

**Congresswoman Suzanne Bonamici (D-OR)**

Subcommittee on Environment Markup  
Statement for the Record  
*H.R. 1237, the “COAST Research Act of 2019”*  
April 9, 2019

Thank you Chair Fletcher and Ranking Member Marshall.

Our oceans and estuaries face immediate threats from increasing carbon emissions. About one third of the carbon dioxide in the atmosphere dissolves into the ocean, causing water chemistry to change. As our oceans, estuaries, and coastal waterways absorb carbon dioxide, chemical inputs, and excess nutrient run-off from land and coastal pollution, they are becoming more acidic.

Ocean and coastal acidification make it difficult for shellfish, coral, phytoplankton, and other marine organisms to build their shells and skeletal structures. Acidic waters also endanger salmon and other finfish. Knowledge about potential effects on other species is still limited, but we know that changes in ocean chemistry threaten the blue economy. They affect fishers and shellfish farmers who depend on the oceans’ resources to support their families, and the Tribes that have rights and deep cultural and historical connections to diminishing species. Our inaction on ocean and coastal acidification will have severe environmental and socioeconomic consequences, particularly on the Pacific Coast, where oceanic currents and coastal upwelling intensify the regional vulnerability to carbon dioxide emissions.

We must invest in research to better understand ocean and coastal acidification and give affected communities the tools they need to adapt and mitigate the effects. I was proud to reintroduce the bipartisan Coastal and Ocean Acidification Stressors and Threats (COAST) Research Act with Representatives Young, Pingree, and Posey to expand scientific research and monitoring to improve our understanding of ocean and coastal acidification.

During the legislative hearing on this bill in February, we heard witnesses describe the current research gaps that persist in federal efforts to address ocean and coastal acidification and the importance of increasing our understanding of interactions between ocean acidification, warming, and deoxygenation.

The COAST Research Act would improve research on ocean and coastal acidification in the context of other environmental stressors and direct federal agencies to assess adaptation and mitigation strategies. The most effective strategy for mitigation ocean acidification is reducing anthropogenic sources of carbon dioxide emissions worldwide. But there are actions that we can take at the local level to improve conditions, lessen exposure to ocean acidification, and manage local pollution and conditions that can exacerbate acidification. Oregon’s shellfish industry and researchers at Oregon State University have collaborated on ocean acidification mitigation strategies, like the use of seagrass at a local scale, that have helped the shellfish industry survive.

Their research demonstrates what is possible when we invest in science and research to help coastal communities adapt to climate change.

The bill would also designate the National Oceanic and Atmospheric Administration (NOAA) as the lead federal agency responsible for implementing the federal response to ocean and coastal acidification. As Chair of the Interagency Working Group on Ocean Acidification, NOAA is already leading interdisciplinary efforts to expand our understanding of changing ocean conditions. Designating NOAA as the lead federal agency on ocean and coastal acidification is a pragmatic response to calls for an interdependent national ocean acidification program office and recommendations from a September 2014 Government Accountability Office report titled “Ocean Acidification: Federal Response Under Way, but Actions Needed to Understand and Address Potential Impacts.” NOAA would be responsible for facilitating implementation of the Interagency Working Group’s strategic research plan, coordinating monitoring and research efforts among federal agencies, managing the Ocean Acidification Information Exchange, and maintaining a data archive system.

Additionally, the COAST Research Act would increase our understanding of the socioeconomic effects of ocean and coastal acidification in estuaries and engage stakeholders through an Advisory Board. The Advisory Board will be comprised of representatives of the shellfish and crab industry, finfish industry, seafood processors, recreational fishing, academia, nongovernmental organizations, state, local, and tribal governments, and regional coastal acidification networks. At the Full Committee markup, I intend to offer an amendment to add a representative from the Pacific Islands Ocean Observing System or similar entity representing the U.S. Pacific Islands and the State of Hawaii and a representative from the Caribbean Regional Association for Coastal Ocean Observing or a similar entity representing Puerto Rico and the U.S. Virgin Islands to the Advisory Board. The regionally balanced group will advise the Interagency Working Group on ocean acidification and coastal acidification research and monitoring activities. Furthermore, the bill expands the definition of ocean acidification to include estuaries and includes a definition of coastal acidification to recognize mechanisms that cause changes in coastal chemistry.

The bill would also provide for the long-term stewardship and standardization of data on ocean and coastal acidification by directing NOAA to establish and maintain a data archive system that processes, stores, archives, and provides access to data from federally funded research and research from state and local agencies, Tribes, academic scientists, citizen scientists, and industry organizations on ocean and coastal acidification. The system will incorporate existing global or national data assets including the National Centers for Environmental Information and the Integrated Ocean Observing System. Ocean acidification research is still in its infancy, and the best way to mitigate its effects is through regionally coordinated scientific research.

Finally, the bill would reauthorize the Federal Ocean Acidification Research and Monitoring Act funding for NOAA and the National Science Foundation through 2023. Authorization for this important research has lapsed since Fiscal Year 2012.

The COAST Research Act will help identify risks and inform vulnerable communities, industries, and coastal and ocean managers on how they can best prepare and, when possible,

adapt to changing conditions. This research is critical to the health of our oceans and our planet. Our oceans and estuaries are very vulnerable to the climate change, and we cannot afford to wait. I urge my colleagues to support this bill.

