

Harmful Algal Blooms (HABs) Newsletter



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Mention of trade names, products, or services in this newsletter does not convey and should not be interpreted as conveying official EPA endorsement, approval, or recommendation for use.

More HABs information is
available on EPA's
[CyanoHABs in Water Bodies website](#)

EPA Updates!

HABs Research, Resources, and Tools

Recorded Webinar: EPA Tools for Managing CyanoHABs in Drinking and Recreational Waters



On July 29, 2021, EPA's Office of Science and Technology (within the Office of Water) held a webinar entitled, ***EPA Tools for Managing CyanoHABs in Drinking and Recreational Waters***, to increase awareness of EPA's tools and resources for helping states and tribes on this subject. Representatives from California, New York, Ohio, and Oregon also presented their outreach and risk communication resources related to cyanobacterial HABs (cyanoHABs) and their toxins in recreational and drinking waters. In addition, webinar participants had the opportunity to share their challenges in managing and communicating the risks from cyanobacteria and their toxins with EPA.

A recording of the webinar as well as presentation materials are available on the [EPA CyanoHABs website](#).

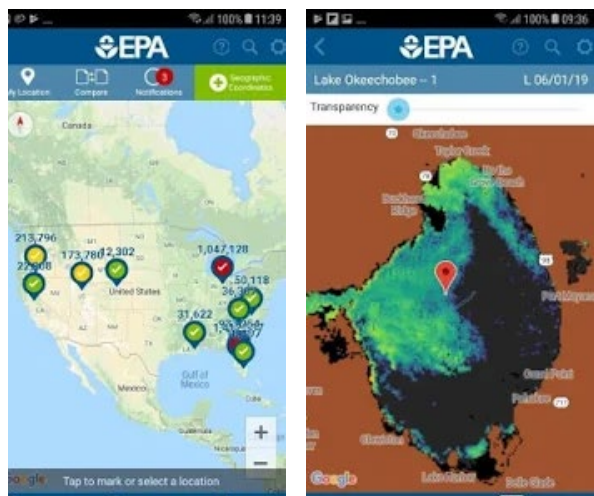
EPA Releases the Cyanobacteria Assessment Network (CyAN) Web Tool for Monitoring Water Quality



On July 21, 2021, EPA released a new tool, CyANWeb, that can be used to assist federal, state, Tribal, and local partners in identifying whether a HAB is forming where people swim, fish, and boat. The tool uses satellite data to alert users based on specific changes in the color of the water in over 2,000 of the largest lakes and reservoirs across the United States. Developed with input from users across the country, CyANWeb increases cyanobacteria satellite data access to water quality managers, communities, and anyone interested in knowing more about the water quality in their area.

CyANWeb uses historical and current satellite data to develop daily and weekly images that serve as an early warning system for HABs. CyANWeb is easy to use and has features that let users view comparisons of multiple water bodies over time, as well as mark locations for future reference.

Users can access CyANWeb via desktop computer, tablet, smart phone, and most other internet-browsing devices. CyANWeb uses satellite data that was previously only available within the CyAN Android™ app EPA released in 2019. CyAN Android™ is available for download in the Google Play™ store for Android™ devices.



CALL FOR ABSTRACTS

The 2nd Annual Virtual HABs Symposium: *Emerging Research & Case Studies*, will be held on January 6 and 7, 2022. The Algal Bloom Action Team, a collaboration of water professionals, researchers, and educators from 12 states in the North Central Region of the United States, invites you to submit science-based presentation abstracts that address HABs in the North Central Region of the U.S. on at least one of the following topic areas:

- Human Health and HABs
- Animal Health and HABs
- Monitoring, Identifying, and Ecology of HABs
- Preventing and Treating HABs

Abstracts are due on Friday, August 27th, 2021.

NOTICE OF FUNDING OPPORTUNITY

NOAA's National Centers for Coastal and Ocean Science Competitive Research Program (NCCOS/CRP), Climate Program Office (CPO), and Ocean Acidification Program (OAP), in partnership with the Office of National Marine Sanctuaries (ONMS) and the Integrated Ocean Observing System (IOOS) Office, are pleased to announce a Fiscal Year 2022 Notice of Funding Opportunity (NOFO) to understand the impacts of multiple stressors (including HABs) on marine ecosystems under climate change.

A letter of intent is required.

