

24 March 2005

**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 will be 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 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 is not intended to be the final form of NANOOS governance; however, parts of it may be adopted into the Bylaws of an incorporated NANOOS. 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, future NOAA P.O.R.T.S. systems, USGS stream gauges, USACE wave stations, etc.).

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 nascent association for the development, operation, and improvement of a Pacific Northwest regional coastal ocean observing system (RCOOS).

There are other regional coastal ocean observing systems along the U.S. Pacific coast that NANOOS will coordinate with including the Alaska Ocean Observing System (AOOS), Central and Northern California Ocean Observing System (CeNCOOS), and Southern California Coastal Ocean Observing System (SCCOOS). Further, though Canada has no directly analogous program to NANOOS or IOOS, the ocean systems know no boundaries and NANOOS specifically intends to 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 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. It is anticipated that in the future NANOOS will incorporate as a non profit 501(c)(3) tax-exempt organization and members will contribute funds or in-kind resources to help provide for organizational and administrative needs of NANOOS. However, NANOOS members by means of this MOA are not obligated to continue as such when NANOOS incorporates.

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, 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

Until such time as 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, with the NANOOS Treasurer, 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 Governing Council, Officers, Advisory Group, 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 (“the Council”). A member organization (Party) may choose not to have a representative member on the Council. The initial Council will include the present Steering Committee members, as named in Section XVII who present this MOA for signature.

Representatives from adjacent Regional Associations, the Alaska Ocean Observing System (AOOS), and the Central and Northern California Ocean Observing System (CeNCOOS), as well as proposed IOOS national backbone systems such as the Pacific Coastal Ocean Observing System (PaCOOS) may also be members of the NANOOS Council, but will not have voting rights (“non-voting members”). Federal agency representatives may participate to the extent allowed by their agency.

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 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 duty of each Council member to:

- Attend NANOOS meetings;
- Abide by the NANOOS MOA and other applicable decisions by the Council; and
- Actively promote NANOOS, both within and beyond the region. (e.g., submitting abstracts and making oral and poster presentations at conferences, representing NANOOS at meetings, etc.).

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 of the Council, or any Committee thereof, will proceed according to Robert's Rules of Order. All NANOOS Governing Council actions should conform to guidelines established by the National Federation of Regional Associations.

Terms of Office

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

b. Officers

The elected officers of NANOOS shall be a President, President-Elect, Secretary, and Treasurer, who shall be Governing Council members during the six months prior to election (except for initial election upon enactment of this agreement).

President

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

President-Elect

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

Secretary

The Secretary shall be responsible to 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 President shall designate a Secretary pro tempore.

Treasurer

The Treasurer shall be responsible to the Governing Council. The Treasurer shall interact with the Fiscal Agent(s) on behalf of NANOOS to account for monies to support the NANOOS mission and operations. The Treasurer shall keep, or cause to be kept, accurate financial accounts, and shall hold those open for inspection and examination by the Governing Council. In concert with the Fiscal Agent(s), the Treasurer shall prepare, or cause to be prepared, a full report concerning the finances of NANOOS to be presented to the Council annually. The Treasurer shall act as a second Officer signatory, after the President, on all NANOOS business requiring such.

c. User's Advisory Group

This group represents both the end users and the seven IOOS goals. It will identify and engage end users and provide their direct input to the Governing Council as well as all the other standing committees for system development, operation and data products. Group members, except for the User's Advisory Group Coordinator, do not need to be Council members or employees/officers of the Parties. Group members will be appointed by the Governing Council.

d. Standing Committees

General

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, except for the Chair, 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.

Executive Committee

The Executive Committee shall be comprised of Officers (President, President-Elect, Secretary, and Treasurer), the NANOOS Executive Director, and Chairs of all Standing Committees, who are elected by and from within the Council (see "Elections" in this section, below). The President 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 President 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 ten business days beforehand. Meetings may be either in person or conducted telephonically. Participation

telephonically shall constitute presence in person. 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.

The designation herein of the Executive Committee and the delegation thereto of authority shall not relieve the Governing Council or any member thereon of any responsibility imposed by law.

Operations Committee

This committee will design and oversee the physical operations of the observing systems that comprise NANOOS. It particularly deals with safety, permitting, and other in-situ and field aspects of the observing systems. It will deal with measurement quality standards and operational system standards.

Data/Information Management and Communications Committee

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.

