APRIL 21, 2016

Region 5 Harmful Algal Bloom Clean Water Act/Safe Drinking Water Act Workshop and Public Meeting
April 27-29, 2016
Chicago, IL

Who: The intended audience for the harmful algal bloom (HAB) workshop is state and tribal Clean Water Act (CWA) and Safe Drinking Water Act (SDWA) programs, USEPA headquarters and Region 5, and other federal programs. The public meeting on Friday, April 29, is open to the public.

When: The HAB CWA/SDWA workshop will be held from April 27 to 28, 2016, and the HAB public meeting will be held on the morning of April 29, 2016.

Where: 77 West Jackson Blvd., Chicago, IL; Lake Michigan conference room on 12th floor and also via webinar. There is a security check in the lobby for anyone without a federal government ID.

Note: If you are unable to participate in person, links to register for the webinar are below and also posted on the EventBrite registration site.

How:

Workshop registration:
Register for the HAB workshop if you're planning to be in Chicago at the "EPA Region 5 Harmful Algal Blooms CWA/SDWA Workshop" EventBrite website—click here or copy this link into your browser: https://www.eventbrite.com/e/epa-region-5-harmful-algal-blooms-cwasdwa-workshop-tickets-22500792476. *Note:* Please only register for the workshop if you plan to participate in person in Chicago.

Note to webinar participants: If you're planning to participate by webinar, please sign up for each day you'll be participating--that is, if you'll be participating in the webinar on Wednesday and Thursday, please click on both of the links below. The presentations will be available via webinar, although the discussions that follow may be more difficult to hear, and an asterisk (*) in the agenda below indicates sessions during which the webinar will *not* be available (e.g., small group discussions). We'll try to make the large group discussions audible via the webinar, but please be aware that it may be difficult to hear everything said. However, we expect that the presentations will be clearly audible.

Wednesday April 27, 2016:
Webinar Registration URL: https://attendee.gotowebinar.com/register/1701736509697853698
Webinar ID: 148-715-803

Thursday April 28, 2016:
Webinar Registration URL: https://attendee.gotowebinar.com/register/58520780033167874
Webinar ID: 152-537-531

Public meeting registration: Following this workshop and in the same location, the EPA Office of Water will be conducting a public meeting and webinar on managing cyanotoxins in drinking water on Friday April 29, 2016 from 9:15 a.m. to 12:30 p.m., Central Standard Time. The public meeting is for interested parties to provide input either in person or online via a webinar on lessons learned after the release of the June 2015 Recommendations for Public Water Systems to Manage Cyanotoxins in Drinking Water. The agency plans to use this information to inform development of additional tools to support states and/or utilities in managing cyanotoxins in drinking water. Persons wishing to attend the meeting in

person or online via webinar must register no later than 5:00 p.m., Eastern Daylight Savings Time, on April 28, 2016. Please follow this link for more information and to register.

What/Why:

Workshop Objectives:

1. Share information and build relationships among federal, state, and tribal Clean Water Act and Safe Drinking Water Act programs by making connections and identifying shared harmful algal bloom–related goals, needs, and barriers, particularly as they relate to source water protection.
2. Identify short- and long-term next steps and key actions that federal, state, and tribal programs can take to address common HAB-related goals, needs, and barriers.
3. Facilitate further HAB-related engagement and shared learning post-workshop; sustain continued engagement among participants.

Agenda:

Note: This schedule is in Central Daylight Time.

The asterisks indicate that the webinar will **not be available for these discussion sessions.*

Harmful Algal Bloom Workshop Day 1—Wednesday, April 27		
8:00-8:30 CDT	Registration	
8:30-9:00	Welcome and opening remarks	Tinka Hyde, USEPA Region 5 Beth Messer, Ohio EPA
Health and ecological effects		
9:00-9:30	EPA's drinking water health advisories and recreational criteria for cyanotoxins	Lesley D'Anglada, USEPA
9:30-9:50	Minnesota's experience with human and animal illness investigations and state interagency HAB workgroup collaboration	Pam Anderson, Minnesota Pollution Control Agency
9:50-10:30	Large group discussion on health and ecological effects and recreational criteria—see questions in attachment A at the end of this document; please come prepared to discuss	Facilitator: Cadmus
10:30-10:50	Break	
Monitoring, prediction, and water quality trends		
10:50-11:45	NOAA's Great Lakes harmful algal bloom program Part 1: Prediction, monitoring, and experiments Part 2: Remote and in situ sensing	Tim Davis, NOAA Great Lakes Environmental Research Laboratory (GLERL) Steve Ruberg, NOAA GLERL
11:45-1:00	Lunch (on your own)	
1:00-1:30	National HAB occurrence: Results and approaches	Keith Loftin, USGS
1:30-1:50	Ohio EPA's experience with use of sensors at intakes and satellite data, collaboration with CyAN project, cyanotoxin monitoring efforts, and listing of algae impairments using a cyanotoxin indicator	Heather Raymond, Ohio EPA
1:50-2:10*	Small group discussions on monitoring, prediction, and water quality trends—see questions in attachment A; please come prepared to discuss	Facilitators: Cadmus, as well as 6-8 others TBD

