

Collaboration in curriculum

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Photo courtesy Coastal Margin Observation and Prediction -- Native students received safety instructions from Michael Wilkin aboard the Research Vessel Forerunner.

Center for Coastal Margin Observation and Prediction plans K - 12 curriculum with Native leadership

By Karen Wegner and Elizabeth Woody

SPECIAL TO TODAY

PORTLAND, Ore. - The National Science Foundation Science and Technology Center for Coastal Margin Observation and Prediction received formal support by resolution from The Affiliated Tribes of Northwest Indians at their May 2008 regional conference. This makes public CMOP's commitment to building deep relationships with Native communities and their students across the Northwest.

Affiliated Tribes founded in 1953 by tribal leaders in the Northwest is dedicated to tribal sovereignty and self-determination representing 54 tribal governments from Oregon, Idaho, Washington, southeast Alaska, northern California and western Montana. Representatives from the member tribes discuss and establish mutual goals for policy direction through committees by way of resolutions during the three yearly meetings.

Founded in 2006, CMOP is a multi-institutional science and technology center led by Oregon Health & Science University. Its institutional partners are the University of Washington and Oregon State University. CMOP conducts interdisciplinary research, technology development, education and knowledge transfer to achieve a better understanding of physical, chemical and biological processes regulating river-to-ocean ecosystems. CMOP is committed to the interests of American Indians in its program activities across K - 12 education, higher education, scientific research, natural resource management and community economic development, and runs a thriving higher education initiative.

The ATNI resolution encourages CMOP to continue its active engagement of tribal members, governments, and organizations in the Pacific Northwest for the purpose of better understanding and reflecting Native interests and support of indigenous knowledge systems. Director of K - 12 Education Karen Wegner works toward this goal with the Northwest Regional Education Laboratory, the Puget Sound Center for Teaching Learning and Technology, and Patsy Whitefoot, Yakama Nation, chair of the ATNI Education Committee, to collaborate on grant development focusing on American Indian middle and high school students.

CMOP is currently meeting the K - 12 goals in a variety of ways and with different partners. Using research by CMOP, with partner Saturday Academy, the center offers classes and camps taught by faculty, graduate students, postdoctoral fellows and staff. During the summer of 2008, two camps were offered: a physical oceanography focus and another focused on tsunamis. CMOP also supports OSU's SMILE Program's high school challenge and for eight years, the challenge topics will center on CMOP research topics.

The K - 12 educational element of the center's research requires the development, implementation and assessment of transformative approaches to science, technology, engineering and mathematics, or STEM, education using river-to-ocean ecosystems as the foundation for the program.

"The importance of including Native Americans in any dialogue concerning STEM cannot be overstated enough. Indian people have long been the voice of reason when it comes to better understanding the earth and our relationship to it," said Winds of Change senior editor Barbara Sorenson in the Winter 2007 issue. "The skills of engineering, math and technology have been a part of their cultures long before non-Natives ever stepped foot on American soil. There still is much knowledge that can be gleaned from the Indian community."

Native people are actively involved with the CMOP institution in many ways. Roy Sampsel, Choctaw/Wyandotte and director of the Institute for Tribal Government at Portland State University's Hatfield School of Government, guides CMOP's

commitment to tribes in the Pacific Northwest since the original proposal was accepted. Sampsel's active participation with CMOP includes presiding as the chair of CMOP's external advisory board and his support of CMOP's educational pathway from K - 12 to higher education.

Elizabeth Woody, Navajo/Warm Springs/Wasco/Yakama, has accepted the position of K - 12 program coordinator. Woody, an award-winning author and artist with numerous titles to her credit, will work with Wegner by contributing to the development of curriculum and activities to support K - 12 initiatives for both formal and free-choice education settings. Large parts of these efforts specifically target Native K - 12 students by cultural relevance, promotion of understanding Western science with incorporation of important aspects of indigenous knowledge systems. To prevent unnecessary replication, Woody will conduct background research and literature searches on proposed and revised curriculum to develop unique and transformative opportunities. She will help with the coordination of the Teacher Professional Development programs associated with the center's classes and camps.

In the K-grey pathway in CMOP education is Shana Radford, Nez Perce/Cayuse and a political science senior at Portland State University who is participating in the undergraduate internship program offered each summer at CMOP. She is developing a web portal incorporating tribal information and its relation to the river to ocean system.

"It's a wise investment, as this will help give CMOP a tool to expand Native American representation and at the same time invest in my own education about salmon habitat and restoration," she said. "As a future tribal leader, I see this not only as an investment for me but my community and the Pacific Northwest."

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