

UNITED STATESDEPARTMENTOFCOMMERCE National Oceanic and AtmosphericAdministration NATIONAL OCEAN SERVICE Nat,onol Cer,ters for Coastal Ocean Science Silver Spring, Maryland 20910

SEP 2 7 2019

National HAB Committee c/o Mindy L. Richlen, Ph.D. Woods Hole Oceanographic Institution Biology Department Mail Stop 32, Redfield 332 Woods Hole MA 02543-1049 USA

RE: Lifetime Research and Service Award Nomination Dr. Quay Dortch, Nominee

Dear Dr. Richlen,

Please accept the forwarded letter nominating Dr. Quay Dortch for the National HAB Committee (NHC) Lifetime Research and Service Award.

I am honored to be a pail of the team that is nominating Dr. Dortch. I know I speak on behalf of the team in saying we feel no other individual is a stronger candidate for this award. Dr. Dortch's leadership, expertise, and service have had a major positive impact on the U.S. HAB community and her deep commitment to the field over her 50-year career is unparalleled.

We thank the NHC for considering our nomination of Dr. Dortch.

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Steven Thur, Ph.D. Director



Dear Members of the National HAB Committee,

Our team is nominating Dr. Quay Dortch for the National HAB Committee (NHC) Lifetime Research and Service Award. Quay has significantly advanced the science, understanding, and awareness of harmful algal blooms (HABs) and their impacts on society throughout her career as both a world-class research scientist and as a lead for National Oceanic and Atmospheric Administration (NOAA) HAB programs. Quay is a nationally and internationally recognized leader in HAB research who has provided invaluable service to the HAB community. She is a strong and deserving candidate for this prestigious award.

Prior to joining NOAA, Quay worked almost 30 years as a professional oceanographer, nearly half of this time as a Louisiana Universities Marine Consortium professor with adjunct status at several institutions in the region. Quay amassed extensive field and laboratory experience, and solidified her reputation as a leading researcher with expertise in phytoplankton ecology and physiology, HABs, and eutrophication. Quay mentored 30 students and two post-doctoral fellows and it is a testament to her skill that many became prominent HAB scientists. Quay demonstrated exceptional success and productivity in peer-reviewed research having led or collaborated on over 30 competitively funded projects and authored 62 peer-reviewed publications, including highly cited papers on nitrogen utilization, Si:N effects, river plume systems, and paleo-oceanography. Her article comparing nitrate vs. ammonium utilization by phytoplankton is broadly acknowledged as part of the "classic/seminal" literature.

In 2003, Quay joined NOAA as the lead manager of the federal inter-agency, national HAB research program known as Ecology and Oceanography of Harmful Algal Blooms (ECOHAB). Quay coordinated a community planning process that led to the creation of the new, competitive program Prevention, Control, and Mitigation of Harmful Algal Blooms (PCMHAB) in 2009, responding to Congressional direction to develop methods of reducing HAB impacts. During this time, she also co-managed the HAB Event Response Program. Quay has provided oversight for over \$75 million in NOAA HAB research across 113 projects, which have produced nearly 1,000 peer-reviewed publications and 11 special issue journal volumes and created new HAB mitigation approaches that have been adopted nationwide. Quay's key accomplishments include: development of ecogenomic approaches to determine the causes of brown tide in Long Island supporting strategies to reduce nutrient loading in ground and surface waters; implementation of a shipboard screening dockside testing method for toxins in clams from Georges Bank to open a lucrative fishery in federal waters; and developing predictive models and forecasts in many HAB impacted regions that advance our ecological understanding and deliver actionable information to managers.

Quay regularly provides science and policy expertise for NOAA leadership, participates in highlevel Congressional staff meetings, and fields numerous media requests. The breadth and depth of her knowledge and ability to communicate HAB science capabilities and needs have been invaluable; she has the rare ability to simplify complicated or nuanced issues to influence decision makers. Her tireless efforts have contributed directly to the continued reauthorization of HABHRCA (2004, 2014, and 2017) and a slow but steady restoration of NOAA's competitive HAB funding from \$9M in 2016 to \$18M currently. Quay has been a strong advocate for transparency in federal program management and policy development and for incorporating external perspectives by facilitating collaboration and engagement with the HAB community.

Quay's consistent leadership has been critical to the creation, expansion, and endurance of the U.S. HAB community. She has overseen the development of and co-authored many national-

level reports that continue to provide strategic direction for U.S. HAB science. Her service on the National HAB Committee, a highly effective community governance structure, has facilitated federal engagement with the HAB community. Quay was an early proponent of expanding the U.S. HAB symposia series to include a freshwater focus and of facilitating attendance by students and managers.

Quay has also been a driving force behind federal agency HAB coordination, encouraging efficient use of federal HAB science funding, and has been a productive member of many professional societies including AAAS, ASLO, and ISSHA. As a NOAA Advisor to the Interstate Shellfish Sanitation Conference, Quay identified a need for research to speed the transfer of HAB detection tools to state shellfish safety programs and growers. Her initiative fostered NOAA support for projects that are moving biotoxin detection methods into regulatory use; training managers in HAB species taxonomy and microscopic identification, and promoting a better understanding of toxin accumulation and depuration in shellfish. Quay has coordinated with other program managers, scientists, and managers to transition technologies including the Imaging FlowCytobot (IFCB) and Environmental Sample Processor (ESP) from generic research tools with limited management utility to marketable assets for HAB detection and mitigation, valued by coastal managers. The commercialization and subsequent adoption of these instruments by resource managers allows more informed shellfish industry management and stronger prevention of HAB-related human illnesses.

During the unprecedented 2015 West Coast *Pseudo-nitzschia* HAB event, Quay assembled a cross-NOAA team that advised NOAA, state and tribal leaders along the West Coast on the potential causes, impacts, and duration of the event. Quay coordinated a multi-jurisdictional response providing science and funding to promote sustainable fisheries and protect public health throughout the region. Quay led similar efforts that bolstered state responses and documented impacts caused by the 2005 New England Red Tide event, the 2017-2019 Florida *Karenia brevis* bloom, and the recent cyanobacterial blooms in the northern Gulf of Mexico.

Throughout her career, Quay has distinguished herself through many achievements as a scientist, program manager, and advocate for the U.S. HAB community. Quay has been a dependable colleague, a trusted mentor, and a cherished friend to the many members of our diverse HAB field. Quay is personable, accessible, supportive, and insightful. She has inspired women to careers in science and has championed greater workplace diversity, making a positive impact throughout her career. We can think of no other individual whose leadership, expertise, service and reputation have so vastly impacted the U.S. HAB community. It is our sincere hope that you will honor Quay's deep commitment to HAB science and her dedicated service to the HAB community with the NHC Lifetime Research and Service Award.

Respectfully,

Maggie Broadwater, Ph.D. - Acting Program Manager, NCCOS Competitive Research Program Gregory Doucette, Ph.D. - Research Scientist, NCCOS Stressor Detection & Impacts Division David Kidwell, M.S. - Director, NCCOS Competitive Research Program Judith Kleindinst - formerly U.S. HAB National Office, Woods Hole Oceanographic Institution Raphael Kudela, Ph.D. - Professor, University of California Santa Cruz Marc Suddleson, M.S. - Program Manager, NCCOS Competitive Research Program Steven Thur, Ph.D. - Director, National Centers for Coastal Ocean Science