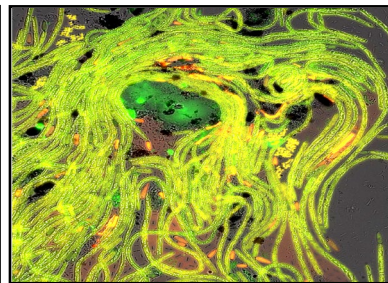


Freshwater HABs Newsletter



[HABs Included in the EPA's Fish and Shellfish Program Newsletter](#)

The September issue of the EPA *Fish and Shellfish Program Newsletter* focuses on harmful algal blooms. It highlights current information about health advisories and closures for fish and shellfish, ORD research on methods development for microcystins in fish tissue, new technologies for detection of red tide-causing organisms, publications, and future meetings and conferences.

For more information about this newsletter, contact Sharon Frey at Frey.Sharon@epa.gov. Additional information about advisories and fish and shellfish consumption can be found at <https://www.epa.gov/fish-tech>

Raphidiodopsis (Cylindrospermopsis) raciborskii. Lake Discovery, RTP, NC.
October 4th, 2018
From Dr. Zucker, NHEERL, EPA

[NSF Research Experiences for Undergraduates \(REU\)](#)

At Auburn University, Alabama Summer 2019 from May 19 to July 28. Research will focus on the ecology of southeastern ponds, rivers, reservoirs, and estuaries. For more information go to <http://wilsonlab.com/reu/>

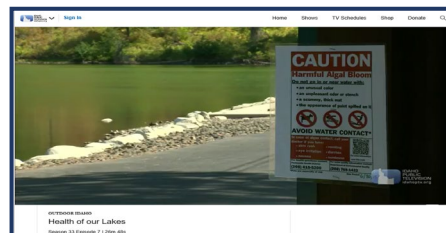
[NCCOS FY19 FFOs for Harmful Algal Blooms and the Ecological Effects of Sea Level Rise Grants](#)

NOAA/NOS/National Centers for Coastal Ocean Science (NCCOS)/Competitive Research Program (CRP) is soliciting proposals for the Monitoring and Event Response for Harmful Algal Blooms (MERHAB) and The Ecology and Oceanography of Harmful Algal Blooms (ECOHAB) Research Programs. Funding is contingent upon the availability of Fiscal Year 2019 Federal appropriations. It is anticipated that projects funded under this announcement will have a September 1, 2019 start date.

Deadline for Letters of Intent: November 5, 2018

Deadline for Full Applications:

- ✓ January 22, 2019 for MERHAB
- ✓ February 4, 2019 for ECOHAB



[Outdoor Idaho: "Health of our Lakes" Video](#)

Outdoor Idaho: The Health of Our Lakes video follows scientists and lake managers as they investigate increasing levels of cyanobacteria and identify for solutions.

[Hypoxia Hazard Video](#)

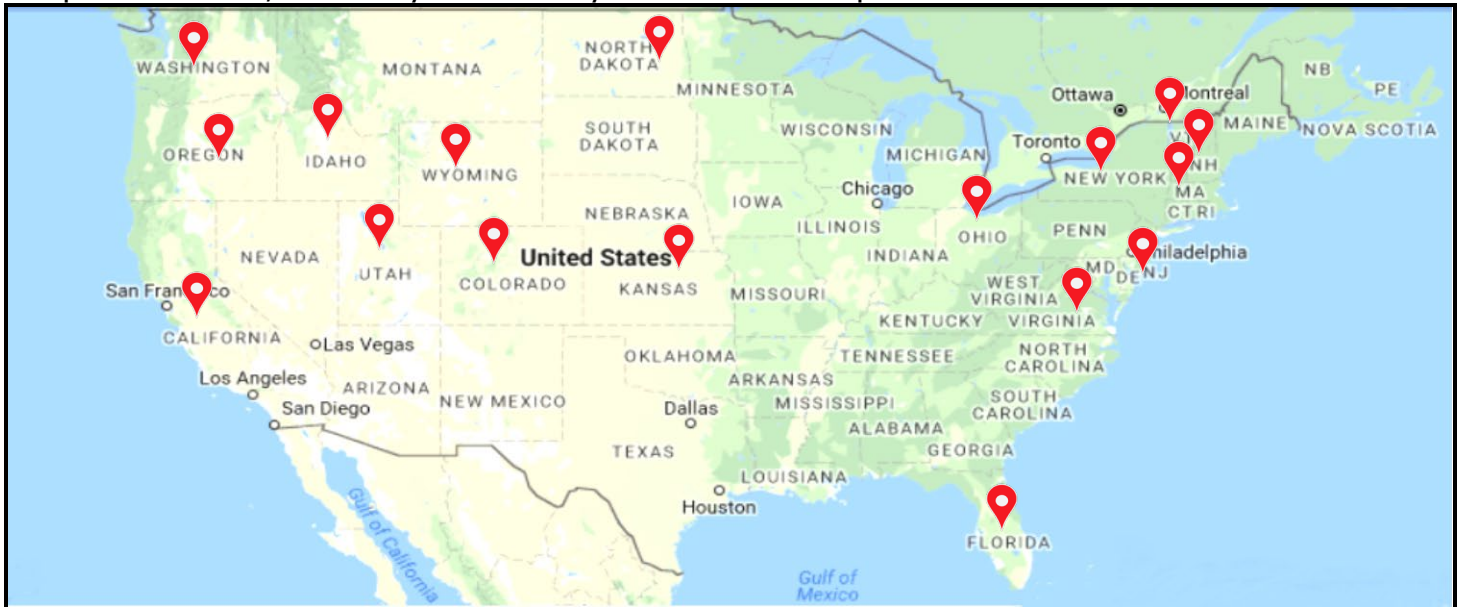
Oregon Coordinating Council on [Ocean Acidification and Hypoxia](#) was created in 2017 with the passage of Oregon Senate Bill 1039 to provide recommendations and guidance to the state on how to respond to hypoxia and ocean acidification. Composed of members of State agencies, academia, stakeholders, and Tribal interests, the council will work to develop recommendations, and advise the State on the implementation of actions to support the sustainability of Oregon's ocean as OAH intensifies.

