California Cyanobacteria Harmful Algal Bloom (CCHAB) Network Meeting Notes

Thursday, January 25, 2018

9:00 am - 12:00 pm

Natural Resources Building - CA Department of Water Resources 1416 Ninth Street, Sacramento, CA

***All Presentations are available on the CCHAB webpage.**

9:00 am Welcome, Introductions and Announcements

- New CA Water Quality Monitoring Council Director
  - Nicholas Martorano
- Co-Chair Nominations and Election
  - A call for new Co-Chair nominations will go out on the Lyris around February 16th.
  - The nominations will be distributed in March
  - Note that nominations are open to anyone, for more information on the Co-Chair position please see the CCHAB Network Charter: http://www.mywaterquality.ca.gov/monitoring_council/cyanohab_network/docs/cchab_chartertwo.pdf

9:10 am Statewide HABs Status Updates

- Northern
  - All advisory signs were removed around December 25. North Coast had its first bloom of 2018 at Ruth Lake. It is apparent now that blooms are not just a summer thing. No toxins were tested, only gene expression.
  - There was a debrief at the end of the bloom year with Sonoma County partners. Weekly calls during the bloom season, worked out well with the County.
- Central
  - In November started monthly HABS monitoring in Clear Lake and partnering with Department of Water Resources for monthly monitoring at center of the lake.
  - The center of Clear Lake has similar cyanotoxin concentrations as at the shore.
  - Currently sending off fish and shellfish tissue (liver only) for microcystin testing to Bend Genetics. Results will be posted in CEDEN.
  - The rest of Central Valley region has been quiet but it is possible that there is a lack of reporting.
  - San Luis Reservoir has a very severe bloom that lasted longer than in prior years. Sampling lasted into late November early December. It was a lake wide bloom. Mid to Late summer 'Danger' advisory signs were posted around the lake.
- Southern
  - No updates reported
- Others
  - The San Luis Reservoir wanted to expand its capacity, however during the NEPA process it was determined there was not enough information regarding HABs. It would be a good idea to coordinate with reservoir managers so EIR/EIS properly address HABs.

Review of HABS in Other States – Beckye Stanton, Office of Environmental Hazards and Health Assessment (OEHHA)

- Built on the use of existing tables from the New England Interstate Water Pollution Control Commission.
- All 50 states were added to the table through internet searches and some direct communication with other states.
- Fresh water HAB response was grouped into three categories - (less developed, more developed, and most developed)
  - Less; minimal online information and no or minimal monitoring
  - More: use reactive monitoring when a bloom is reported, some online reports and have some routine monitoring for lakes and beaches.
  - Most: Have collaborative/volunteer monitoring for more than just the big three toxins. Take shellfish and fish tissue samples. Water body planning is use to actively combat HABs.
- Some states had multilingual websites and reports but it varied greatly among states and between the three categories.
- Most developed programs used collaboration and existing programs to cut cost associated with HAB monitoring.
- Possibility of expanding the table to include other countries.
- Beckye will present in depth at upcoming CCHAB meeting in April 2018.

9:40 am Citizen Science Monitoring for Harmful Algal Blooms

Erick Burres, Citizen Science Team, California Water Boards

- Citizen Science dates back to 1846 and applies to all fields of science from Educational science to gaming (VR)
- Myth: Citizen Science is free
  - False, cost can occur with the use of citizen science however, it is more cost effective.
- Myth: Data is not of good quality when using volunteers.
  - False, data can be exceptionally good
- Citizen Science is great for spreading knowledge, creating a base for advocacy and citizen policy making. It also creates personal involvement in environmental stewardship.
- Types of citizen science data collection
  - Visual: Drone, camera, field journal, smartphones and tablets
  - Physical Measurements: secchi disk, measuring and counting devices.
  - chemical: Test strips
- Clean Water Team training tools are on the YouTube channel.
- Working on an app that will automatically ID cyanobacteria but high resolution pictures are needed.
- If anyone is interested in Erick conducting a training on available citizen monitoring tools to monitor for cyanobacteria, please contact him at erick.burres@waterboards.ca.gov

10:10 am Division of Drinking Water (DDW): One of Many Partners During HABs Response

