

Freshwater HABs Newsletter



National Recreational Water Quality Workshop

The Conservation Technology Information Center (CTIC), under a cooperative agreement with EPA's Office of Water, Office of Science and Technology will co-sponsor a national workshop on recreational water quality. The workshop will be in Chicago, Illinois April 21-24, 2020. The goal for this workshop is to aid recreational water managers, researchers, stakeholders and public health officials at all levels to share information and ideas about implementing and supporting a successful recreational water program. This workshop will focus on harmful algal blooms and fecal contamination. The workshop will provide information on tools, training and an opportunity to discuss strategies for managing and monitoring HABs and fecal contamination in recreational waters. The workshop will provide opportunities for sharing across programs on management of these issues.

EPA is calling for abstracts starting December 4, 2019 and are due <u>January</u> 20, 2020. Registration will open January 6, 2020. For more information go to https://www.ctic.org/projects/Training/Rec Waters

NEWS

Governor Phil Murphy and officials from the New Jersey Department of Environmental Protection announces more than \$13 million in funding to local communities and a new initiative to reduce and prevent future HABs in New Jersey. Read more here.

REMINDERS

EPA's Harmful Algal Bloom Video Challenge

For students in grades 9 through 12 living in Kansas, Missouri, Iowa, Nebraska, Montana, North Dakota, South Dakota, Wyoming, Utah, and Colorado, and tribal nations in the States listed here.

Deadline: January 3rd, 2020

EPA's RFA Approaches to Reduce Nutrient Loadings for HABs Management

Deadline: December 19, 2019



To sign up for the newsletter send an email to epacyanohabs@epa.gov Please visit_the EPA's CyanoHABs in Water Bodies website here.

UPCOMING EVENTS

Workshop

Modeling and Prediction of HABs GlobalHAB Workshop 18-21 May 2020, Glasgow, UK

Conferences

National
Recreational Water
Quality Workshop
April 21-24, 2020
Chicago, Illinois

19th ICHA October 2020 La Paz, Mexico

Useful Resources

HABs Collaborative Newsletter Fall 2019

<u>Drinking Water</u> <u>Cyanotoxin Management</u> <u>Plan Template</u>

Emergency Response
Plan for Cyanotoxins in
Recreational Water

This newsletter was created by <u>Dr. Lesley</u> <u>D'Anglada</u>, Office of Science and Technology, Office of Water. 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.

Blooms, Beach Closures and Health Advisories* November 2019

* Include 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 or lakes are not actively monitored.



<u>California (15):</u> Lake Anza, Lake Chabot, Lake Temescal, Quarry Lakes, El Dorado East Regional Park Ponds, Big Break Regional Shoreline Area, Clear Lake, Grizzly Gulch at Whiskeytown Lake, Laguna Creek at Camden Lake, Lake Britton, Manteca Lake, San Luis Reservoir at Basalt Boat Launch, West of Sulphur Bank Mercury Mine, Whiskeytown Lake Pond, Stevens Lake

Florida (4): Oriole Beach, Santa Rosa Sound; Lake Hunter, Jog Road, Palm Beach; Canal and Kirk Rd Bridge, Palm Beach

<u>Idaho (9):</u> Fernan Lake, Mormon Reservoir, Blacks Creek Reservoir, Mountain Home Reservoir, Indian Creek Reservoir, Little Camas Reservoir, Thorn Creek Reservoir, Hordemann Pond, Winchester Lake

<u>Kansas (5)</u>: Gathering Pond (Hatchery Supply Pond), Jerry Ivey Pond, Lake Jeanette, Lakewood Park Lake, South Park Lake (as of 10/20/2019).

Maryland (3): Patuxent River, Eastern Bay, Sassafrass Harbor (HAB Present):

<u>Massachusetts (8):</u> Arlington Reservoir, Billington Sea, Lake Boone, Lake Holbrook, Lake Warner, Magnolia Pond, Plunkett Reservoir, Santuit Pond, South Wattupa Pond, Triangle Pond

Mississippi (1): Shearwater Beach

New Hampshire (14): Paradise (Nelson's) Pond, Sisson Pond, Watson Reservoir, Slack Reservoir, Little Pond, Carbuncle Pond, Almy Pond, Elm Lake, JL Curran Reservoir, Mashapaug Pond, Pleasure Lake, Roosevelt Lake, Sisson Pond, Melville Ponds

