

Freshwater HABs Newsletter

[USGS GeoHEALTH Newsletter Special Issue on Algal Toxins](#)

This edition of the *GeoHEALTH* Newsletter (Volume 15, Issue 3, 2018), features the USGS's Toxic Substances Hydrology and Contaminant Biology Programs' collaborative science within and outside the USGS with a focus on harmful algal blooms. This work is used by stakeholders to understand why, when, and where toxic algal blooms occur and how to mitigate environmental exposures to toxins that adversely impact local economies and the health of fish, wildlife, and the public.

[EPA and USDA Collaborative Approaches to Address Nutrients](#)

To better address this challenge, the EPA and the USDA are working to identify opportunities for meaningful reductions in nonpoint nutrient losses and improvements in water quality. These opportunities will require using all the tools available to address excess nutrients in watersheds, including non-regulatory and market-based programs. The EPA and the USDA are committed to working together to improve water quality while improving the efficiency of land use practices and optimizing treatment technologies and invite each state environmental and agricultural agency to engage with the EPA and the USDA to identify local opportunities and challenges to reducing excess nutrients in watersheds and improving water quality.

[Milford Watershed Regional Conservation Partnership Project \(RCPP\)](#)

The Natural Resources Conservation Service (NRCS) in coordination with the Kansas Water Office recently signed a Regional Conservation Partnership Project (RCPP) agreement that will bring partners together to work with NRCS on implementing conservation practices within the Milford Lake Watershed. The agreement will bring financial resources and incentives to help agriculture producers make upgrades to protect the watershed and shorten the duration of HABs on Milford Lake. The Kansas Water Office is the lead partner, and numerous regional entities are contributing to the project.

Happy Holidays!



Algae (green) and cyanobacteria (red)
600x fluorescence image
From Dr. Robert Zucker, EPA/ORD

UPCOMING EVENTS

[Great Lakes HABs Collaboratory Webinar: Great Lakes Observing System \(GLOS\)](#)

January 23, 2019
2:00-3:30pm EST

[ASLO 2019](#)

February 23 -March 2nd, 2019
San Juan, Puerto Rico

[29th Annual PA Lake Management Society \(PALMS\) Conference](#)

March 6-7, 2019
State College, PA

[11th National Water Monitoring Conference](#)

March 25-29, 2019
Denver, Colorado

[11th International Conference on Toxic Cyanobacteria](#)

May 5-10, 2019
Krakow, Poland

[IAGLR 2019 Conference](#)

June 10-14, 2019
Brockport, NY

[10th US HAB Symposium](#)