**Congresswoman Suzanne Bonamici (D-OR)**

Subcommittee on Environment Markup

Statement for the Record

*H.R. 1716, the “Coastal Communities Ocean Acidification Act of 2019”*

April 9, 2019

Thank you Chair Fletcher and Ranking Member Marshall.

The Pacific Coast, including my home state of Oregon, is more vulnerable to severe changes in ocean chemistry, including the pervasive effects of ocean acidification, than other coastal regions. The Pacific Coast can be used as a testing ground for different strategies and models to manage and adapt to ocean acidification, but ocean acidification is a global phenomenon. We must strengthen our understanding of the socioeconomic effects of ocean acidification on a range of geographically diverse coastal communities.

During the Environment Subcommittee hearing in February titled “Sea Change: Impacts of Climate Change on Our Oceans and Coasts,” we heard witnesses describe how strengthening our understanding of the socioeconomic effects of ocean acidification can guide the planning and response from coastal communities.

I am proud to be an original cosponsor of Congresswoman Pingree’s Coastal Communities Ocean Acidification Act. The bill would direct the National Oceanic and Atmospheric Administration (NOAA) to conduct an ocean acidification coastal community vulnerability assessment to identify coastal communities, island communities, low-population rural communities, and subsistence communities, that are dependent on coastal and ocean resources that may be affected by ocean acidification. The study would also assess the social and economic vulnerabilities of communities affected by ocean acidification and identify possible adaptation strategies. Importantly, the bill also directs NOAA to work with states, like my home state of Oregon, that are already developing ocean acidification plans.

The consequences of ocean acidification are already affecting the blue economy and are projected to worsen over time. We know that even if carbon dioxide emissions are halted today, many of the reciprocal effects for ocean acidification will continue to occur over the course of the next few decades. We must improve our understanding of the socioeconomic effects and vulnerabilities of ocean acidification to help coastal communities prepare appropriate mitigation and adaptation strategies.

I would like to thank Congresswoman Pingree for her leadership, and I urge my colleagues to support this bill.

**Congresswoman Suzanne Bonamici (D-OR)**

Subcommittee on Environment Markup

Statement for the Record

*H.R. 1921, the “Ocean Acidification Innovation Act of 2019”*

April 9, 2019

Thank you Chair Fletcher and Ranking Member Marshall.

Our understanding of ocean acidification and its interactions with other environmental stressors, such as hypoxia, harmful algal blooms, and warming water, is rapidly evolving, but still quite limited in scope. A 2009 white paper from the Ocean Carbon and Biogeochemistry’s Ocean Acidification Subcommittee estimated that that a U.S. national program on ocean acidification would need \$50 to \$100 million per year to provide timely information for managers and decision-makers. A 2012 report from the National Marine Sanctuaries Foundation based on informal conversations with program managers at various federal agencies estimated a need for approximately \$95 million for all federal ocean acidification research and monitoring by FY20. In Fiscal Year 2019, the National Oceanic and Atmospheric Administration (NOAA) Integrated Ocean Acidification Program received only \$12 million. There is no doubt that the gaps in federal research are a result of insufficient funding.

I am proud to be an original cosponsor of Congressman Kilmer’s Ocean Acidification Innovation Act, which would establish a prize competition for federal agencies that serve on the Interagency Working Group on Ocean Acidification to increase efforts to research, monitor, and manage ocean acidification and its effects. The prize competition will encourage collaboration and spur innovative strategies to mitigate and adapt to ocean acidification. This will help the communities, environments, and industries that rely on healthy oceans and are facing the harsh realities of rising carbon emissions.

It is my understanding that the Committee Report on this bill will include language to clarify the congressional intent that funds authorized in the Federal Ocean Acidification Research and Monitoring Act should not be used for the prize competition given the limited federal resources that currently exist for ocean acidification research.

I would like to thank Congressman Kilmer for his leadership, and I urge my colleagues to support this bill.

**Congresswoman Suzanne Bonamici (D-OR)**

Subcommittee on Environment Markup

Statement for the Record

*H.R. 988 the “NEAR Act of 2019”*

April 9, 2019

Thank you Chair Fletcher and Ranking Member Marshall.

As Co-Chair of the House Oceans Caucus and Congressional Estuary Caucus, I know that ocean and coastal acidification are not only affecting the open oceans. Estuaries and nearshore waters are also faced with environmental stressors. Ocean and coastal acidification often present itself in the context of other coastal processes, like runoff, erosion, and upwelled water from the oceans, making it is difficult to measure its individual effects on estuarine environments.

I am proud to be an original cosponsor of Congressman Posey’s National Estuaries and Acidification Research (NEAR) Act. The bill would direct the National Academies of Science Ocean Study Board to conduct a study that examines the existing science of ocean acidification in estuarine environments and provide recommendations to improve future research and management to inform mitigation decisions. This will address the significant research gap and urgent need for research on ocean and coastal acidification in estuaries.

It is my understanding that Congressman Posey will offer an amendment at the Full Committee markup to include authorizing language for the National Academies study to clarify the congressional intent that funds authorized in the Federal Ocean Acidification Research and Monitoring Act should not be used for the study given the limited federal resources that currently exist for ocean acidification research.

I would like to thank my fellow Co-Chair of the Congressional Estuary Caucus, Congressman Posey for his leadership, and I urge my colleagues to support this bill.