2:10-2:50	Large group discussion on monitoring, prediction, and water quality trends (share insights from small group discussions)	Facilitator: Cadmus
2:50-3:10	Break	
Prevention, waterbody management, and source water protection		
3:10-3:40	Waterbody management approaches for cyanoHABs	Mario Sengco, USEPA (via webinar)
3:40-4:00	Binational phosphorus load reduction efforts to prevent Lake Erie HABs	Santina Wortman, USEPA Region 5
4:00-4:30	Targeting high impact farm fields using nutrient management models (and internet-based spatial information interactive systems) to reduce phosphorus discharge and decrease HAB production	Jon Bartholic, Michigan State University
Day 1 wrap up session		
4:30-4:45	Day 1 wrap up—see questions in attachment A	Cadmus/Region 5/All
5:00-6:00	Networking opportunity at Poag Mahone's, a nearby restaurant within walking distance (0.2 mile): 333 South Wells Chicago, IL http://www.poagmahone.com/	Directions: Head west on W. Jackson Blvd. (left onto Jackson as heading out the building), and then south (turn left) on South Wells Street. Destination will be on your left.
6:00	Dinner (on your own)	
HAB Workshop Day 2—Thursday, April 28		
Prevention, waterbody management, and source water protection (continued)		
8:00-8:40	Current research efforts on nutrient load reduction methods	Christopher Winslow, Ohio Sea Grant College Program
8:40-9:10*	Small group discussions on prevention, waterbody management, and source water protection—see questions in attachment A; please come prepared to discuss	Facilitators: Cadmus, as well as 6-8 others TBD
9:10-10:00	Large group discussion on prevention, waterbody management, and source water protection (share insights from small group discussions)	Facilitator: Cadmus
10:00-10:20	Break	
Drinking water treatment and analytical methods		
10:20-10:40	Overview of USEPA's activities to support public water systems to manage cyanotoxins in drinking water	Hannah Holsinger, USEPA Facilitator: Cadmus
10:40-10:50	An introduction to EPA's Drinking Water Mapping Application to Protect Source Waters (DWMAPS)	Katie Foreman, USEPA
10:50-11:20	Water treatment options for HABs-related toxins—studies to examine the impacts of permanganate and powdered activated carbon application	Nick Dugan, USEPA ORD—Cincinnati
11:20-11:40	Ohio EPA's methods comparison study for microcystins detection, as well as Ohio's experience with molecular screening tools	Heather Raymond, Ohio EPA

11:40-12:15	Large group discussion on drinking water and analytical methods—see questions in attachment A; please come prepared to discuss	Facilitator: Cadmus
12:15-1:30	Lunch (on your own)	
Reporting, messaging, and communication to the public		
1:30-2:15	Harmful algal blooms and public health surveillance: The One Health Harmful Algal Bloom System (OHHABS)	Virginia Roberts, CDC
2:15-2:40	Indiana's HAB recreational surveillance program	Cyndi Wagner, Indiana Department of Environmental Management
2:40-3:00	Florida's aquatic toxins program	Andy Reich, Florida Department of Health (via webinar)
3:00-3:20	Break	
3:20-3:40*	Small group discussions on reporting, messaging, and communication to the public—see questions in attachment A; please come prepared to discuss	Facilitators: Cadmus, as well as 6-8 others TBD
3:40-4:15	Large group discussion on reporting, messaging, and communication to the public (share insights from small group discussions)	Facilitator: Cadmus
Day 2 wrap up session		
4:15-4:30	Day 2 wrap up—see questions in attachment A	Cadmus/Region 5/All
HAB Public Meeting—Friday, April 29		
9:15-12:30, CDT	Public meeting on managing cyanotoxins in drinking water—interested parties are invited to provide input either in person or online via a webinar on lessons learned after the release of the June 2015 Recommendations for Public Water Systems to Manage Cyanotoxins in Drinking Water	USEPA Headquarters

Hotel reservations: We've reserved 50 hotel rooms at the federal government rate ($160) from April 26 to April 28 at a nearby hotel, Club Quarters (at the corner of Adams and Clark at 111 W. Adams Street), which is about a five-minute walk to where the workshop will be held. Participants can reserve rooms any time until **Friday, April 1**, by contacting Club Quarters Member Services or via the reservation link below. *Some rooms may still be available after April 1 at the federal government rate.* Club Quarters Member Services can be reached at (203) 905-2100 from 7a-11p Monday through Friday, 9a-5p Saturday, and 10a-6p Sunday (EST). The reservation link is as follows: https://gc.synxis.com/rez.aspx?Chain=14601&Hotel=58314&template=CQmain&shell=CQH&locale=en-US&hotellist=WEB&group=EPAA26. The name of the reservation group is **"US Environmental Protection Agency EPA"** and the group code is "**EPAA26**". You can visit www.clubquarters.com or call (312)-214-6400 for more information about Club Quarters, including parking information, etc.

Questions: Please feel free to contact Wendy Drake (drake.wendy@epa.gov; (312) 886-6705) or Cary McElhinney (mcelhinney.cary@epa.gov; (312) 886-4313) if you have any questions.