Amy Little and Sheri Miller, Division of Drinking Water - Mendocino District

- The regions for the State Water Boards are different from the Drinking Water regions
- Each district engineer knows the most about the district, if there was a problem, such as a HABs outbreak, with a waterbody then the district engineer is the person to contact.
- The issues in Toledo Ohio created EPA standards for drinking water.
- There is no one size fits all solution for HABs. Currently it is a source-by-source issue and solution.
- Title 22 chapter 15 has monitoring requirements for state and federal constituents but it is inconsistent.
- Currently working on management plans but it is not required and we cannot make them do it.
- Question: Is this changing because of the unregulated contaminants rule?
    - No, not in the near future
- Watershed sanitary surveys are done every five years and are available to the public upon request but are not stored on any computer.
- Question: How do you want the Division of Drinking Water to follow up after a bloom is reported and dealt with?
- Question: Is it possible to bring the DDW into the HABs tool on the portal?
- Question: Could you please touch on DDWs over site on small potable water systems? Does DDW check on county inspection of small potable water systems? The issue is that small or single-family homes often get overlooked when there is a bloom.
    - DDW does nothing for single-family home potable water systems and there is no hard rule for small potable water systems so there is no real oversight.

10:50 am <u>One Health Harmful Algal Bloom System (OHHABS) In conjunction with Tracking California</u>

Susan Paulukonis, California Department of Public Health

- There are many under-reported cases of illness caused by HABs
- Vets are more likely to report illness caused by HABs than physicians
- Data is necessary to get accurate information but currently it is not required to report illness caused by HABs.
- OHHABS will help with the way we look at HABs
- OHHABS is a part of the National Outbreak Reporting System (NORS)/
- Outreach is important in order for accurate reporting and most other states use other sources of funding such as grant or partnering with a university.
- In the future we would like to used the data collected to find “sentinel” cases to look in to medial and insurance claims associated with HABs to estimate the cost associated with HABs.
- Question: How do you intend to connect the information on bloom and monitoring data in OHHABS with CEDEN?
    - We don’t know yet but we are working on it.
    - There is a possibility of using the tracking number for incident report to translate to OHHABS

11:20 am Effect of Sample Handling on Anatoxin-a Stability, Gabie Gutierrez, Bend Genetics

- Anatoxin-a degrades easily based on holding time and temperature above 10 degrees Celsius (C°).
- Testing samples used in the experiment ranged from 4C° and 25 C° with and without preservative solution.
- Only a few studies were done to show rapid degradation.
- Results
  - The preserved solution: not much degradation even with a range of 4 to 25 C°.
  - Unpreserved cold samples: there was no change
  - Unpreserved warm samples: there was a rapid degradation
- Question: what is the best practice for shipping samples?
  - Keep cold with ice and use preservative unless you are not doing gene analysis then freeze the sample.
- Question: Is there a way to tell how long it takes to cool down and reaching the lab?
  - Possible, however most degradation occurs due to cell lysis.

11:45 am Subcommittee Updates (15)

- Mitigation Subcommittee – Carrie Austin, San Francisco Bay Water Board
  - Developed flowchart and website mockup for HAB treatment and mitigation options.
  - The flow chart is designed to help choose the best mitigation method, once feedback is give from the Co-chairs, it will be distributed on the lyris list.
- Wildlife Impacts Subcommittee – Reggie Linville, OEHHA
  - It's a small subcommittee with OEHHA and DFW, and are currently working on coordinating data and a unified tracking system.
  - Members of the of the group are working with staff at the Water Board, Public Health, Fish and Wildlife, and OEHHA to develop a coordination plan to collect, share and track animal-related data. Susan Paulukonis of the Department of Public Health mentioned this same effort earlier in the day. Hope to have this plan developed by March 2018.
  - Slow progress is being made on the factsheet for local managers that respond to HAB incidents that include potential fish and wildlife impacts
  - Significant barrier to identifying and responding to potential HAB-related wildlife incidents is lack of state funding for fish and wildlife testing along with the loss of CDFW"s laboratory capacity to measure cyanotoxins
  - Nearterm approach ot this problem is to archive fish and wildlife smaples for later testing.
  - Interested in information on cyanotoxin stability in archived samples over time
  - If you have information on this or suggested contacts in this area, please send to Regina Linville at regina.linville@oehha.ca.gov or Ali Dunn at ali.dunn@waterboards.ca.gov
- Guidance Update Subcommittee - Marisa Van Dyke, CA Water Boards

- GUS reconvened in December with smaller group.
- Currently looking for peer reviewers - March 2018
- Final draft Guidance planned for adoption by Network - Spring 2018
- Email Marisa Van Dyke marisa.vandyke@waterboards.ca.gov if interested in peer review

12:00 pm Adjourn

- Question: what type of outreach is being done to get more people across the state involved with CCHAB?
  - They is an outreach subcommittee but hey have not met recently.