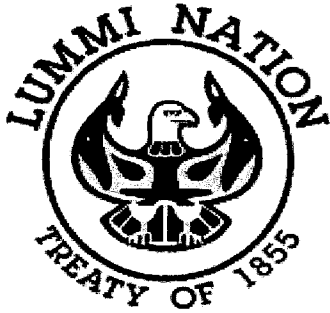


**Comments to Governors Edition
of
U.S. Commission on Ocean Policy Report**



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The Lummi People have lived by the sea and from the sea for thousands of years. The value of the water as a source of food, transportation and even our existence is constantly on our minds. Totally reliant on the water around us, the Lummi Nation has continued to place the highest value on traditions that involve the oceans. The identity of the Lummi People as a distinct group has depended on our relationship to the sea. In reality all Northwest Natives are tied to the oceans with inseparable bonds and permanent relationships.

In 1855 our Treaties were written around natural resources that guaranteed to us we would have a continued use and responsibility to those waters.

Specifically, the Treaties granted to the Lummi People 50 percent of natural resources and those rights were later affirmed by Judicial decisions, the Lummi People felt secure. In those early days of the Treaty, Lummi People totally relied on the waters that surrounded them. Today that reliance has been reduced by changes in the waters, views of management, pressures of population and what appears to be climate changes. However our values continue to be directed at the sea and maintenance of our rights. They all point to the reality that we must all be better stewards of the sea and its resources.

The Lummi People have had minimal input into the development of the Ocean Policy

Document now presented and represented by the more than 1000 pages of actions, recommendations, testimonials and background. **In reality the Lummi Nation and other coastal Tribes have a very large presence in these issues.** The Lummi Nation reacts daily to issues that impact the environment, their jobs, Puget Sound and the connecting Pacific Ocean and their existence. We continue to place emphasis on aspects of our water-oriented background, including our diminishing fishing fleet, shellfish harvests, cultural needs, and successful aquaculture program. The Aquaculture Project beginning in 1969, was a vision of continued reliance on the water and tidelands. Today after 35 years, the fish and shellfish aspects of that project continue to supply valuable jobs and income to the Tribe and a gateway to aquaculture potential through Northwest Indian College programs.

The roots of the Tribally owned community college at Lummi, the Northwest Indian College (NWIC), actually started in 1969 as an Aquaculture Training Program, a collaborative effort by the Federal government, the State government and the Lummi Nation. The College continues today as Northwest Indian College, with a native enrollment of more than 1600 students from throughout the United States. In 1999 the College was designated as the location for the **National Indian Center for Marine Environmental Research and Education (NICMERE)**. The College was chosen for this center as it is the only Native college located on marine waters and the only college with a marine program that works collaboratively with the Lummi Aquaculture program in research, technical training and educational opportunity. The thirty-five member American Indian Higher Education Consortium of Colleges and Universities recognized the unique position of the Northwest Indian College and designed NWIC and NICMERE as the Center for marine studies for that group. Presidential Executive Orders for American Indians and Alaska Natives Education opportunities also direct collaborative efforts to be developed and enhance the capacity of Tribal Governments to provide education opportunities. NWIC and NICMERE also provide a resource for Puget Sound Tribes and West Coast Tribes for educational opportunities at a Native institution.

NICMERE's strategic plan was developed to provide a larger presence of Native scientists in the management of natural resources, including all the marine sciences. Through the use of grants, NICMERE is providing research efforts that are contributing to the marine community. As a 1994 Land Grant College, Northwest Indian College can participate in Sea Grant programs and provide additional input to the marine environment through Native-oriented research efforts. NICMERE has a Memorandum of Understanding with the Department of Commerce (NOAA, NMFS, Northwest Fisheries Science Center) to collaborate and provide the college with cutting edge technology from their staffs and facilities for students and faculty in the ocean sciences. Native American Tribes benefit from such an endeavor by pooling their efforts in science projects.

Lummi Nation has a vision of incorporation of ocean studies in their K-12 programs that includes a new high school. Early high school development of an ocean program will insure the higher education aspects of the water oriented community will be provided with people that can relate to the water through Indian eyes.