Deadline for letters of intent is October 4, 2021 and full applications are due January 18, 2022.

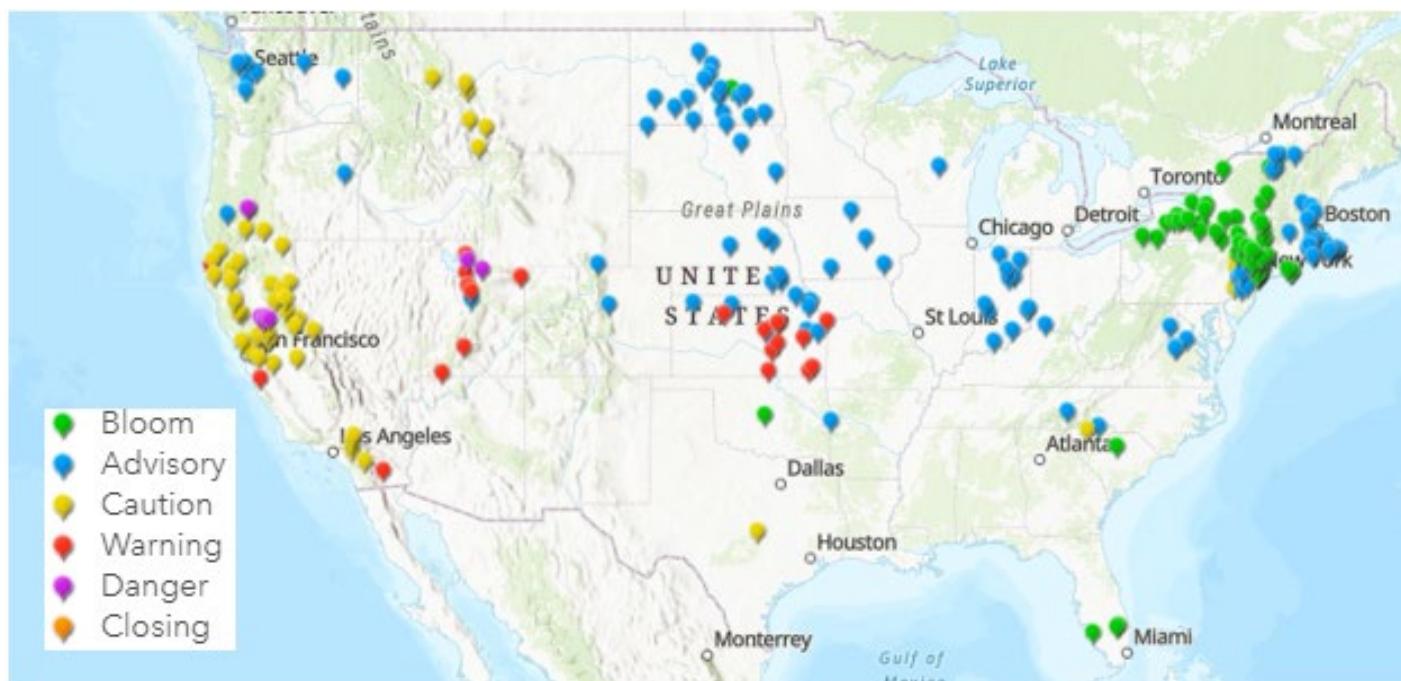
WHO launches Guidelines for Recreational Water Quality as Summer Heats Up

On July 13, 2021, WHO launched updated Guidelines for Recreational Water Quality, setting out health-based targets for water quality, as well as best practices for surveillance, risk assessment, and risk-based targets for improved management and monitoring approaches that provide timely advice to water users.



Reported Blooms, Beach Closures, and Health Advisories* - July 2021

**Includes blooms, cautions, warnings, public health advisories, closings, and detections over state thresholds due to the presence of algae and/or toxins. This is not a comprehensive list; not all blooms have been reported and/or not all lakes are actively monitored.*



Click the state name to see the reported blooms for the month of July 2021:

[Arkansas \(1\)](#); [California \(59\)](#); [Colorado \(1\)](#); [Florida \(3\)](#); [Indiana \(11\)](#); [Iowa \(4\)](#); [Kansas \(20\)](#); [Massachusetts \(15\)](#); [Montana \(6\)](#); [Nebraska \(7\)](#); [New Hampshire \(4\)](#); [New Jersey \(14\)](#); [New York \(59\)](#); [North Carolina \(1\)](#); [North Dakota \(19\)](#); [Ohio \(1\)](#); [Oklahoma \(1\)](#); [Oregon \(2\)](#); [Rhode Island \(9\)](#); [South Carolina \(3\)](#); [South Dakota \(2\)](#); [Texas \(1\)](#); [Utah \(10\)](#); [Vermont \(5\)](#); [Virginia \(4\)](#); [Washington \(8\)](#); [Wisconsin \(1\)](#); [Wyoming \(1\)](#)

Upcoming Virtual Events

19th International Conference on Harmful Algae
October 10-15, 2021 La Paz, B.C.S. (live and virtual)

CERF 2021 - November 1-4 and 8-11, 2021
Impact of Climate Change on Harmful Algal Blooms

SETAC North America 42nd Annual Meeting
November 14-18, 2021
Pelagic and Benthic HABs: The detection, fate, effects, monitoring, and management of blooms and their associated toxins

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

12th International Conference on Toxic Cyanobacteria
May 22-27, 2022, Toledo, Ohio

ADDITIONAL USEFUL



Chesapeake Bay 'Dead Zone' Forecast

Researchers from the Chesapeake Bay Program, University of Maryland Center for Environmental Science, University of Michigan, and U.S. Geological Survey issued a **forecast** on the Chesapeake Bay Dead Zone based on the amount of rainfall from January to May 2021. The **dead zone** is predicted to be smaller than average this summer.

Recently Published Articles*

Identification of Planktothrix (Cyanobacteria) blooms and effects on the aquatic macroinvertebrate community in the non-tidal Potomac River, USA

Henesy, J., J. L. Wolny, J. E. Mullican, D. S. Rosales, J. S., Pitula, & J. W. Love. 2021. Virginia Journal of Science, 72(1-2), 1-29.

Synthesis of ecotoxicological studies on cyanotoxins in freshwater habitats - Evaluating the basis for developing thresholds protective of aquatic life in the United States

Alvine C. Mehinto, Jayme Smith, Ellie Wenger, Beckye Stanton, Regina Linville, Bryan W. Brooks, Martha A. Sutula, Meredith D.A. Howard. Science of The Total Environment, Volume 795, 2021, 148864.

The relative importance of environmental factors in predicting phytoplankton shifting and cyanobacteria abundance in regulated shallow lakes

Ke Rao, Xiang Zhang, Mo Wang, Jianfeng Liu, Wenqi Guo, Guangwei Huang, Jing Xu. Environmental Pollution, Volume 286, 2021, 117555.

Iron transport in cyanobacteria - from molecules to communities

Guo-Wei Qiu, Coco Koedooder, Bao-Sheng Qiu, Yeala Shaked, Nir Keren. Trends in Microbiology, 2021.

Cyanobacteria cell prediction using interpretable deep learning model with observed, numerical, and sensing data assemblage

JongCheol Pyo, Kyung Hwa Cho, Kyunghyun Kim, Sang-Soo Baek, Gibeom Nam, Sanghyun Park, Water Research, 2021, 117483.

Differences in susceptibility of cyanobacteria species to lytic volatile organic compounds and influence on seasonal succession

Suzue Arii, Ryuji Yamashita, Kiyomi Tsuji, Koji Tomita, Masateru Hasegawa, Beata Bober, Ken-ichi Harada, Chemosphere, Volume 284, 2021, 131378.

Cyanobacteria and biogeochemical cycles through Earth history

Patricia Sánchez-Baracaldo, Giorgio Bianchini, Jamie D. Wilson, Andrew H. Knoll, Trends in Microbiology, 2021.

Elimination of β -N-methylamino-L-alanine (BMAA) during UV/chlorine process: Influence factors, transformation pathway and DBP formation

Julong Sun, Shiqing Zhou, Da Sheng, Nan Li, Jue Wang, Changbo Jiang. Chemosphere, Volume 284, 2021, 131426.

Mixing regime shapes the community assembly process, microbial interaction and proliferation of cyanobacterial species Planktothrix in a stratified lake

Junwen Chen, Huacong Liu, Yaohui Bai, Jing Qi, Weixiao Qi, Huijuan Liu, Jianfeng Peng, Jiuhui Qu, Journal of Environmental Sciences, Volume 115, 2022, 103-113.

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



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