New Jersey (17): Deal Lake, Sunset Lake, Spruce Run Reservoir, Lake Hopatcong, Monksville Reservoir, Budd Lake, Dramasei Park Lake, Papaianni Lake, Amico Island Pond, Branch Brook Park Lake, Elmer Lake, Pemberton Lake, Daretown Lake, Unnamed Pond, Lake Owassa, Smithfield Lake, Canistear Reservoir

Ohio (3): Buckeye Lake (Crystal Beach and Fairfield), Grand Lake St. Mary's, North Bend Boat Club Oregon (2): South Umpqua River and Lawson Bar (Permanent Recreational Use Advisory), Tenmile Lake

South Carolina (1): Lake Wateree

<u>Utah (9)</u>: East Canyon Reservoir, Echo Reservoir, Holmes Creek Reservoir, Jordanelle Reservoir, Maybey Pond, Otter Creek Reservoir, Pineview Reservoir, Piute Reservoir, Yuba Lake,

Vermont (1): Winona Lake

Washington (4): Spanaway Lake, Lone Lake, Pass Lake, Rapjohn Lake

Wyoming (1): Keyhole Reservoir

Recently Published Articles

<u>Use of qPCR and RT-qPCR for monitoring variations of microcystin producers and as an early warning system to predict toxin production in an Ohio inland lake</u>

Jingrang Lu, Ian Struewing, Larry Wymer, Daniel R. Tettenhorst, Jody Shoemaker, Joel Allen, Water Research, 2019, 115262.

<u>Degradation of cyanotoxin microcystin-LR in synthetic and natural waters by chemical-free</u> UV/VUV radiation

Pranav Chintalapati, Madjid Mohseni, Journal of Hazardous Materials, Volume 381, 2020, 120921

<u>Clethodim (herbicide) alters the growth and toxins content of Microcystis aeruginosa and Raphidiopsis raciborskii</u>

Fernanda Brêda-Alves, Frederico Pacheco Militão, Brener Freitas de Alvarenga, Pamela Ferreira Miranda, Valéria de Oliveira Fernandes, Micheline Kézia Cordeiro-Araújo, Mathias Ahii Chia, Chemosphere, 2019, 125318.

Cyanotoxin production beyond the cyanobacteria

Geoffrey A. Codd, Peter B. Nunn, Toxicon, Volume 168, 2019, Pages 93-94.

Electrocoagulation/flocculation of cyanobacteria from surface waters

Alejandro de la Fuente, Alicia M. Muro-Pastor, Francisco Merchán, Fernando Madrid, José Ignacio Pérez-Martínez, Tomás Undabeytia, Journal of Cleaner Production, Volume 238, 2019, 117964.

<u>Degradation of cyanotoxin microcystin-LR in synthetic and natural waters by chemical-free UV/VUV radiation</u>

Pranav Chintalapati, Madjid Mohseni, Journal of Hazardous Materials, Volume 381, 2020, 120921

A molecular-based method to estimate the risk associated with cyanotoxins and odor compounds in drinking water sources

Keng-Yu Lu, Yi-Ting Chiu, Michael Burch, Delia Senoro, Tsair-Fuh Lin, Water Research, Volume 164, 2019, 114938.

Removal efficiency of phosphorus, cyanobacteria and cyanotoxins by the "flock & sink" mitigation technique in semi-arid eutrophic waters

Daniely de Lucena-Silva, Joseline Molozzi, Juliana dos Santos Severiano, Vanessa Becker, José Etham de Lucena Barbosa, Water Research, Volume 159, 2019, Pages 262-273.

Toolbox for the sampling and monitoring of benthic cyanobacteria

Virginie Gaget, Peter Hobson, Angela Keulen, Kelly Newton, Paul Monis, Andrew R. Humpage, Laura S. Weyrich, Justin D. Brookes, Water Research, Volume 169, 2020, 115222.

Role of potentially toxic cyanobacteria in crustacean zooplankton diet in a eutrophic lake Helen Agasild, Kristel Panksep, Ilmar Tõnno, Kätlin Blank, Toomas Kõiv, René Freiberg, Reet Laugaste, Roger I. Jones, Peeter Nõges, Tiina Nõges, Harmful Algae, Volume 89, 2019, 101688.

<u>Ecotoxicity assessment of microcystins from freshwater samples using a bioluminescent</u> cyanobacterial bioassay

Miguel González-Pleiter, Samuel Cirés, Lars Wörmer, Ramsy Agha, Gerardo Pulido-Reyes, Keila Martín-Betancor, Andreu Rico, Francisco Leganés, Antonio Quesada, Francisca Fernández-Piñas, Chemosphere, Volume 240, 2020, 124966.