Our request at this point is to insure that Native interests are recognized by any plan or policy proposed by the Federal, State and local governments for marine waters on a government to government basis. Lummi has been developing facilities that can make such a plan successful by including us in the groundwork of this plan. NICMERE is a perfect vehicle to disseminate and collect information regarding the inclusion of the Native groups and Tribes that will be directly impacted by the National Ocean Policy Report.

Funding of facilities for The Northwest Indian College and NICMERE will insure the aspects of this program are available to all Natives and provide an education basis and proven science that will enable Natives to participate in research and education and will guarantee protection of our resources and full use of our waters for all people.

Examples of funding to enhance Native input in the marine sciences, aquaculture and fisheries management include:

- Marine Science Research and Education Center (NICMERE) at Northwest Indian College
- Permanent staff for research and education (NICMERE)
- Education and research equipment needed for full participation in the ocean efforts of management and conservation
- Enhancement of Aquaculture facilities
- K-12 ocean science program
- Fishermen assistance in catch/value added products
- Transfer of aquaculture techniques to fishermen (mussels, clams, oysters, fish rearing techniques)
- Innovative habitat restoration projects involving the community
- Community education programs on individual and collective efforts for pollution control
- Tribal tourism, land management, forestry
- Salmon issues, ESA policies, including ocean survival
- Shellfish disease and propagation
- Hatchery reform and use to insure fish enhancement meets the needs of Tribal fishermen
- Mass marking techniques

Lummi Nation and Northwest Indian College appreciates the opportunity to provide input into the U. S. Commission for Ocean Policy. Development of a policy that includes grass roots participation in every area of the oceans use, conservation and development will help insure success.



Darrell Hillaire, Chairman
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The National Indian Center For Marine Environmental Research and Education submits the following comments to the Governor's Forum for inclusion in the Ocean Policy development.

The Role of Native Community Colleges in Natural Science Education and Research

Need for the Project:

In 1998, the National Indian Center for Marine Environmental Research and Education (NICMERE), at Northwest Indian College (NWIC), was developed to provide a unique combination of Tribal People, strategic partnerships and federal support all tied to the need for more Indian scientists. Driven by Executive Orders, education goals, resource conservation and management requirements and development of jobs, NICMERE is working to reach the long-term goal of development of a center for Native science and education. The Center is already a model of action, collaboration and participation. Projects ranging from replanting eelgrass in mitigation zones to GIS plotting of ecological parameters and addressing specific threats to ecosystem health. Cooperation among scientists, agencies and citizens in data gathering and resource inventories .such as identifying the beaches where forage fish spawn are dramatically increasing the knowledge on which effective action can be based. Projects are needed for educating and involving people whose attitudes and actions are key to the regions future. NICMERE provides a rationale for creating a model that takes stock of the Natives needs and what must be accomplished, what has been learned and what lies ahead.

Fisheries Management In the Northwest Area:

The fisheries management structure of Puget Sound is like no-where else in the world. A landmark court decision in 1974 upheld the treaty rights of Puget Sound tribes to share the marine resources in a fifty-fifty split with non-tribal residents. Puget Sound treaty tribes are thus co-managers with the state of Washington for management of fisheries and the habitat upon which these species rely. Harvest regulations occur through a co-management process. The Washington Department of Fish and Wildlife (WDFW) and the Northwest Indian Fisheries Commission (NWIFC) set harvest levels and separately administer the regulations to non-tribal and tribal fishermen. More than 90 percent of the biologists and scientists in those organizations are non-Indian.

Current Status of Native American Science Education and Resources Development:

□ Management and development of natural resources is critical to the nations economic well being. As President Bush has underscored by designating November as National American Indian Heritage Month, American Indian and Alaska Natives have been vital contributors to the strength and diversity of the American Society. The Tribes are involved in fishing, timber, and other natural resources through their own ownership or co-management of resources such as

fishing, environmental issues, timber, and water through mandates that provide management responsibilities.

