

Benthic HABs Discussion Group, 20-Oct-2020 meeting

<https://www.epa.gov/cyanohabs/epa-newsletter-and-collaboration-and-outreach-habs#benthic>

Below is a formatted version of the chat from the meeting. The co-facilitators have decided to share this in order to preserve/share the valuable information that was discussed below. It is also an opportunity for members to follow up with each other and continue discussion.

October 20, 2020 3:55 PM from Keith Bouma-Gregson to everyone:
Please add any questions for Janice to the chat.

October 20, 2020 4:10 PM from Margaret Spoo-Chupka to everyone:
Do you post signs for the public?

October 20, 2020 4:11 PM from Keith Loftin to everyone: Can
you differentiate between extracellular anatoxins sorbed to sediment in the mat vs.
from the cyanos?

October 20, 2020 4:11 PM from Rebecca Hillwig to everyone: Any
idea why the mats are lifting off in late July and then September? Is it a die off
or do they just become so large that they detach? Are toxins released throughout
their lifecycle or like planktonic species, are they released in greater amounts
when the cells begin to die off?

October 20, 2020 4:12 PM from Kurt Carpenter to everyone: Is
anyone seeing increased benthic cyano mats after fires? I'd think that we could see
more with turbid water and all the organics, and the heterotrophic nature of these
organisms

October 20, 2020 4:13 PM from jim hyde to everyone: What do you
think made the mats break away from the benthos?

October 20, 2020 4:30 PM from sfricke@karuk.us to everyone: Why
is the microcystin Danger threshold so high?

October 20, 2020 4:38 PM from Kurt Carpenter to everyone: Is
that Phormidium autumtale or Microcoleus domiant?

October 20, 2020 4:38 PM from ben holcomb to everyone: The
Warning advisory is 15 ppb which recommends no primary contact rec. The danger
advisory is 90 ppb which recommends closing the waterbody. Similar to microcystin,
the closure values are extrapolated from the warning advisory levels. There is no
available science that informs when to close a waterbody.

October 20, 2020 4:39 PM from ben holcomb to everyone: I
believe microcoleus was once called phormidium autmnale...?

October 20, 2020 4:39 PM from Margaret Spoo-Chupka to everyone:
yes.

October 20, 2020 4:40 PM from Dail Laughinghouse to everyone:

yes

October 20, 2020 4:40 PM from Dail Laughinghouse to everyone:
Revision was done here: Strunecky, O., Komárek, J., Johansen, J., Lukesová, A. & Elster, J. (2013). Molecular and morphological criteria for revision of the genus Microcoleus (Oscillatoriales, cyanobacteria). Journal of Phycology 49(6): 1167-1180

October 20, 2020 4:42 PM from sfricke@karuk.us to everyone: I thought it said that for microcystin, warning level was 8 and danger was 2000. 2000 is extremely high. That's what I was wondering about.

October 20, 2020 4:46 PM from ben holcomb to everyone: WHO recommended closing waterbodies when cells exceed 10M cells/ml. Using microcystis as the analog, that translates to about 2000 ppb microcystin.

October 20, 2020 4:47 PM from Kurt Carpenter to everyone: cameras at USGS gages are becoming more common and might be a way to detect episodic detachment- photos every 30 minutes could show the floating mats when that happens. First of these sites was just installed in the McKenzie River at Vida, but more are in the works. Not that expensive to have a literal eye on the river

October 20, 2020 4:48 PM from Christine Joab to everyone: I like your method of communication with talking points that all agencies can use to keep the messaging consistent.

October 20, 2020 4:58 PM from Christine Joab to everyone: Both were great presentations!

October 20, 2020 4:58 PM from Kurt Carpenter to everyone: Do you think groundwater is part of the nutrient source or sediments?

October 20, 2020 5:00 PM from ben holcomb to everyone: I suspect sediments. Xeric ecosystems have considerable sediment in the watershed