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Testimony Regarding the
Reauthorization of the National Sea Grant College Program
Before the Subcommittee on Fisheries, Wildlife, and Oceans
Committee on Natural Resources
United States House of Representatives
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Good morning Madam Chairwoman and Members of the Subcommittee.

My name is Bill Dewey. I have been involved in the farming of bivalve shellfish in Washington State for twenty seven years since getting a degree in shellfish biology from the University of Washington. I manage public affairs for Taylor Shellfish Company full time, and on the weekends and vacation time from Taylor I also operate a clam farm of my own. I serve on a number of local, state and national boards and committees representing the interests of the West Coast shellfish growers.

It is truly an honor to have been selected from the thousands of stakeholders and beneficiaries of the National Sea Grant College Program, as a witness to testify regarding H.R. 5618. I would like to share how this program has benefitted me personally, Taylor Shellfish Company and the shellfish community in general. I hope that by sharing these experiences it will underscore the importance of reauthorizing the Sea Grant Program and amendments proposed by H.R. 5618.

Specific to the amendments, in particular we support:

- Linking the National Ocean Research Priorities Plan and Implementation Strategy issued by the National Science and Technology Council's Joint Subcommittee on Ocean Science and Technology with Sea Grant's programs.
- The inclusion of "regional research and information plans", where by one or more Sea Grant colleges or Sea Grant institutes can identify regional priorities to implement the National Ocean Research Priorities Plan and Implementation Strategy;
- Improving the periodic review of the Sea Grant program consistent with the recommendations of the National Academy of Sciences;

Specific to funding, I do not envy your task of prioritizing where best to spend the nation's limited financial resources. Evaluating the merits of the multitudes of programs before you with hundreds of constituents like me saying a particular program should be your highest priority is a

daunting task. Selfishly, let me say that in my opinion, the Sea Grant Program provides essential services to coastal communities and a great return on your investment. I am concerned that the proposed funding levels authorized in Sec. 10 represent a significant reduction from their current FY 2008 authorization level and in subsequent years will not be commensurate with the demands placed on Sea Grant programs.

Our coasts are experiencing extraordinary population growth and development. By 2025 the Department of Commerce estimates 75% of the nation's population will live in coastal counties. Washington's Puget Sound is no exception. We have 4 million people now and are expecting another 1.4 million by 2025. The intense coastal development is resulting in more and more of our shellfish beds being downgraded due to contamination. It is going to take a substantial investment in a number of programs and the Sea Grant Program in particular to address the cumulative effects of this intensive coastal development.

Background and Sea Grant Services to the Shellfish Industry

Washington State is the largest producer of farmed shellfish in the United States. I have provided a table of West Coast shellfish production produced by the Pacific Coast Shellfish Growers Association in an addendum to my testimony. It is broken down by state and species. While I would like to say Washington's dominance is the direct result of the National Sea Grant College Program, it can only lay claim to part of the success story. Sea Grant has contributed as you will learn in significant ways, but the foundation of this success lies in state laws passed in the 1890s. Washington's Bush and Callow Acts encouraged the sale of state owned tidelands into private ownership specifically for the purpose of culturing oysters. It was successful in achieving its intent which was to stimulate a robust oyster farming industry. These laws reversed the tragedy of the commons and effectively replenished a resource that was being depleted by a wild fishery.

I don't know this for certain, but I believe Taylor Shellfish Company produces more farmed oysters, clams and mussels than any other single company in the United States. Taylor's Great Grandfather started growing shellfish in 1890. The passion for doing so as well as the amount of shellfish produced has increased with each generation. Thanks to three recent episodes of the Discovery Channel's Dirty Jobs, some of you may even be familiar with our geoduck and mussel farming and our shucking operations— a badge of honor our employees are quite proud of.

There are a number of reasons Taylor Shellfish Company and shellfish farming in general has been so successful in Washington State. The Sea Grant Program has clearly been instrumental in that success. As one of the four Sea Grant colleges designated in 1971, the program at the University of Washington has been a tremendous asset for shellfish industry right from its inception.

