EPA Updates!
HABs News, Research, Resources, and Tools

Virtual 2021 Hypoxia Task Force Meeting

The Hypoxia Task Force will host a Virtual 2021 Public Meeting on Tuesday, December 14, 2021 at 10:00am - 2:55pm EST

Please register by December 10, 2021

The Mississippi River/Gulf of Mexico Watershed Nutrient Task Force was established in the fall of 1997 to understand the causes and effects of eutrophication in the Gulf of Mexico; coordinate activities to reduce the size, severity, and duration; and ameliorate the effects of hypoxia. Activities include coordinating and supporting nutrient management activities from all sources, restoring habitats to trap and assimilate nutrients, and supporting other hypoxia related activities in the Mississippi River and Gulf of Mexico watersheds.

The Mississippi River/Gulf of Mexico Watershed Nutrient Task Force holds public meetings throughout the Mississippi River Basin to inform the public of the progress toward moving forward on Gulf Hypoxia.

More information on the Hypoxia Task Force is available on EPA’s Mississippi River/Gulf of Mexico Hypoxia Task Force website. Related meetings are posted on this website, as well.

More HABs information is available on EPA’s CyanoHABs in Water Bodies website.
Interesting Reports on HABs Research

**2021 New York State HABs Research Guide**

**Action Plan for Harmful Algal Bloom Monitoring, Research, Outreach, and Event Coordination in Alaska**

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**NOAA’s Notice of Funding Opportunity**

The National Oceanic and Atmospheric Administration (NOAA) recently issued its Fiscal Year (FY) 22 Phase I Notice of Funding Opportunity for the Small Business Innovation Research (SBIR) program. Proposals are encouraged from qualified small businesses for highly innovative technologies with strong commercial potential. Research to commercialize HAB toxin detection, HAB control and mitigation technologies that advance a broad set of topics and agency priorities listed in Section 9.0 of the NOFO may be supported.

Submit a required Letter of Intent via [this form](#) by December 13, 2021 at 11:59 pm (ET) to be eligible to submit a Phase I application. More details and program contact information are on this [NOAA SBIR website](#).

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Would you or a colleague like to sign up to receive future issues of this newsletter? Simply send an email to epacyanohabs@epa.gov
Go to EPA's interactive Tracking CyanoHABs Story Map to access the data points underlying the map and for more information.

Click the state name to see the reported blooms for the month of November 2021:
- California (19); Florida (1); Idaho (10); Kansas (13); Massachusetts (5); Michigan (1); Montana (2);
- New Hampshire (2); New Jersey (4); New York (15); North Carolina (2); North Dakota (3); Oregon (3);
- Rhode Island (12); South Carolina (2); Texas (1); Vermont (1); Washington (4); Wyoming (18)

Upcoming Virtual Events

- **2nd Annual Virtual Harmful Algal Bloom Symposium**
  January 6-7, 2022
  Emerging Research & Case Studies

- **12th International Conference on Toxic Cyanobacteria**
  May 22-27, 2022, Toledo, Ohio
  Abstract Deadline: January 15th, 2022
  Early Registration: March 1st, 2022

- **Pathogens and Natural Toxins e-Conference**
  July 1st to August 31st, 2022

- **U.S. Symposium on Harmful Algae**
  October 23-28, 2022, Albany, New York

Additional Useful Resources

Save the Date

Upcoming US EPA Benthic HAB Discussion Group Webinar on

February 8, 2022

For more information visit the [EPA’s Benthics Discussion Group website](#)
Recently Published Articles

**Occurrence of cyanobacteria in water used for food production: A review**

**The reduction in water volume favors filamentous cyanobacteria and heterocyst production in semiarid tropical reservoirs without the influence of the N:P ratio**
Camila Ferreira Mendes, Juliana dos Santos Severiano, Gustavo Correia de Moura, Ranielle Daiana dos Santos Silva, Flávia Morgana Monteiro, José Etham de Lucena Barbosa, Science of the Total Environment, 2021, 151584.

**Nitrate as a predictor of cyanobacteria biomass in eutrophic lakes in a climate change context**

**Monitoring of the impact of the proliferations of cyanobacteria on the characteristics of Natural Organic Matter in a eutrophic water resource: Comparison between 2012-2013 and 2017-2018**

**Co-occurrence of multiple cyanotoxins and taste-and-odor compounds in the large eutrophic Lake Taihu, China: Dynamics, driving factors, and challenges for risk assessment**
Hongmin Li, Xiaohong Gu, Huihui Chen, Zhigang Mao, Ruijie Shen, Qingfei Zeng, You Ge, Environmental Pollution, 2021, 118594.

**Phytotoxic effects of microcystins, antitoxin-a and cylindrospermopsin to aquatic plants: A meta-analysis**

**New insights into toxicity of microcystins produced by cyanobacteria using in silico ADMET predicton**
Cristiane Gonçalves da Silva, Marcelo Dutra Duque, Cristina Souza Freire Nordi, Cristina Viana-Niero, Toxicon, Volume 204, 2021, Pages 64-71.

**Influence of refrigeration and freezing in Microcystins and Cylindrospermopsin concentrations on fish muscle of tilapia (Oreochromis niloticus) and tench (Tinca tinca)**
Leticia Diez-Quijada, Ana I. Prieto, Remedios Guzmán-Guillén, Ana M. Cameán, Ángeles Jos, Food and Chemical Toxicology, 2021, 112673.

**Isolation from a fish kill and transcriptomic characterization of Gyrodinium jinhaense off Long Island Sound**
Brittany N. Sprecher, Huan Zhang, Gihong Park, Senjie Lin, Harmful Algae, Volume 110, 2021, 102136.

**Phycocyanin, a super functional ingredient from algae; properties, purification characterization, and applications**

**The presence of polystyrene nanoplastics enhances the MCLR uptake in zebrafish leading to the exacerbation of oxidative liver damage**
Xiaodong Ling, Junli Zuo, Meiqi Pan, Hongyan Nie, Jianzhong Shen, Qing Yang, Tien-Chieh Hung, Guangyu Li, Science of the Total Environment, 2021, 151749.

**MCLR-elicited hepatic fibrosis and carcinogenic gene expression changes persist in rats with diet-induced nonalcoholic steatohepatitis through a 4-week recovery period**

**Environmental controls of harmful cyanobacterial blooms in Chinese inland waters**
Hai Xu, Boqiang Qin, Hans W. Paerl, Kai Peng, Qingji Zhang, Guangwei Zhu, Yunlin Zhang, Harmful Algae, Volume 110, 2021, 102127.

**Sensitive Electrochemical Detection of Microcystin-LR in Water Samples Via Target-Induced Displacement of Aptamer Associated [Ru(NH₃)₆]³⁺**

*Articles are retrieved monthly from Science Direct research database searching for the following key words: cyanobacteria, cyanotoxins, harmful algal blooms, and HAB(s).*