United States Environmental Protection Agency

Teshwater HABs News

GAO's Information on Federal Agencies' Expenditures and Coordination Related to Harmful Algae Report

Twelve federal agencies reported expending an estimated total of roughly \$101 million from fiscal years 2013 through 2015 to fund various research, monitoring, and other activities related to HABs in marine or freshwater environments. The 5 agencies with the largest expenditures related to harmful algal blooms for this period—totaling roughly \$86 million—were the NOAA, \$39.4 million; NSF, \$15.4 million; EPA, \$14.5 million; USGS, \$9 million; and the NIEHS, \$8 million. These 5 agencies funded efforts to research and analyze harmful algal blooms; forecast, monitor, and respond to their occurrence; and investigate human and ecological health effects. In addition, federal officials reported that agencies participate in numerous groups, task forces, and other coordination efforts led by federal agencies, states, international organizations, or academics. Furthermore, federal officials reported a number of interagency partnerships directly related to their harmful algae work.

USEPA Freshwater Harmful Algal Blooms Research Grant

As part of its Science to Achieve Results (STAR) program, EPA announced the release of the Freshwater Harmful Algal Blooms Request for Applications. This RFA seeks regular and early career applications proposing innovative research on the prediction, prevention, control and mitigation of freshwater HABs as well as the drivers, life cycle patterns, and fate of and effects from less-common, less-studied, and emerging freshwater HAB species and toxins.

New Publication: Toxic and Harmful Microalgae of the World Ocean

The publication examines trends in the spread of toxic marine microorganisms and evaluates policies to contain them. The publication also examines in particular the impacts of eutrophication (high concentration of nutrients in the water), overfishing, globalized maritime traffic and climate change.

Inland HABs Discussion Group Webinar

On October 20th, the Inland HABs Discussion Group hosted a webinar on response efforts to deal with HABs in freshwater systems. In addition, the Florida Department of Environmental Protection and the Utah Department of Environmental Protection presented on their 2016 HABs experience. Presentations and audio recording are posted <u>here</u>.



October, 2016

Belcourt Lake, North Dakota September 22, 2016 Photo: W. Houle

UPCOMING EVENTS

Webinars <u>EPA's Water</u> <u>Research Webinars</u>

Workshops

Developing a HAB Action Plan for Alaska December 8–9, Alaska

Conferences <u>NALMS 2016</u> November 1-4, Canada

SETAC 2016 November 6-10, Florida

ASLO February 26-March 3, Hawaii

Useful Resources ✓ <u>EPA's Funding</u>

- <u>Opportunities</u>
- ✓ EPA's Water Research Grants
- ✓ <u>Iowa Water Center</u> <u>Seed Grant</u> <u>Program (HABs)</u>

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HABs, BEACH CLOSURES AND HEALTH ADVISORIES, OCTOBER 2016



Toxins collection <u>"Freshwater HABs and Health in a Changing World"</u> is open for manuscript submission. Please visit Toxins website here <u>www.mdpi.com</u>

RECENTLY PUBLISHED ARTICLES

The re-eutrophication of Lake Erie: Harmful algal blooms and hypoxia

Watson, S.B., C. Miller, G. Arhonditsis, G.L. Boyer, W. Carmichael, M.N. Charlton, R. Confesor, D.C. Depew, T.O. Hook, S.A. Ludsin, G. Matisoff, S.P. McElmurry, M.W. Murray, R.P. Richards, Y.R. Rao, M.M. Steffen, and S.W. Wilhelm. 2016. Harmful Algae 56:44-66.

Evidence of freshwater algal toxins in marine shellfish: Implication for human and aquatic health Corinne M. Gibble et al. 2016. Harmful Algae. 59:59-66

Initial skill assessment of the California Harmful Algae Risk Mapping (C-HARM) system Clarissa R. Anderson, Raphael M. Kudela, Mati Kahru, Yi Chao, Leslie K. Rosenfeld, Frederick L. Bahr, David M. Anderson and Tenaya A. Norris. Harmful Algae. 59: 1-18

Characterization of akinetes from cyanobacterial strains and lake sediment: A study of their resistance and toxic potential Benjamin Legrand, Amélie Lamarque, Marion Sabart and Delphine Latour, 2016. Harmful Algae. 59: 42-50.

Stress of algicidal substances from a bacterium *Exiguobacterium* sp. h10 on *Microcystis* aeruginosa

Li, Y., Liu, L., Xu, Y., Ping, L., Zhang, K., Jiang, X., Zheng, T. and Wang, H. 2016, Lett Apply Microbiology.

Cyanobacterial Harmful Algal Blooms and U.S. Geological Survey Science Capabilities Jennifer L. Graham, Neil M. Dubrovsky, and Sandra M. Eberts. USGS Report 2016–1174, October 2016