In their early years Washington Sea Grant supported research which was instrumental in the development of the sterile triploid oyster. In the wild, oysters typically spawn once a year. They put a lot of energy into this annual reproductive event and during the process become less than optimal for consuming. This is where the rule some of you may be familiar with about only eating oysters in months with an “R” comes from. The hatchery produced sterile triploid oysters grow faster and maintain an optimal meat quality year round making the “R” rule no longer relevant. These traits make triploid oysters extremely valuable to shellfish growers. Today they account for an estimated one third of Washington’s oyster production.

In the early 1980s, Sea Grant research and outreach efforts were important in establishing Washington’s Manila clam industry, which now produces about 8.5 million pounds of clams per year.

Today, Sea Grant-initiated research in geoduck clam genetics is providing insights into the management of wild and cultured stocks of these economically important shellfish.

Current Sea Grant shellfish research projects range from studies of oyster diseases to characterizations of factors affecting shellfish habitats. I am providing a list of current Washington projects to give a sense of the value to the shellfish stakeholder community:

- Physical and biotic processes affecting the dynamics of geoduck populations and management approaches that take into account spatial heterogeneity in the population and the fishery.
- Dynamics and potential effects of interactions between farmed and wild populations of geoduck clams that will enable state and tribal workers to proactively manage wild geoduck for resource sustainability and help ensure that stocks of these commercially valuable shellfish remain abundant.
- Use of the latest molecular techniques to identify sources of fecal bacteria that have closed shellfish beds in Oakland Bay and provide a scientific basis to help the community identify and control the sources of pollution.
- High-resolution modeling technology and field studies to help researchers determine the patterns of flushing and retention (residence time) in two Washington estuaries and estimate their impacts on nutrient loading, plankton distribution and oyster growth.
- To control the spread of non-native cordgrass that degrades shellfish aquaculture sites, introduction of four types of the *Spartina*-eating insect *Prokelisia marginata* into infested areas with the best-performing made available to resource managers, landowners and others for biological control.

- Examination of the impacts of the Japanese oyster drill on native Olympia oyster populations, helping to set priorities for drill control and identify thresholds for Olympia oyster recovery.
- Assess susceptibility of several oyster species to herpes-like viruses in order to produce, transport and market healthy disease-free shellfish that are crucial to the success of the U.S. oyster industry.
- Creation of disease-resistant stocks, guidance for broodstock breeding based on reproductive traits and development of broodstock and culture management tools to reduce mortalities during grow-out.

Communications and Outreach

In addition to research, Sea Grant communications and outreach also provide a direct and significant impact on Washington's shellfish industry:

Sea Grant publications

I understand that WSG's publication, *Heaven on the Half Shell: The Story of the Northwest's Love Affair with the Oyster* has been distributed to Subcommittee members. This book is a beautiful testament to our oyster industry. The Sea Grant authors took great care to interview elders in the industry and capture a history in this beautiful book that might otherwise have been lost.

In an effort to build an alliance of shoreline property owners interested in protecting water quality and healthy ecosystems, Taylor Shellfish encourages shellfish gardening. We hold a number of shellfish seed sales on Saturdays with low tides. Shellfish gardening has become very popular with hundreds of people turning out to purchase seed and equipment for their beaches. We provide two very popular Sea Grant publications, *Small-Scale Oyster Farming for Pleasure and Profit* and *Small-Scale Clam Farming for Pleasure and Profit* at these seed sales. I have brought some to share with you and some newspaper articles that demonstrate the success of these efforts.

Other notable Sea Grant publications relative to shellfish include *Reestablishing Olympia Oyster Populations in Puget Sound*, and *Washington Aquaculture Regulations and Research Goals: A West Coast Aquaculture Perspective*.