[Benthic HAB Workgroup meeting on Research and Technology](#)

The Benthic HABs Discussion Group held a webinar on October 23rd on Research and Technology with two presentations: "[A Comparison of Dredging Activities and HAB Events: Case Studies in Lake Erie and the Chesapeake Bay](#)" by Dr. Kaytee Pokrzywinski, and "[Using Machine Learning Techniques for Classification of Harmful Algal Blooms](#)" by Dr. Michael Waters. To listen to the webinar recording go [here](#).

BLOOMS, BEACH CLOSURES and HEALTH ADVISORIES, October 2018

The following map includes blooms, cautions, warnings, public health advisories, closings and detections over the State's threshold, due to the presence of algae, toxins or both. This is not a comprehensive list, and many blooms may have not been reported.



- **California (16):** Whiskeytown Lake, Clear Lake, Huichica Pond, Lake Naza, Lake Chabot, Quarry Lakes, Pilarcitos Creek, Lake Cunningham, Shadow Cliffs Arroyo, Discovery Bay, Old River, San Luis River, Crowley Lake, Hensley Lake, Salton Sea near Desert Shores, Pyramid Lake
- **Colorado: (1)** Cebolla Basin section of Blue Mesa Reservoir
- **Idaho (4):** Mormon Reservoir, Fernan Lake, Brownlee Reservoir, Lake Cascade
- **Kansas (3):** Watches (South Lake Park); Warning (Frazier Lake, Jerry Ivey Pond)
- **Florida (5):** Indian River Lagoon, Riverland Woods Park, Himmarshee Canal, Bill Keith Preserver, Lake Okeechobee, [Red Tide](#) (Pinellas, Hillsborough, Manatee, Sarasota, Charlotte, Lee, Escambia, Santa Rosa, Bay, Brevard, Indian River, and Martin counties)
- **Massachusetts (5):** Cedar Lake, Sturbridge; Central Pond, Seekonk; Hummock Pond, Nantucket; South Watuppa Pond, Fall River, Westport; Turner Reservoir, Seekonk
- **New Hampshire (1):** Hunkins Pond in Sanbornton
- **New York (1):** Canandaigua Lake, "Do Not Drink Advisory" Rushville and Middlesex public water systems.
- **New Jersey (14):** Deal Lake, Duck Pond, Weequahik Lake, Memorial Lake, Swartswood Lake, Budd Lake, Unnamed Lake Saddle River Park, Cupsaw Lake, Little Swartswood Lake, Spruce Run Reservoir, Southard Park Pond, Lake Hopatcong, Crystal Springs Pond, Branch Brook Park Lake
- **North Dakota (1):** Homme Dam
- **Ohio (3):** Maumee River, Woodsfield Reservoir, Grand Lake St. Marys
- **Oregon (3):** South Umpqua River, Keno Dam and Upper Klamath Lake
- **Utah (6):** Deer Creek Reservoir, Manning Meadow Reservoir, Otter Creek, Panguitch Lake, Utah Lake, Scofield Reservoir
- **Vermont (3):** Lake Morey, New Port City Docks, Farrant Point to Marina
- **Virginia (1):** Pamunkey And North Anna Branches, Lake Anna
- **Washington (9):** Moses Lake, Pattison Lake, Potholes Lake, Potholes Reservoir, Lacamas Lake, Burien Lake, Hicklin Lake, Kitsap Lake, Lone Lake
- **Wyoming (2):** Alcova Reservoir, Pathfinder Reservoir (from September 26th).