ATTACHMENT A: Discussion questions

Objectives for small group discussions

- Sharing ideas and lessons learned—providing the opportunity to learn from participants
- Brainstorming on obstacles and information gaps including ways to increase cross-program coordination
- Brainstorming on needs
- Networking between CWA/SDWA colleagues

Objective for large group discussions

- Strategies developed for next steps to address what was discussed in the small groups

Questions

Health and ecological effects – LARGE group discussion only

Part 1: Health and ecological effects

- What are some of the ecological impacts you have experienced in your state?

Part 2: Recreational criteria

- What public health guidance is in use in your state? What has worked? What hasn't?
- How would you use the criteria values developed by EPA?
- What are your biggest needs related to the development of guidance for the protection of public health and animals from exposure to cyanotoxins in recreational settings?
- Are there water parameters associated with harmful algal blooms other than cyanotoxins to consider for the development of recreational guidance values?

Monitoring, prediction, and water quality trends

- What other toxins (other than microcystins and cylindrospermopsin) have been detected in your state's freshwater systems?
- What kinds of HAB monitoring, analysis, and prediction are you doing in your programs? What's worked? What hasn't?
- Any use of, or thoughts on, indicators or surrogates (such as chlorophyll *a* levels) with an established relationship to public water system algal toxins for predictions, trends, and assessments?
- Are CWA and SDWA monitoring programs coordinating to address both recreational and drinking water uses? For example, Is HAB monitoring included in your state monitoring strategy? If not, do you have plans to include it?

If there's time …

- Any innovative approaches that are specific to your programs?
- What are the biggest information/data gaps in your monitoring and assessment programs?
- What are your biggest needs for improving your monitoring, analyzing, and predicting of HABs?

Prevention, waterbody management, and source water protection

- What are examples of management and protection strategies that you are using in your programs for nutrients and HAB reduction in source waters (sources of drinking water)? What's worked? What hasn't?

- How are you working with stakeholders to reduce nutrient pollution to prevent HABs (e.g., public outreach for the reduction of fertilizer use)? What is/isn't working? Any recommendations?
- Are your programs coordinating across SDWA and CWA programs to address protection of source waters from HABs? For example, have the state nutrient reduction strategies helped to make connections between the CWA and SDWA programs? Are there lessons from the development of state nutrient reduction strategies that could help states develop and enhance HAB strategies?

If there's time …

- Additional examples of CWA and SDWA coordination:
  - Is the state drinking water program involved in the review of Section 319 grant applications intended to address HABs in source water protection (SWP) areas?
  - Do state permit writers consider downstream impacts of phosphorus and nitrogen on HABs in waterbodies used for drinking water and recreation purposes? Does the state NPDES enforcement program have a policy or strategy that gives priority to waterbodies impacted by HABs that are used for drinking water and recreation?
  - Have the state source water protection programs considered updating the source water assessments of waterbodies impacted by HABs in coordination with CWA programs?
- What institutional mechanisms/approaches are needed to help your state address HABs (e.g., to create a collective approach to accountability)?
- What are your biggest obstacles to implementing source water protection measures to reduce nutrients and HAB formation?
- What do you think the biggest needs are for nutrient reduction and HAB formation in your state's watersheds and waterbodies?

Drinking water treatment and analytical methods – LARGE group discussion only

Note: In addition to algal toxins, algae itself is also a treatment consideration, because the algal organic matter can compromise filters, for example.

- What treatment and analytical techniques have you used/are you using in your programs? Did/do they work? Why or why not?
- What are your biggest needs concerning drinking water treatment and analytical methods?
- How are states addressing simultaneous compliance issues—for example, to deal with the unintended consequences of focusing on HABs in the treatment train?

If there's time …

- Do drinking water utilities have the opportunity to work with upstream partners to address the sources of the problem, or are they the only ones held accountable?
- What recommendations do you have for small public water systems (for example, on inland lakes) that may not have the capacity to add treatment, monitor, or receive CWA funding?

Reporting, messaging, and communication to the public

- Scenario: You have a water sample that is above a level of concern for a particular cyanotoxin in your drinking water or recreational water. What is your outreach process from that point forward? How do you report and message this to the public? How are the drinking water and recreational water programs coordinating these messages?
- What are your biggest challenges and needs to messaging, reporting, and communicating risk around cyanotoxins as related to public communication, as well as coordinating communication and sharing information among agencies?

- What opportunities exist to make information sharing among intrastate agencies more effective?

If there's time …

- Are any states using something other than real-time cyanobacterial cell or toxin monitoring to inform drinking water advisories or advisories/warnings/danger postings for recreational protection? Do some states post advisories proactively based on past data?
- What opportunities exist to further enhance public health protection through outreach?
- Have states incorporated HAB monitoring into fish consumption advisories? If so, how?

Days 1 and 2 wrap up sessions

- Is there anything in particular from the presentations and discussions that you think will be applicable to your programs? Why?
- In addition to preparing a summary of the workshop proceedings, what follow-up would be helpful for Region 5 to undertake?
- Would additional workshops, webinars, or conference calls on particular topics be helpful to continue the conversations started here or address additional issues?