

**Congress of the United States**  
**Washington, DC 20515**

December 15, 2018

The Honorable Mick Mulvaney  
Director  
Office of Management and Budget  
725 17<sup>th</sup> Street Northwest  
Washington, DC 20503

Dear Director Mulvaney:

We write to respectfully request that you allocate robust funding in the President's Fiscal Year 2020 budget request for programs that address a widespread and ever-increasing problem: toxic algal blooms, also called harmful algal blooms (HABs). Toxic algae affect marine, coastal, estuarine, and freshwater systems in all 50 states and all U.S. territories. A strong investment in programs that address toxic algae will help protect economic activity, the health of millions of Americans, and our environment.

Toxic blooms threaten human health and cause several billion dollars in economic losses each year. We have made significant advances in our understanding of where, when, and why blooms occur, but we must improve our ability to mitigate their impacts on our communities. We therefore strongly support investment in science, research, and management to increase our capacity to forecast, detect, prevent, and control HABs, as well as to lessen their effects on human health and economies across the country.

The severity of HABs is reflected in recent notable events including:

Toxic blue-green algae originating in Lake Okeechobee in Florida has fouled rivers and inland waterways leading to both coasts, wreaking havoc on the state's tourism industry and threatening public health. The Florida Department of Environmental Protection found that toxicity samples taken of the water discharged from Lake Okeechobee in 2018 had 495 parts per billion of microcystin—50 times higher than the safe level of toxicity for human contact. This toxic bloom remains a continued threat to drinking water and commercial and recreational uses of waterways. Concurrently, the red tide that stretches along more than 200 miles of the Florida Gulf coast has lasted more than a year and caused the deaths of millions of fish and hundreds of sea turtles, dolphins, and the protected Florida Manatee.

Drinking water advisories were issued due to two separate HAB toxins being detected above the EPA advisory levels in the Detroit Reservoir in Oregon this summer. The bloom affected the water distribution system for the City of Salem, City of Turner, Suburban East Salem Water District, and Orchard Heights Water Association, affecting more than 150,000 people and lasting several weeks. These events echoed the 2014 Toledo, Ohio, drinking water crisis that impacted more than 400,000 residents and lasted for three days after elevated concentrations of microcystin from the annually recurrent cyanobacterial bloom in Lake Erie were detected in the municipal water system.

In 2016, Utah Lake experienced a toxic bloom. Utah Poison Control reported hundreds of calls about the bloom, including calls from at least 130 people reporting vomiting, diarrhea, headaches and rashes after coming in contact with the toxic water.

New data from the Alaskan Arctic reveals the widespread presence of a toxic HAB species in waters from the Bering Strait to the Chukchi and Beaufort Seas, endangering food supplies for indigenous peoples as well as Arctic ecosystems that have had no prior exposure to these potent neurotoxins.

During summer 2015, potent neurotoxins associated with the so-called warm water “blob” off the West Coast triggered a toxic algae bloom from Southern California to Alaska that closed hundreds of miles of shellfish and crab fisheries. Coastal communities lost tens of millions of dollars from the closure of the Dungeness crab fishery alone. The toxic substance that can accumulate in shellfish, domoic acid, can cause permanent brain damage in humans and a human poisoning syndrome called amnesic shellfish poisoning (ASP).

Several new toxic HAB species have emerged as regional threats in New England coastal waters. One species that produces domoic acid and ASP bloomed in the region for the first time in 2016, resulting in a major shellfish recall and harvesting closures across approximately half of Maine’s coastline and large areas of Massachusetts and Rhode Island. Subsequent blooms in 2017 and 2018 jeopardized or suspended shellfish harvesting in some of these same areas again. Two other new toxic or harmful HAB species have also been documented in the Gulf of Maine over the last two years, including an organism previously restricted to warm southern waters.

Alarmingly, coordinated studies released in 2017 from the Environmental Protection Agency (EPA), U.S. Geological Survey (USGS), and the National Oceanic and Atmospheric Administration (NOAA) revealed that from a single sampling of all lakes nationwide, 39% contained toxic algae and toxins were present at some point during the year in 78% of the lakes. Furthermore, based on the tracking of news reports in 2018, reported HABs increased 40% above the reported incidences in 2017. This is a worrisome trend as HABs are already a national problem.

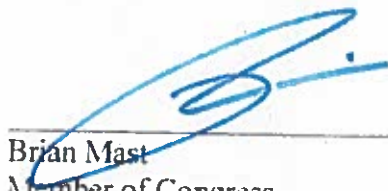
To make the necessary progress toward understanding and addressing the significant and expanding threats that toxic algae pose to human health and our national economy, we ask that you prioritize a strong and coordinated federal response in this year’s budget request by including robust funding to support multi-investigator research programs for HAB-related work. Areas of emphasis should include: furthering our understanding of the socioeconomic impacts of HABs on our coastal communities; developing and improving early warning, forecasting, and detection tools; enhancing our understanding of how changes in climate may affect HABs as well as new and emerging organisms and toxins of concern; expanding our understanding of the various drivers of HABs in different regions of the country and the mechanisms underlying those events; and improving awareness of how HABs interact with other environmental stressors like hypoxia.

