

**Testimony in support of HB 2784 and HB 3234**

**Oregon House Agriculture and Natural Resources Committee**

**Ref: Oregon Shellfish Initiative**

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It's my honor to provide testimony in support of House Bills 2784 and 3234 that are written to enhance shellfish farming and recreational harvesting in Oregon, as well as the conservation and management of Oregon's wild shellfish stocks.

My name is Chris Langdon and I am a professor at Oregon State University. My research mainly focuses on supporting Oregon's shellfish farmers through studies on the effects of ocean acidification on oyster larval development as well as by directing a breeding program to enhance the performance of hatchery and farmed Pacific oysters. I am standing in for Dr. Gil Sylvia, Oregon State University, who served on the Oregon Shellfish Task Force but is unable to attend this public hearing due to prior commitments.

Oregon is blessed with excellent coastal conditions that result in highly productive shellfish populations. Recreational harvesting of clams and mussels is a major activity for coastal visitors and communities, generating about \$38 million annually from direct and indirect expenditures. In addition, oyster farming is estimated to have a direct economic value of about \$10 million through sales of harvested oysters to consumers.

In 2015, House Bill 2209 created the Oregon Shellfish Taskforce. The Taskforce is composed of representatives from the oyster farming community, management agencies, conservation groups, the tribes and academia. After much deliberation, the Taskforce identified critical actions necessary to support and enhance recreational and commercial shellfish activities in Oregon. Many of these critical actions are addressed in HB 2784 and 3234. Due to the lack of time, I will limit my comments to the proposed support of work conducted by Oregon State University researchers in collaboration with the Whiskey Creek Hatchery, Netarts Bay.

The Whiskey Creek Hatchery is the only independent oyster hatchery on the West Coast in that it is not part of a larger oyster farming company that it primarily serves. Thus, it provides seed to many of small family oyster farms in Oregon and elsewhere on the West Coast. This hatchery has been in the forefront in overcoming the effects of ocean acidification on West Coast oyster production. Working with colleagues at Oregon State University, the hatchery implemented some very sophisticated technologies to continuously monitor seawater acidity and carbonate chemistry. This allows the hatchery to adjust seawater carbonate chemistry to ensure good larval performance. This approach has been widely adopted by other hatcheries in the US and abroad. HB 3234 asks for funds (\$280,000 over the biennium) to continue this essential collaborative work between Oregon State University and Whiskey Creek Hatchery.

Through this collaborative work, it is now possible to insulate oyster hatcheries from the direct effects of ocean acidification; however, oysters planted in Oregon's coastal waters will be exposed to acidified seawater and other changes in ocean conditions, some of which are likely related to global warming. To address these challenges and to enhance the long-term viability of oyster farmers, we are also asking for support (\$570,000 over the biennium) for Oregon State University's Molluscan Broodstock Program (MBP). MBP was initiated in 1996 to improve the production and quality of Pacific oysters by means of selective breeding. After five generations of selection, farm yields of MBP-derived oysters have been improved by 19%, compared with those of non-selected, wild oysters. The program works closely with farmers in Oregon and the West Coast. MBP's improved broodstock are used by three of the four major hatcheries for seed production. Support from the State is vital for the continuation of this long-term, practical breeding program. There are currently no other Pacific oyster breeding programs on the West Coast.

Overall, Oregon's oyster industry benefits from close collaboration with Oregon State University. This close partnership has enabled West Coast oyster hatcheries and farmers to overcome immediate problems of seed availability associated with the effects of ocean acidification, as well as to adapt to future environmental challenges and opportunities through selective breeding and broodstock improvement.

I strongly support these Bills and encourage this committee to review them favorably