RECENTLY PUBLISHED ARTICLES

[Extracts from benthic anatoxin-producing Phormidium are toxic to 3 macroinvertebrate taxa at environmentally relevant concentrations](#)

Brian Anderson, Jennifer Voorhees, Bryn Phillips, Rich Fadness, Rosalina Stancheva, Jeanette Nichols, Daniel Orr, Susanna A. Wood. *Environ Toxicol Chem* 2018.

[Biosynthesis of the neurotoxin domoic acid in a bloom-forming diatom](#)

John K. Brunson, Shaun M. K. McKinnie, Jonathan R. Chekan, John P. McCrow, Zachary D. Miles, Erin M. Bertrand, Vincent A. Bielinski, Hanna Luhavaya, Miroslav Oborník, G. Jason Smith, David A. Hutchins, Andrew E. Allen, Bradley S. Moore. *Science* 28 Sep 2018: 1356-1358

[Impact of Microcystin-LR on Liver Function Varies by Dose and Sex in Mice](#)

Igor Mrdjen, Mark A. Morse, Randall J. Ruch, Thomas J. Knobloch, Shambhunath Choudhary, Christopher M. Weghorst, and Jiyoung Lee. *Toxins* 2018, 10, 435.

[Linking phytoplankton pigment composition and optical properties: a framework for developing remote-sensing metrics for monitoring cyanobacteria](#)

Gabriel Hmimina, Florence D. Hulot, Jean François Humbert, Catherine Quiblier, Kevin Tambosco, Bruno Lemaire, Brigitte Vinçon-Leite, Louise Audebert, Kamel Soudani. *Water Research*, 2018.

[New Method for Simultaneous Determination of Microcystins and Cylindrospermopsin in Vegetable Matrices by SPE-UPLC-MS/MS](#)

Leticia Díez-Quijada, Remedios Guzmán-Guillén, Ana I. Prieto Ortega, María Llana-Ruíz-Cabello, Alexandre Campos, Vitor Vasconcelos, Ángeles Jos and Ana M. Cameán. *Toxins* 2018, 10 (10), 406.

[Extensive Contamination of Water with Saxitoxin Near the Dam of the Irkutsk Hydropower Station Reservoir \(East Siberia, Russia\)](#)



Mikhail Grachev, Ilya Zubkov, Irina Tikhonova, Maria Ivacheva, Anton Kuzmin, Elena Sukhanova, Ekaterina Sorokovikova, Galina Fedorova, Aleksandr Galkin, Maria Suslova, Olga Netsvetayeva, Elena Eletskaaya, Tatyana Pogadaeva, Vladimir Smirnov, Andrey Ivanov, Vladimir Shagun, Viktor Minaev and Olga Belykh *Toxins* 2018, 10 (10), 402.

[Comparison of ELISA and LC-MS/MS Analytical Methods and Validation of AWWA Hazen-Adams CyanoTOX](#)

He, Xuexiang & Stanford, Benjamin & Adams, Craig & J. Rosenfeldt, Erik & C. Wert, Eric. (2018). *Journal - American Water Works Association*. 110. 62-67.

[Microcystin Surveillance Study of Iowa's Public Water Supply Systems July 11, 2016 – June 26, 2017 Report of Findings](#) Iowa Department of Natural Resources (DNR), June 2018

Upcoming Conferences and Seminars

-  [11th International Conference on Toxic Cyanobacteria, Kraków, Poland, May 5–10, 2019](#)
-  [EPA Biotech Products CoP Seminar Series: Invasive Species Removal and Ecological Recovery, Nov 8, 2018 1:00-2:00 pm EST](#)

This newsletter was created by Dr. Lesley V. D'Anglada, Office of Science and Technology, Office of Water, EPA. Mention of trade names, products, or services does not convey and should not be interpreted as conveying official EPA endorsement, approval or recommendation for use.

To sign up please send an email to: epacyanohabs@epa.gov For previous newsletters, go to [Freshwater HABS Newsletter](#) or visit the [USEPA's CyanoHABS Website](#)