We look forward to your response and to working with you to better monitor and mitigate the damage caused by harmful algal blooms and to protect the health of Americans and our local economies.

Sincerely,



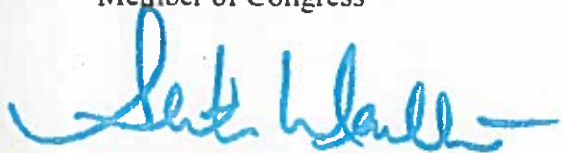
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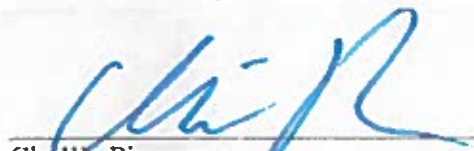
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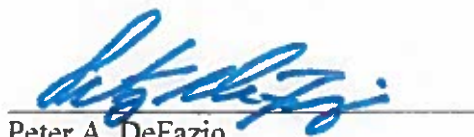
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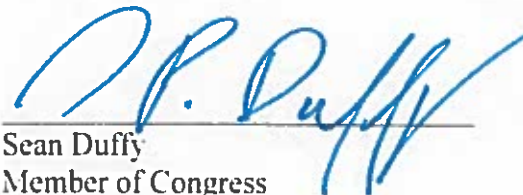
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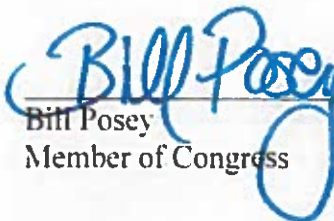
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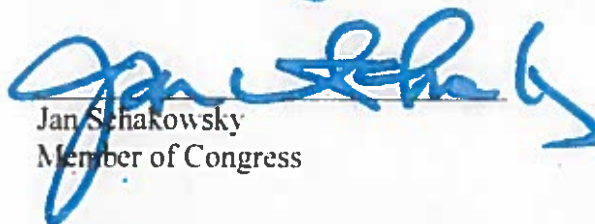
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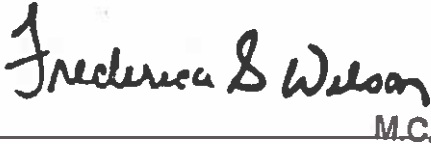
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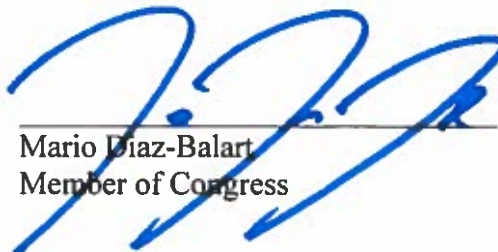
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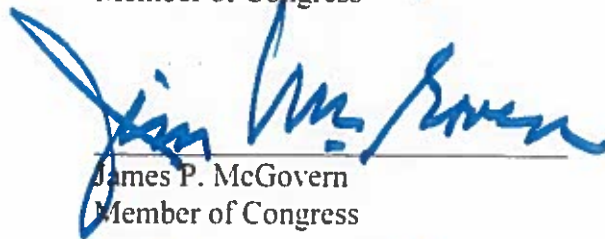
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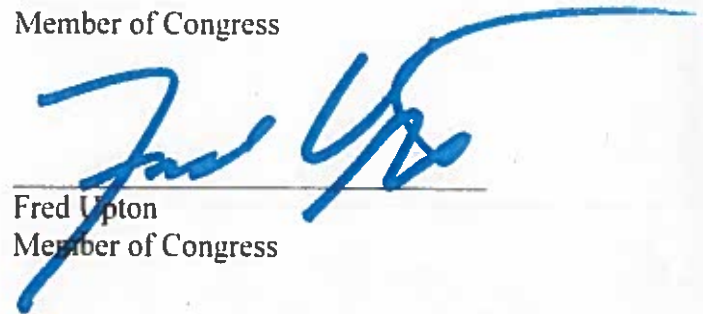
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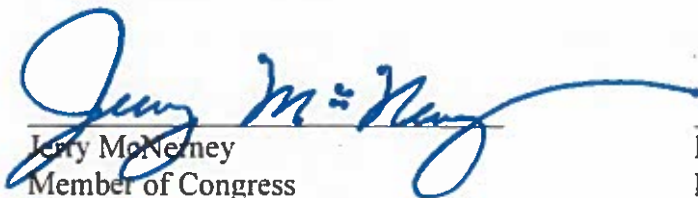
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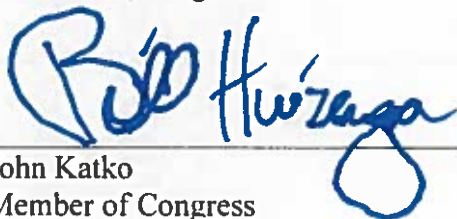
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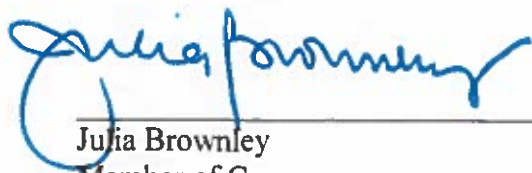
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