Modeling and Analysis Product Committee

This committee will design and 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 related to models and for end users, but will fully coordinate with the other committees in doing so.

Science and Research Committee

The research committee identifies research and development needs relevant to NANOOS, including new technologies, and ensures coordination with other ocean research initiatives.

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. This committee ensures that the Plan is consistent with the current Integrated Ocean Observing System (IOOS) Education Plan.

Nominating Committee

The immediate Past President shall Chair this committee and appoint its members from within the Council. It will oversee nominations for vacant positions and provide nominations every other year for each officer and standing committee chair position annually as described below in “Elections” (in this section, below). No present officer may be a member of this committee.

e. Additional 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. Each committee shall be chaired and co-chaired by a Council member. 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.

f. Elections

At least 45 calendar days before every other Annual Meeting, the Nominating Committee will provide a list of at least two candidates for each of the offices of President-Elect, Secretary, and Treasurer to the President-Elect and for each Standing Committee Chair position. Each nominee will be considered individually for election rather than as part of a slate of nominees. The President-Elect will cause ballots with those names, and other such information as may be pertinent, to be delivered to the members of the Governing Council (by regular mail or electronically) at least 30 calendar days before the Annual Meeting. Completed ballots must be received five business days before the Annual Meeting for tally by the President-Elect. At the Annual Meeting, the President-Elect becomes President without vote and will announce the results for the offices of President-Elect, Secretary, Treasurer and Standing Committee Chairs.

g. Terms of Office

Term

All terms of office are for two years, or until such time as the office is otherwise filled by special election or action of the Council.

Resignation

An officer or committee chair may resign his/her position at any time upon written notice to the President or the President–Elect of the Council.

Vacancies

A vacancy in any office, except those of President or President-Elect, occurring by reason of resignation, or otherwise, shall be filled by majority vote of the Council at any duly constituted meeting. A vacancy in the Office of President shall be filled by the President-Elect. A vacancy in the Office of President-Elect shall be filled by a Special Election following the nomination of at least two (2) Members by the Nominating Committee. 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. The Executive Director will be responsible to the Council and will communicate directly and solely through the Council President or the President’s designee. The initial Executive Director shall be the Coordinator of NANOOS, the position of which will be renamed Executive Director upon the execution of this MOA. 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 include 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. NANOOS staff will be responsible to the NANOOS Executive Director. At some point, and commensurate with funding, NANOOS Staff will include an Operations Director who will oversee the daily operation of NANOOS. This includes responsibility for NANOOS observing system

operations. The Operations Director will be supported by the Committee Chairs for the operational aspects of the system.

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.

To assess NANOOS' performance, the Governing Council will develop indicators, targets, baselines, and timeframes will be by 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 containing both the annual and projected budgets and authorized expenditure plans. The NANOOS standing committees will develop and advise on fiscal and policy plans. The NANOOS Office 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 will provide the final approval.

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 dues and 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.

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 bi-annually or as often as needed, in addition to the meetings of the Governing Council and committees. 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; and
- Establish a mechanism through which new participants can participate in planning for the ocean observing system.

Section XVI. General provisions

- a. **Effective date** This MOA becomes effective upon the date of the signature of the tenth 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.
- b. **Withdrawal** Any Party to this MOA may withdraw at any time with three months formal written notice to the other Parties.
- 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, vest rights 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 each Party 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.

Section XVII. Current NANOOS Coordinator and Steering Committee

The current NANOOS Coordinator and Steering Committee, who present this MOA for signature, consist of the following individuals:

Coordinator: Jan Newton University of Washington, Seattle, WA

Steering

Committee: Antonio Baptista Oregon Health & Sciences University, Portland, OR
Jack Barth Oregon State University, Corvallis, OR
Robert Bohlman Marine Exchange of Puget Sound, Seattle, WA
Patrick Corcoran Oregon Sea Grant, Astoria, OR
Mike Kosro Oregon State University, Corvallis, OR
David Martin University of Washington, Seattle, WA
Greg McMurray Oregon Dept of Land Conservation & Development,
Salem, OR
Ian Miller Surfrider Foundation, Seattle, WA
Jay Pearlman The Boeing Company, Seattle, WA
Terry Wright Northwest Indian Fisheries Commission, Olympia, WA

Accepted as affirmed by our signatures below:

Name, Institution Date

Representing

Name, Institution Date

Representing

Name, Institution

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