NOAA Sea Grant selects four aquaculture research projects for funding

The National Sea Grant College Program — part of the National Oceanic and Atmospheric Administration (NOAA) — will award a total of almost $1 million to four West Coast projects through the NOAA Sea Grant Aquaculture Research Program.

Washington Sea Grant (WSG), based at the University of Washington, will manage the projects. WSG is one of 33 Sea Grant programs nationwide engaged in marine research, outreach and education. The national research competition was designed to support the development of environmentally and economically sustainable aquaculture. The two-year grants are for fiscal years 2012 and 2013.

“Last year, Washington launched a major initiative to support the state’s thriving and healthy shellfish aquaculture industry,” said WSG Director Penny Dalton. “The selected projects fit the state’s goals and WSG’s interest in encouraging responsible aquaculture.”

Alleviating Regulatory Impediments to Native Shellfish Aquaculture
Lead: Steven Roberts, University of Washington School of Aquatic and Fishery Sciences.
Award: $427,371.

Aquaculture of native shellfish can genetically impact nearby populations of the same species of wild shellfish. If wild populations are genetically adapted to local environmental conditions, interbreeding with cultured populations from other locales may affect their adaptive potential. A significant barrier to sustainable aquaculture is the lack of information to predict the impacts of culturing native shellfish species for restoration and commercial production. This project will expand understanding of local adaptation in Olympia oysters — the only oyster species native to Puget Sound — to address concerns that interbreeding between cultured and wild stocks could negatively impact wild populations.

Planning for Sustainable Shellfish Aquaculture in Complex Multiple-use Environments: Determining Social and Ecological Carrying Capacity for South
Puget Sound
Shellfish aquaculture is poised to become a dominant player in the U.S. seafood industry. Production on the West Coast has increased steadily over the last 30 years, with expanding domestic and export markets. This project will provide tools and information for assessing the ecological and social capacity of South Puget Sound to support shellfish aquaculture. It will determine carrying capacity for shellfish aquaculture and develop methodologies and guidance documents that can be used to inform marine spatial planning activities throughout the United States. The project uses an ecosystem-based approach to support sustainable shellfish aquaculture and provide a framework for addressing issues that commonly lead to regulatory and permitting conflicts.

Fish Aquaculture Simulation Model and GIS: Validation and Adaptation for Government Management Use
Lead: Jack Rensel, University of Southern California Department of Biology. Award: $142,996.
U.S. coastal ocean waters are well suited for fish aquaculture, but to date, no commercial-scale operations have been permitted anywhere in the marine exclusive economic zone, which extends 200 miles from the coast. There is no permitting or management structure for this zone, and agencies lack necessary quantitative tools to develop management requirements and safeguards. The project will use AquaModel, a geospatial software system that simulates the siting, operational and environmental effects of individual or multiple net-pen fish farms in coastal and oceanic waters. It will examine relationships between operational and environmental conditions and fish farm effects and, with subsequent review, is intended to test and demonstrate the accuracy of the software program.

Planning for Sustainable Shellfish Aquaculture: Identifying Current Activities, Public Perceptions, Conflicts and Compatibilities
Lead: Kristin Rasmussen, Pacific Shellfish Institute. Award: $125,559.
This proposal combines geospatial data on West Coast commercial aquaculture activities with research and outreach on the social impacts of shellfish aquaculture. The outcome will help decision-makers understand interrelationships among social, economic and ecological values and multiple uses of ocean and coastal areas. Long-term goals are to enhance ecologically and socially sustainable development of West Coast shellfish aquaculture and increase public understanding of shellfish-related activities.

Based at the University of Washington, Washington Sea Grant provides statewide marine research, outreach, and education services. The National Sea Grant College Program is part of the National Oceanic and Atmospheric Administration, U.S. Department of Commerce.  http://www.wsg.washington.edu/