

# FRESHWATER HABS NEWSLETTER

Competitive Research and Funding on HABs, Water Quality, and Nutrient **Reduction from HABHRCA Member Agencies** 

**Environmental Protection Agency** 

- Research Grants from the EPA's National Center for Environmental Research
- Funding Sources for Managing Cyanobacterial Harmful Algal Blooms and Cyanotoxins in **Drinking Water**
- EPA State Revolving Funds

NIH, National Institute of Environmental Health Sciences

• Research on Oceans, the Great Lakes and Human Health through the Centers for Oceans and Human Health

USDA, National Institute of Food and Agriculture

- USDA's National Institute of Food and Agriculture Grants
- AFRI Education and Literacy Initiative National Science Foundation

- Biological Oceanography Program's Funding Opportunities
- Dear Colleague Letter: FY 2017 Innovations at the Nexus of Food, Energy and Water Systems (INFEWS) Funding Opportunity on Nitrogen, Phosphorus, and Water

**National Oceanic and Atmospheric Administration** 

- Monitoring and Event Response (MERHAB)
- Office for Coastal Management's Competitive Grant Announcements
- NCCOS National Centers for Coastal Ocean Research
- Sea Grant Projects, Impacts and Accomplishments

Also see Ohio Sea Grant funding opportunities.

# WEBINAR: Using Advanced Water Quality Monitoring Technologies to Address Water Pollution on May 5, 2017 at 12:00 p.m. - 1:30 p.m. EST

- Hosted by Meridian Institute in collaboration with Pisces Foundation
- The webinar will cover merging data collection technologies from satellite remote sensing to citizen science crowdsourcing.
- Speakers and presentations are: <u>Dr. Robert Shuchman (</u>Technologies for Multi-Layered Water Quality Data Gathering); Dr. Erin Hestir and Dr. Erin Urguhart (Current Capabilities and Limitations of Remote Sensing for Water Quality and Related Land Use Monitoring); Jeff Allenby (Using Land Cover Mapping to Address Sources of Water Pollution in the Chesapeake Bay Watershed); Hilary Snook (Emerging Tools for Detecting Harmful Algal Blooms - Cyanobacteria Collaborative Monitoring Network); and Dr. Blake Schaeffer (Emerging Tools for Detecting Harmful Algal Blooms – Cyanobacteria Assessment Network (CyAN) Project)
- Please contact Liz Duxbury at Meridian Institute (Iduxbury@merid.org or 970.296.3057)

# Canada and Ontario Extend Public Consultations on Draft Action Plan to Reduce Harmful Algal Blooms in Lake Erie

This is to inform you that the public comment period for the Canada-Ontario Draft Action Plan for Lake Erie has been extended by an additional 15 days. The new deadline to submit comments is Wednesday, May 24, 2017. Please submit your comments through Canada's engagement platform at www.letstalklakeerie.ca.

This newsletter was created by Dr. Lesley V. D'Anglada, Office of Water, U.S.EPA To see previous editions of this newsletter, go to Freshwater HABs Newsletter For more information, please visit the **USEPA's CyanoHABs Website** 



Carper's Pond, April 2017 Riverbend Park, Great Falls, VA

#### **UPCOMING EVENTS**

#### Workshops

### OSU's Workshops

Dealing with Cyanobacteria Algal Toxins and Taste & Odor Compounds

August 7-8, 2017 August 9-10, 2017

Algae ID Workshop August 7-8, 2017 August 9-10, 2017

## **Taxonomic ID of Harmful** Algae in U.S. Marine Waters

August 13-23, 2017 East Boothbay, ME

### **Ecology of Diatoms and Algal Blooms**

May to August, 2017 Iowa Lakeside Laboratory

# Conferences

**IAGLR** 

May 15-19, 2017 Detroit, Michigan

NHDES's Drinking Water **Source Protection Conference** - **REGISTER** May 18, 2017 Concord, NH