Outreach efforts

Staff from the Sea Grant Marine Advisory Services are out in the community working on a variety of issues of importance to the shellfish industry including septic system operation and maintenance, invasive species, stormwater, low impact development and oil spill prevention. Teri King, one of the Washington field agents is famous for her septic socials where waterfront homeowners gather to learn about operation and maintenance of the septic systems. Teri has also coordinated three State of the Oyster shellfish sampling events for waterfront property owners to determine the levels of pathogens in shellfish from their beaches.

To protect shellfish operations from the effects of oil and chemical spills, Sea Grant staff have assisted in planning and presenting an in-depth HAZMAT course for local shellfish growers. It became apparent to growers following a recent oil spill in Puget Sound that not only were they not prepared to respond in the event of a spill on their beds, they would not be allowed to without appropriate HAZWOPER training. Sea Grant has partnered with the Pacific Shellfish Institute to remedy this situation.

Conference for Shellfish Growers and Chuckanut Shellfish, Inc.

For two decades, Sea Grant Programs in Washington, Oregon and Alaska have sponsored an annual Conference for Shellfish Growers and hosted meetings that bring together shellfish growers, regulators and scientists to discuss new developments and cooperatively resolve problems. The annual Conference for Shellfish Growers has a reputation for an agenda packed with practical information and is very popular with growers.

It was at one of these Sea Grant-sponsored conferences some 15 years ago that I was personally inspired by a keynote speaker invited from France. The gentleman presented a talk and video on the mechanization of Manila clam farming in France. That presentation has been the inspiration for my company, Chuckanut Shellfish and the many inventions on my Manila clam farm in Samish Bay. In the addendum to my testimony I have provided you with photographs showing rows of clams on my farm and the assorted equipment I have adapted or developed to automate production. I get an immense amount of gratification from the success of my farm which to this day I attribute to the inspiration provided at that Sea Grant conference. That inspiration is now having a ripple effect as the mechanization I pioneered is being replicated by others in the industry.

Honest Broker of Unbiased Information.

Sea Grant is well-established and respected nationally as an honest broker and source of unbiased information. In Washington State and elsewhere this has made it a key player in responding to the needs for sound information identified by decision-makers, for convening

stakeholders to seek common ground, and for facilitating the development and implementation of new coastal policies, plans, management approaches, and conflict resolution strategies related to sustainable coastal and economic development.

One of the new and most promising species being cultivated in Washington State is the giant geoduck clam. Marketed in sushi bars throughout the world where the impressive siphon is eaten raw, it commands phenomenal prices. Concerns have been raised about the environmental effects of the culture and harvest of this deep burrowing clam. Because of their reputation as an objective broker of unbiased information Washington Sea Grant has been sought out by the legislature, resource managers, local policy makers and industry for answers. They have provided an excellent review of the pertinent literature and hosted a workshop which included experts on the effects of shellfish culture from around the country. The Washington State legislature has entrusted the program with \$750,000 to solicit and oversee research on effects geoduck farming where knowledge gaps remain.

Conclusion – reauthorization and amendments proposed by H.R. 5618 are justified

Madam Chairwoman and Members of the Subcommittee, I hope my comments this morning have shed light on the merits of the National Sea Grant College Program and affirmed to you the value of the amendments and reauthorization proposed in H.R. 5618.

I am active in the national shellfish community and assure you that shellfish producing states around the country have numerous examples just like mine of Sea Grant facilitated successes. The National Sea Grant College Program has contributed immensely for decades to the advancement and sustainability of shellfish farming throughout the country. Mind you, shellfish growers are but one of Sea Grant's many beneficiaries and I am confident you could find droves of other constituents just like me to sing their praises.

The extraordinary rate of coastal development calls for extraordinary measures to protect our coastal resources. In light of that, I ask you to carefully consider the Sea Grant Associations request to enhance the National Sea Grant College Program to a level of \$125 million by the year 2014. With encroaching shoreline development the future well being of the shellfish industry will be relying more and more on the services provided by them.

Thank you for the opportunity to testify today as a representative stakeholder of the National Sea Grant College Program. I would be happy to answer any questions or provide additional information if requested.