- Resource management is complex, requiring an educated workforce to develop inter- disciplinary solutions that effectively balance the conservation of resources with sustainable economic development and conservation.
- Tribal Colleges and Universities (TCUs) are suffering the most in their needs for support in development of education and research programs for Native science personnel to support Native management concepts and research needs.
- Recognizing the need for more professional Native Americans to sustain natural resources and promote economic development in Native Communities, the Department of Commerce (DOC) developed the National Indian Center for Marine Environmental Research and Education (NICMERE) concept to enhance the professional staff of Native Communities as a result of Presidential Executive Orders.

The NICMERE program is especially aimed at the development a large pool of skilled scientists and technicians to fill the need for Natives in their natural resources programs. The first step is a transferable associate degree that can lead to the next step to professional development of educators and scientists (NWIC plans a four year degree in the next five years) to manage Tribal resources. Curriculums encouraging both the science approach and the education approach will be the first degree efforts (BA-BS) of NWIC. The College will increasingly focus on transferable degrees and four year degrees in the future. NICMERE is part of the NWIC master plan for further development of natural resource elements.

The model provided by the National Indian Center for Marine Environmental Research and Education can be used by other centers servicing the 562 Native Tribes of the United States. The expected outcomes are:

- 1. Capacity Building:** to impact environmental research and education at Tribal colleges and elsewhere to educate a new generation of environmental leaders. This goal will be accomplished by the careful coordination of the work done by the NWIC, NICMERE, developed partners and the Lummi Nation. NWIC through NICMERE has been designated by the 35 American Indian Higher Education Consortium of Tribes to provide marine educational opportunities for Natives. The 54 Affiliated Tribes of the NW also supports the efforts of NWIC in science opportunity development for Natives. Interaction of Natives for educational, coordination and management purposes enhances their participation in natural resources management. Effective communication by Natives provides the basis for the development of the NICMERE and ATE Centers. NICMERE is designed to place Natives in cutting edge research situations (existing MOUs with DOC, NOAA, NMFS, NWFSC, UW, WSU, WWU), provide education opportunities for bachelor, masters and PhD programs and put Natives in jobs that are critical to the sustainability of their natural resources. Building NICMERE facilities,

faculty, recruiting students and developing agreements with other institutes is already underway.

Agreements with other Tribes, Department of Commerce and the Lummi Tribe etc such as that have already been approved, provide development basis for a marine science center such as those provided to Black Colleges and Hispanic Colleges (MSIs). Appropriations attempts in FY 2004 for FY 2005 appear to be un-funded and the possibility of funding through this avenue is poor due to present emphasis.

2. Education Reform: the outcomes of the NICMERE/ATE program will affect what kind of environmental education is delivered at Native Colleges. We expect that the College attendees will early on, through the research opportunities provided, identify current and future environmental challenges of Pacific Northwest Tribes which will encourage students to pursue higher education programs to solve the problems required for Tribes to survival.

3 Environmental Justice: a long-term goal is to achieve environmental justice for Pacific Northwest Tribes to reverse a long story of neglect and abuse. Tribes believe in a sustained environment for their children and cultural needs. A sustainable environment is woven in their culture and plays an integral part in their daily lives.

4 Teachers and educators: Tribal College teachers will be encouraged to participate in the research programs with the students. Distance learning opportunities for the 35 AIHEC Colleges and NW Tribes will be an integral part of the program.

5 . Elders, traditional knowledge and new generations: The Natural Resources Program will also draw upon Native's rich history of harvesting the sea. for sustenance and trade. To access this knowledge, we will invite the participation of Elders and tribal shell fishers in the form of discussions, talks, field experiences and hands-on assistance in developing propagation, harvesting and marketing methods that incorporate tribal values.

Younger members of the community many of whom will seek employment opportunities on the reservation after high school will have the chance to observe science in action, learn more about fishing as a potential livelihood and to become another link in the chain of traditional knowledge that has passed down through the generations. At a time when the Lummi community is struggling with the decline of available jobs lost in fishing, aquaculture holds great potential as an economic development alternative and aquaculture courses will be taught at NWIC. The strong economic potential is generated by growing demand for seafood worldwide.

