

Submitter: Karina Nielsen

On Behalf Of:

Committee: House Committee On Agriculture, Land Use, Natural Resources, and Water

Measure, Appointment or Topic: HB3786

I write in support of HB 3786 to fund the Oregon Ocean Science Fund to offer competitive ocean and coastal science grants that generate the science and information Oregon needs to support a healthy ocean and vibrant coastal economies. Changing ocean conditions put Oregon's ocean and coastal economies at risk. Investing in ocean science research helps reduce these risks to sustain coastal communities and the iconic coastal ecosystems all Oregonians enjoy. The Oregon Ocean Science Trust (OOST) manages the Fund to address the most important coastal and ocean research needs of Oregon. OOST has a strong track record of funding impactful research. This research has already generated information to support sustainable management of our commercial fisheries; assist fishing, aquaculture, and seafood industries and conservation and restoration practitioners adapt to changing ocean conditions including ocean acidification, hypoxia (low oxygen), and marine heat waves; and inform more effective conservation and restoration of coastal and ocean ecosystems and wildlife, while supporting coastal communities and economies.

However, new research and ongoing monitoring are needed to:

- understand how new and different strategies for sandy beach and dunes system management can address coastal erosion, which has and will continue to affect vital coastal transportation and infrastructure;
- assess the risks and vulnerabilities that threaten Oregon's economy and ecosystems from changing ocean conditions, including warmer, more acidic, and less oxygenated ocean water; and
- continue and enhance nearshore data collection and models to understand how changing ocean conditions are affecting species and ecosystems.

HB 3786 will support these critical research needs for Oregon.

The impacts of prior OOST funding include:

- Creating the first biophysical, ecosystem model of Coos Bay. This model combines physical, biological, and chemical data to understand how changes to the Coos Bay watershed and bay ecosystem influence the bay's hydrological, biogeochemical, and ecological processes. For the OOST project, the model was used to identify specific areas where eelgrass conservation and restoration could improve local pH and oxygen levels in the Bay. The benefits of developing the Coos Bay model go well beyond this study. It can be adapted to evaluate how Coos Bay's hydrological, biogeochemical, and ecological processes might respond to a variety of different ecosystems changes or mitigations. It has also identified data gaps that, if filled, would improve the model's capabilities to address other management questions.

- Providing a clearer picture of when and where low pH (ocean acidification) and low oxygen (hypoxic) conditions occur along the Oregon coast. It also revealed how changing coastal winds and marine heat waves are influencing ocean acidification and hypoxia.
 - Developing science-based guidance for best co-management practices for sustaining eelgrass and oyster aquaculture in Oregon bays and estuaries.
- OOST research in progress is addressing kelp forest restoration, supporting ODFW use new techniques to support commercial stock assessments of Black, Yellowtail, and Quillback Rockfish and determining the best places to restore native Olympia oysters in Yaquina Bay.

I urge you to support HB 3786 to fund the Oregon Ocean Science Fund.