FEDERAL ACTIONS ON OCEAN ACIDIFICATION AND HYPOXIA

Background:

Congress has traditionally struggled with the issue of Ocean Acidification and Hypoxia (OAH) due to its direct ties to fossil fuel industries and a general lack of understanding from congressional staff and congressmen of ocean chemistry. OA has been identified as an issue of concern for the Senate Ocean Caucus, co-chaired by Sen. Murkowski (R-AK) and Sen. Whitehouse (D-RI). In 2017, the Senate Ocean Caucus sponsored an OA educational event for congressional staffers with the National Aquarium and the Ocean Foundation. Hypoxia has not been directly identified as an issue by the federal Senate Ocean caucus whose membership is at 33 bi-partisan Senators. The House Ocean Caucus has identified ocean chemistry more broadly as an issue of concern by the co-chairs Rep. Young (R-AK) and Rep. Bonamici (D - OR Dis.1). Neither OA nor hypoxia has been directly identified by the House Ocean Caucus, whose membership is at 81 bi-partisan Representatives. During past congressional sessions, there have been a series of bills introduced into the Senate and the House that have addressed various aspects of OA. Only one bill has directly addressed hypoxia.

At this time, the Federal Ocean Acidification Research and Monitoring Act of 2009 (FOARAM) is the largest, and most encompassing, piece of federal OA legislation. The legislation directs the President to establish the Interagency Working Group on Ocean Acidification, consisting of the thirteen federal agencies, to oversee the planning, establishment, and coordination of activities to improve national understanding of the role of increased OA on marine ecosystems. FOARAM requires the development of a report that includes: (1) a summary of federally funded OA research and monitoring activities; and (2) an analysis of the progress made toward achieving the goals and priorities for the interagency research plan. In addition, FOARAM allocated dedicated funding (roughly 11 million annually) to NOAA to establish and maintain an OA program. Funds were also granted to the National Science Foundation (NSF), the National Aeronautics and Space Administration (NASA), the United States Geological Survey (USGS), and the United States Fish and Wildlife Service (USFWS).

Issue:

H.R.2719 - Coastal Communities Ocean Acidification Act of 2017 (Introduced 05/25/2017)

H.R. 2719 was introduced by Rep. Pingree of Maine (Democratic - 1st district) with 6 original cosponsors, and 23 total sponsors. The bill was referred to the House Committee on Science, Space, and Technology, where is has gained little support and is commonly considered to be inactive for this legislative session (115th Congress). H.R. 2719 would require NOAA to study the socioeconomic impacts of OA on coastal communities and to conduct consultation with states through their Coastal Zone Management Programs. H.R. 2719 is complimentary to NOAA's legislative mandate outlined Federal Ocean Acidification Research and Monitoring Act (FOARAM) of 2009, by directing NOAA to focus on local and community level OA impacts and not regional level (e.g. Oregon state versus West Coast). Under this bill, under the authority of NOAA, would be required to

complete a series of reports to identify which communities are most dependent on ocean resources and how OA would affect valuable industries.

S.2229 - Coastal Communities Ocean Acidification Act of 2017 (Introduced 12/14/2017)

S.2229 was introduced by Sen. Murkowski of Alaska (Republican) with 4 original co-sponsors, 2 Republican and 2 Democratic Senators. The bill has been referred to the Committee on Commerce, Science, and Transportation (CJS). This bill is currently being held by the Senate Commerce Justice and Science Committee, until it can be added to a larger bill moving forward. *S.2229, is identical to H.R.2719, but differs in two main ways:* (1) Tribal government consultation was added into the FOARAM Act of 2009, (2) Sea grant institutions, Tribal monitoring programs, and OA monitoring groups were included, in addition to state Coastal Zone Management programs, into the consultation process for NOAA OA assessments. Adding in other avenues for local consultation was critical to get buy-in from Sen. Murkowski, since Alaska is no longer a partner state to the Coastal Zone Management program.

S.1425 - Coordinated Ocean Monitoring and Research Act of 2017 (Introduced 06/22/2017)

S.1425 passed the Senate by unanimous consent on 01/08/18, and was referred to the House Subcommittee on Water, Power and Oceans on 01/12/2018. S.1425, as reported to the House, is expected to gain bi-partisan support. This bill revises and reauthorizes the Integrated Coastal and Ocean Observation System Act of 2009 through FY2021. Through the bill NOAA must: (1) serve as the lead federal agency for the implementation of IOOS, and (2) establish an IOOS Program Office to oversee daily operations and coordination of IOOS.

S.1425 also has OA specific considerations. H.R.2719 and S.1425 differ from S.1424 in that they clearly define local and community level interaction pathways for NOAA consultation. The Joint Subcommittee on Ocean Science and Technology of the National Science and Technology Council must: (1) conduct an Ocean Chemistry Coastal Community Vulnerability Assessment of OA within a year and every five years thereafter; and (2) develop a plan to deploy OA sensors prioritized by the threat to coastal economies and ecosystems, gaps in data on ocean acidification, and research needs. NSF's research on OA must also include research on: (1) impacts of multiple stressors on ecosystems exhibiting hypoxia, harmful algal blooms, or sediment delivery; and (2) the effects of those impacts combined with changes in ocean chemistry.

Related Bills:

H.R.845 - Ocean Acidification Research Partnerships Act (Introduced 02/03/2017)

H.R. 845 was introduced by Rep. Salud of California (Democratic – 24th district) with 5 original cosponsors, and 10 bi-partisan sponsors. The bill has been referred to the Subcommittee on Environment, where is has gained little support and is commonly considered to be inactive for this legislative session. H.R. amends the FOARAM Act of 2009 to require the NOAA to provide grants for collaborative research projects on OA and developed aid partnerships between the seafood industry and the academic community. NOAA must prioritize projects which: (1) address ecosystems and

communities vulnerable to the impacts of OA, (2) demonstrate support from local stakeholders, or (3) utilize seafood industry assets as research and monitoring platforms.

H.R.2882 - Ocean Acidification Innovation Act of 2017 (Introduced 06/12/2017)

H.R. 2882 was introduced by Rep. Kilmer of Delaware (Democratic – 6th district) and Rep. Beutler of Washington (Republican – 3rd district). The bill has been referred to the Subcommittee on Environment, where is has gained little support and is commonly considered to be inactive for this legislative session. H.R. 2882 amends the FOARAM Act of 2009 to authorize a representative serving on the Interagency Working Group on OA to awards prizes competitively under the Stevenson-Wydler Technology Innovation Act of 1980. Such awards would be used for (1) stimulating innovation to advance the nation's ability to understand, research, or monitor OA, or (2) its impacts or to develop management or adaptation options for responding to OA. Priority must be given to establishing programs that address communities, environments, or industries that are in distress due to the impacts of OA.