### **USA Water Conference** Toxins, Treatments and **Tomorrow's Technologies** May 31st - June 1, 2017

Akron, OH

**Gordon Research Conference** Biotoxins June 18-23, 2017 Easton, MA

### 9th Symposium on **Harmful Algae - ABSTRACTS** until June 31st

November 11-17, 2017 Baltimore, MD

NEWS\*NEWS\*NEWS\*NEWS\*

# HABs, BEACH CLOSURES and HEALTH ADVISORIES, APRIL 2017



Oregon: South Umpqua River - Permanent Advisory

California: Domoic Acid Press Release and Health Advisories

# **RECENTLY PUBLISHED ARTICLES**

# Adsorption of Ten Microcystin Congeners to Common Laboratory-Ware Is Solvent and Surface Dependent

Stefan Altaner, Jonathan Puddick, Susanna A. Wood, and Daniel R. Dietrich. Toxins, April 2017, Vol. 9, p.129-144.

#### Toxic effects of microcystin-LR on the development of prostate in mice

Hui Zhang, Lihui Wang, Song Shen, Chenchen Wang, Zou Xiang, Xiaodong Han, Dongmei Li. Toxicology, Volume 380, 1 April 2017, Pages 50-61.

# <u>Transfer, tissue distribution and bioaccumulation of microcystin-LR in the phytoplanktivorous and carnivorous fish in Anzali wetland, with potential health risks to humans</u>

Soheila Rezaitabar, Abbas Esmaili Sari, Nader Bahramifar, Zohreh Ramezanpour, Science of The Total Environment, Volume 575, 1 January 2017, p. 1130-1138.

# <u>Toxicology of microcystins with reference to cases of human intoxications and epidemiological investigations of exposures to cyanobacteria and cyanotoxins</u>

Zorica Svircev, Damjana Drobac, Nada Tokodi, Biljana Mijovic, Geoffrey Codd and Jussi Meriluoto. 2017, Archives of Toxicology, 91, p. 621-650.

#### Screening of BMAA producing cyanobacteria in cultured isolates and in in situ blooms

Marta Monteiro, Margarida Costa, Cristiana Moreira, Vitor M. Vasconcelos, Mafalda S. Baptista. 2016. J. Appl. Phycol. 29:p. 879.

# A review of the phylogeny, ecology and toxin production of bloom-forming Aphanizomenon spp. and related species within the Nostocales (cyanobacteria)

Samuel Cires, Andreas Ballot. 2016, Harmful Algae, 54, p. 21-43.

#### New SPE-LC-MS/MS method for simultaneous determination of multi-class cyanobacterial and algal toxins

Sevasti-Kiriaki Zervou, Christophoros Christophoridis, Triantafyllos Kaloudis, Theodoros M. Triantis, Anastasia Hiskia. 2017, Journal of Hazardous Materials, 323A, p. 56-66.

# <u>Understanding the key ecological traits of cyanobacteria as a basis for their management and control in changing lakes</u>

Evanthia Mantzouki, Petra M. Visser, Myriam Bormans, Bas W. Ibelings. 2016, Aquat. Ecol. 50, p. 333-350.

#### Cyanotoxins: Which detection technique for an optimum risk assessment?

Virginie Gaget, Melody Lau, Barbara Sendall, Suzanne Froscio, Andrew R. Humpage, Water Research, Volume 118, 1 July 2017, p.227-238

### Taxonomy-free molecular diatom index for high-throughput eDNA biomonitoring

Laure Apothéloz-Perret-Gentil, Arielle Cordonier, François Straub, Jennifer Iseli, Philippe Esling, Jan Pawlowski. *Molecular Ecology Resources*, 2017

# Ocean warming since 1982 has expanded the niche of toxic algal blooms in the North Atlantic and North Pacific oceans

Christopher J. Gobler, Owen M. Doherty, Theresa K. Hattenrath-Lehmann, Andrew W. Griffith, Yoonja Kang, and R. Wayne Litaker. PNAS, April 2017.

**Toxins Journal Topical Collection:** 

"Freshwater HABs and Health in a Changing World" . Register to submit a manuscript.

**Useful Resources** 

- ✓ SWAMP's California Freshwater Harmful Algal Bloom Field Guide
- ✓ The Valuation of Ecosystem Services Available from Farms and Forests

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