6. Project Design: The project will be designed to attract both participants and faculty that will contribute to the value of this program. In the U. S, only 16% of Native American students who enroll in traditional four- year universities graduate with a bachelor's degree after six years (Chronicle of Higher Education, 2001). However, when Native students attend a Tribal College for as little as one year, and then transfer to a four-year university, the likelihood of completing a

bachelor's degree increases four-fold (Ortiz & Heavyrunner, 2003). Bench marks will be established for the program to include: 1. Number of students enrolled: 2. Graduation success: 3. Research programs developed: 4. Facilities development: 5. Faculty recruitment: 6. MOA/MOU development: 7. Progress to advanced degrees: 8. Funding and program development.

The plan aims to create a national model in the resource sciences through the allied disciplines of natural resource management and environmental science by:

- Design and build a research and education facility for Native Americans.
- Expanding collaborations;
- Broadening undergraduate research opportunities: and
- Enhancing capacity for, infrastructure in support of, and commitment to excellence in undergraduate education.
- Provide plans for a research education center at specific location.

As a Tribal associate degree-granting institution that collaborates with baccalaureate degree-granting institutions, the emphasis of this project is on conducting research with first and second year undergraduates to provide the basis for higher education programs.

Cooperative links with other Native Institutions and Governments see Figure 1.