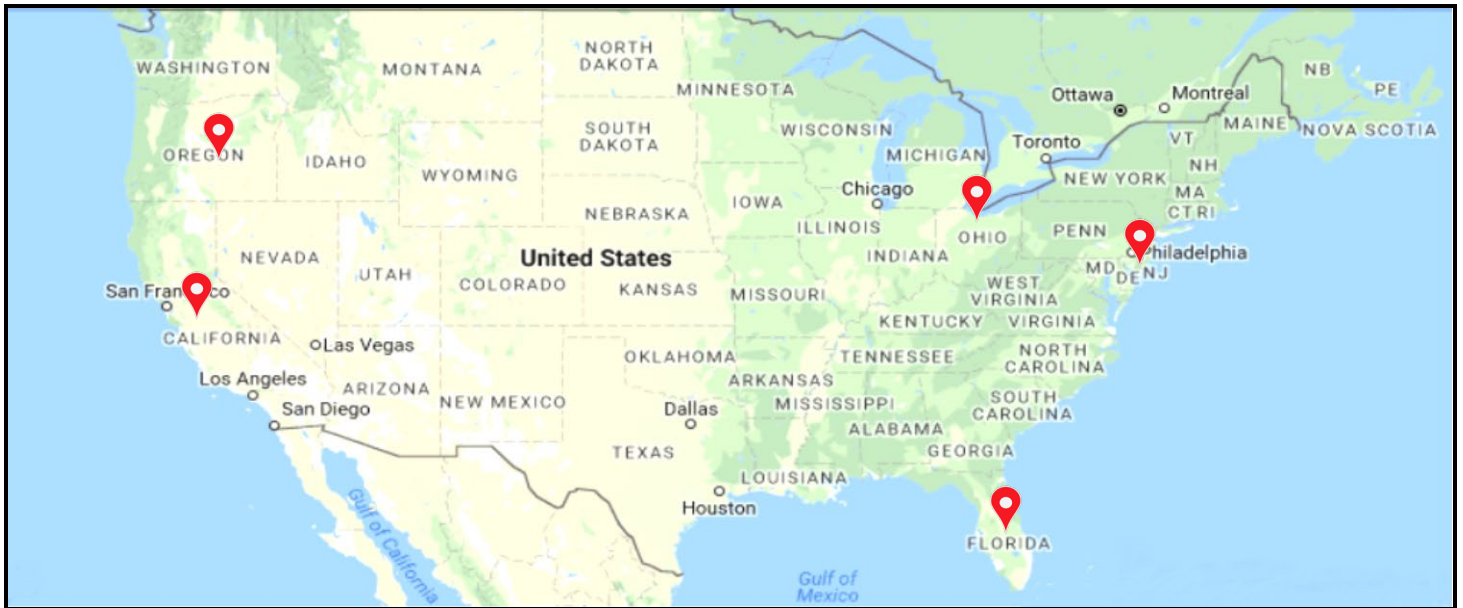
Nov 3-8, 2019
Perdido Beach Resort, Orange Beach, Alabama

[ICHA 2020](#)

October 2020
San Jose del Cabo, Mexico

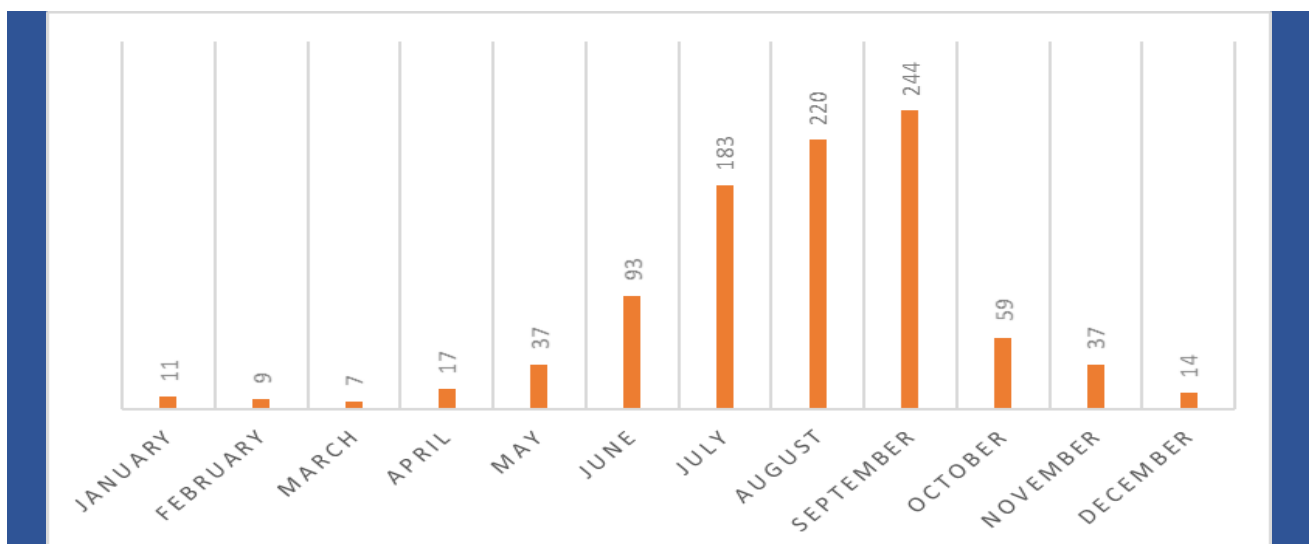
BLOOMS, BEACH CLOSURES and HEALTH ADVISORIES, DECEMBER 2018

The following map includes blooms, cautions, warnings, public health advisories, closings and detections over 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 are not actively monitored as many States close the season for Harmful Algal Bloom monitoring efforts by the end of October.