Cooperative Science Centers Administrative Structure

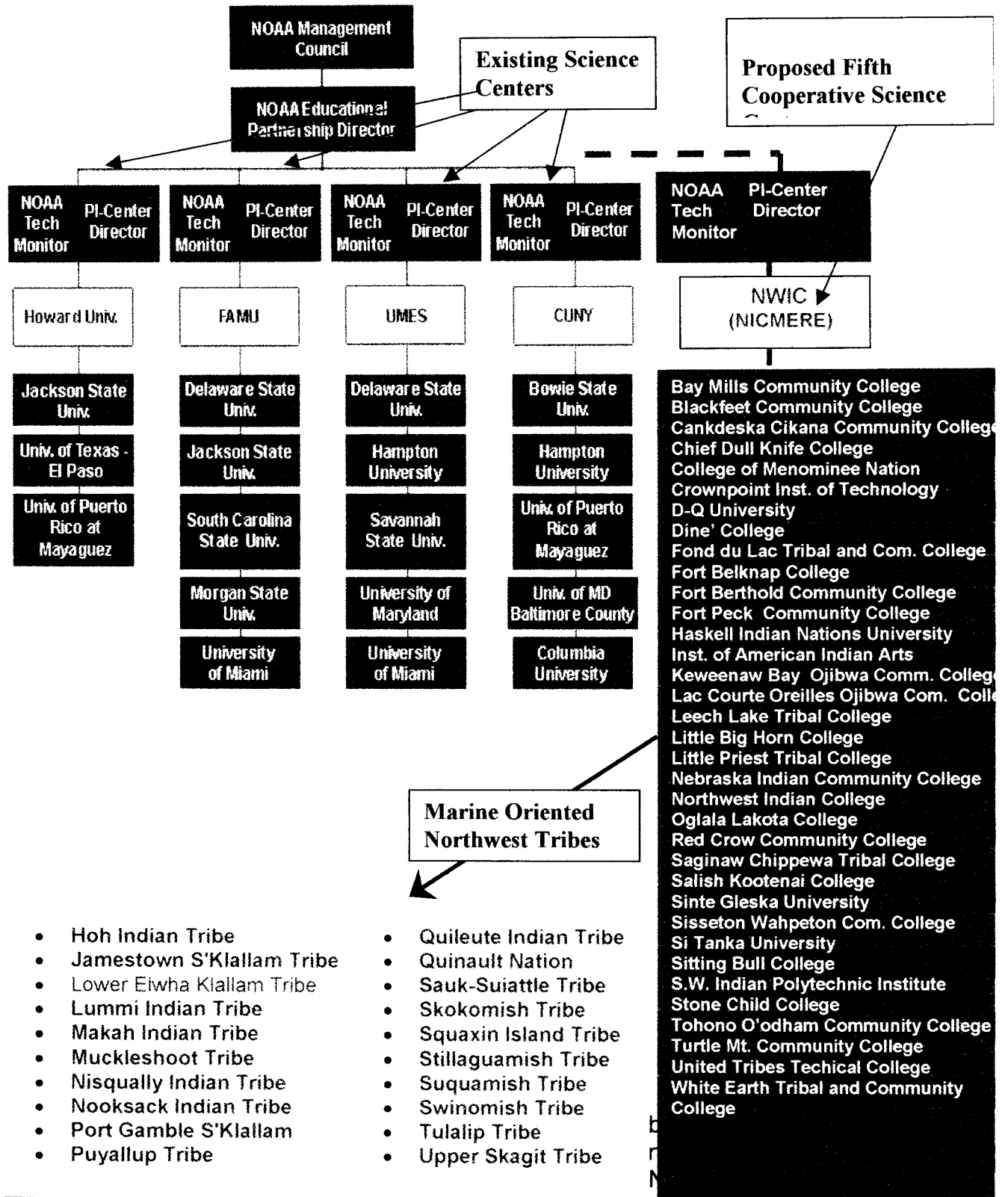


Figure 1. Four marine science centers presently operated by NOAA for development of Minority Science Institute and the proposed development of a fifth science center for Native Americans at Northwest Indian College (NICMERE) to support science education at 35 AIHEC colleges and research for Northwest Tribes.

subsistence and ceremonial emphasis is through natural resources. Opportunity for education through the Native community college system also exists but must include improvements to the system and collaborative agreements with existing institutes.

Success of the program using the Native community college system is increased by direct involvement of Native systems. Recruitment of Natives for colleges and universities has always presented a problem. Getting the Natives to the institute is one hurdle and retention of the student to complete the program is an additional step that is often missed. Retention and completion in Native colleges is also a problem however attraction to these institutes is greater due to the inclusion of Native values in the curriculums.

Northwest Indian College is a 1994 Tribal Land Grant College and the only tribal college in the states of Washington, Oregon, Idaho, and Southeast Alaska that conducts marine related research and education. Unlike most tribal colleges that serve only one tribe, NWIC serves 43 separate tribes and a Native American population in excess of 125,000 individuals. The College enrollment is approximately 1600 individuals with 600 full time equivalent students. The main campus is located on the Lummi Nation Reservation near Bellingham, Washington Northwest Indian College is accredited through the Northwest Association of Schools and Colleges and currently offers two-year degrees. The College is actively working toward securing accreditation for baccalaureate degrees in science and natural resource management as well.

Science, mathematics and engineering studies are of particular importance and interest to the students of Northwest Indian College. Unfortunately, Native American graduates in these areas are the lowest percentage of all of the recognized minority groups in the United States. This situation must be addressed and alleviated. Native American students in particular, appear to be much more successful in learning science, engineering and mathematics if they can relate it to actual applications. This is markedly enhanced when the individuals can actually use laboratory equipment in research projects, particularly when these projects address relevant issues on their home reservations such as economic development based on natural resources.

The NWIC awards Associate degrees in Environmental Engineering and Environmental Studies, among others. NWIC has cooperative agreements with Washington State University (WSU), University of Washington and Western Washington University for four-year transfer programs. NWIC is also a member of the Tri State Agricultural Distance Delivery Alliance that offers an innovative Master of Science Degree to the NWIC constituency entirely through distance learning.

The College employs several methods of course and seminar delivery. The NWIC satellite uplink system ties into a nationwide system permitting it to delivery programs to over 81 sites across the nation on tribal reservations (11 of which are downlink sites of NWIC and at other tribal colleges through the American Indian Higher Education Consortium (AIHEC). The College also delivers programs through a video streaming statewide system (Washington K-20).

Sincerely

A handwritten signature in black ink that reads "Richard Poole". The signature is written in a cursive style with a large, prominent 'R' and 'P'.

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