- **California (3)**: Hensley Lake, H.V. Eastman Lake, Lake Chabot
- **Florida (3)**: Caloosahatchee River (Alva Boat Ramp, Swim Beach, Davis Boat Ramp)
- **New Jersey (6)**: Rahway River/Orange Reservoir, Weequahik Lake, Budd Lake, Unnamed Lake Saddle River Park, Crystals Springs Pond, Branch Brook Park Lake (advisories lifted on 12/20/18)
- **Ohio (1)**: Grand Lake St. Marys
- **Oregon (1)**: South Umpqua River

SUMMARY OF HABs-RELATED ADVISORIES POSTED IN 2018*



* Postings include blooms, cautions, warnings, public health advisories, and closings, due to the presence of algae, toxins or both.

RECENTLY PUBLISHED ARTICLES

[Linking the agricultural landscape of the Midwest to stream health with structural equation modeling](#)

Schmidt, T.S., Van Metre, P.C., and Carlisle, D.M., 2018, Environmental Science and Technology.

[Water-quality trends in US rivers: Exploring effects from streamflow trends and changes in watershed management](#)

Murphy, J.C., and Sprague, L.A., 2018, Science of The Total Environment, Vol. 656, p. 645-658.

[Accumulation and Elimination Dynamics of the Hydroxybenzoate Saxitoxin Analogues in Mussels *Mytilus galloprovincialis* Exposed to the Toxic Marine Dinoflagellate *Gymnodinium catenatum*](#)

Pedro Reis Costa, Ana Catarina Braga and Andrew D. Turner, *Toxins* 2018, 10 (11), 428.

[Cyanotoxins and Cyanobacteria Cell Accumulations in Drinking Water Treatment Plants with a Low Risk of Bloom Formation at the Source](#)

Husein Almuhtaram, Yijing Cui, Arash Zamyadi and Ron Hofmann. *Toxins* 2018, 10 (11), 430.

[Impact of Microcystin-LR on Liver Function Varies by Dose and Sex in Mice](#)

Igor Mrdjen, Mark A. Morse, Randall J. Ruch, Thomas J. Knobloch, Shambhunath Choudhary, Christopher M. Weghorst and Jiyoung Lee. *Toxins* 2018, 10 (11), 435.

[Cyanobacterial Blooms and Microcystins in Southern Vietnam](#)

Bui Trung, Thanh-Son Dao, Elisabeth Faassen and Miquel Lürling. *Toxins* 2018, 10 (11), 471.

[Nitrite Enhances MC-LR-Induced Changes on Splenic Oxidation Resistance and Innate Immunity in Male Zebrafish](#)

Wang Lin, Honghui Guo, Lingkai Wang, Dandan Zhang, Xueyang Wu, Li Li, Dapeng Li and Rong Tang. *Toxins* 2018, 10 (12), 512.

Important Links

- ✓ [December 2018 Fish and Shellfish Program Newsletter](#)
- ✓ [18th ICHA Conference Abstract Book](#)
- ✓ [IOCCG Report: Earth Observations in Support of Global Water Quality Monitoring](#)
- ✓ [EPA Uses Floating Vegetated Islands to Remove Excess Nutrients from Water](#)
- ✓ EPA's new *Hazard Mitigation and Water Quality Discussion Forum* to join send email to lyris@lists.epa.gov and include in the subject line: Subscribe EPA-HAZARD-MIT [Your First Name] [Your Last Name]

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