CCHAB Minutes
October 15, 2020
9-12:10pm

Please see meeting recording on the CCHAB Network Webpage
(https://mywaterquality.ca.gov/monitoring_council/cyanohab_network/index.html#meetings)

Review of July meeting notes

- No comments or questions so moved to approve minutes.

Other updates (open mic)

- Annual report due at next meeting for workgroups/subcommittees and HAB Coordinators. There will also be a session for leads before the December meeting to go over the Water Quality Monitoring Council's new strategic planning tools

Cyanotoxin producer chart update with Ross Cooper, OIMA Sea Grant Fellow and Keith Bouma-Gregson, State Water Resources Control Board

- Taxonomy revisions are frequent, so a review of the "Cyanobacteria and Known Toxins" 2017 chart was conducted, literature for new research, toxins and genera ensued, meetings to edit and refocus the producer chart took place, and updates have been submitted for external review.
- Some genera changes were made due to updated science, other genera were removed due to lack of confidence
- From a toxin perspective, BMAA was removed, guanitoxin was added, anatoxin-a and homoanatoxin-a were combined into a single column, and liver, neuro and skin toxins were grouped
- https://docs.google.com/document/d/1H3ehXnByzgeqFh7tpX09Qguc_c08m9Dt61GpP-iY6Fs/edit for comments due October 30th
- Question: are you putting together information just for California? Answer (Keith): not sure if we have enough of a sense of what is in CA or endemic to CA. This current list will cover the vast majority of taxa in CA.
- *Please see meeting recording on the CCHAB Network Webpage*

Advancing Portable Detection Capabilities of HAB Species in California Waters (Holly Bowers, Moss Landing Marine Labs)

- Moss Landing Marine Labs received a Prop 84 grant administered by the Ocean Protection Council to validate qPCR assays for 11 HAB species and provide instrument demonstrations to regional stakeholders
- Creation of assays for multiple species which have had observed blooms along the CA coast
- PCR analysis was developed in the 1980's and now can be run on laptop and the Liberty 16 can run off an iPhone. This portability eliminates time lags.
- Their reagents and consumables are not proprietary.
- No assays for anatoxin producers yet

Break (15 mins)

Nutrient and HAB Visualization Tool (Brian Bergamaschi, Tamara Kraus, Chuck Hansen, USGS)

- USGS data is available through the National Water Information System (NWIS) https://waterdata.usgs.gov/nwis? and all public journal articles and reports can be found in ScienceBase https://www.sciencebase.gov/catalog/ .
- Nutrient and HAB Visualization tool is product of several years of work to link the millions of Bay Delta data points of water quality chemical constituents from ongoing monitoring results of multiple parameters. This tool compares sites over time and also provides live data to the viewer, as well as real time taxonomy data. Data includes chlorophyll-a, diatom percentages, nitrates, phycocyanin and other analytes.
- Tool can be located at tableau.usgs.gov/bay_delta

Regional HAB Coordinator and Subcommittee Updates

- Region 1:
  - Caution posted at Big Lagoon
  - Warning at Stone Lagoon
  - Dangers at Van Duzen River, South Forth Fork, Mad River, Trinity, Gualala River
  - Three illness reports this year
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- Klamath:
  - Anatoxin detected. Would like to do more benthic sampling to ID where blooms and toxins are located
- Region 2:
  - Caution and warning signs posted
- EB Parks Update
  - Due to shelter in place, reservoirs are closed but continue to be monitored due to popularity in hiking
  - Lots of closures due to microcystin danger designations
- Region 3
  - Suspected dog death so general awareness signs were posted
- Region 4
  - Two phase research project: first phase occurred pre-holiday at 17 lakes that had visual blooms.
  - Cautions posted at several lakes including Machado Lake, North Lake, and Pyramid Lake, Lake Lindero. Substantial fish kill, bloom at Lake Lindero
- Region 5
  - REC use assessment and monitoring in the delta took place. Collected fecal indicator bacteria with every weekly sampling event. Toxins were detected which led to caution to danger signs in various spots in the delta
  - Lake Isabella had a large, thick bloom
  - Port marina area in Stockton has a lot of scum so Danger was posted
  - Labor Day Assessment: Many postings were made due to this.
  - Lake Oroville does not need a posting
  - Kern County is experiencing a dense bloom so the public at and downstream are being informed. Microcystin levels in the thousands
- Clear Lake

    - Anatoxin was detected at several locations over the summer
    - Big Valley Band of Pomo Indians at Clear Lake keeps a table that is shareable with the county and gives recommendations for signage based on toxin levels
    - Results continue to be posted at Big Valley's website www.bvrancheria.com/clearlakecyanotoxins and on social media at facebook/ClearLakeWaterQuality/
    - Particularly challenging bloom season for public water systems in the Lower Arm of Clear Lake. Systems still contending with active blooms and monitoring ammonia levels closely.
- Region 6
    - Participated in pre-holiday assessment and ongoing monitoring. 7 of 9 waterbodies were sampled by regional partners. 2 of the 9 were given a danger posting and other has caution and warning.
    - Three dog illnesses/deaths
- Region 7
    - Monitoring taking place around Salton Sea with several locations having Caution signs posted
    - Special study going on eastern end focused on impacts on hunting dogs
- Region 8
    - 50 samples taken with partners, 15 separate events, 8 water bodies. Several locations, including Big Bear Lake and Lake Elsinore, had danger levels. Fires are impacting the region
    - Funding for additional testing will be provided to the region
- Region 9
    - Monitoring over the summer, due to incident reports.
    - Lake Hodges participated in a holiday assessment
    - Lake Henshaw has a dense bloom and danger posting
- HAB Illness Workgroup
    - Continuing to work with agencies when dog or human illnesses are reported
    - Can be tracked in the HAB portal
    - General outreach and webpage development is taking place
    - notification to nearby medical/veterinarian clinics when danger is posted
    - Fires potentially resulted in less reporting than in past years
    - Illness Tracking webpage under the Portal at https://mywaterquality.ca.gov/habs/hab-related_illness.html
- Mitigation Subcommittee
    - Continues to be very active
    - Focused on researching the latest strategies and technologies for mitigation
    - Strike Force is being held up as it would need funding
    - Various speakers will be presenting at future meetings
    - Seeking funding to put subcommittee ideas and development into mitigation actions
- Benthic HABs subcommittees
    - No updates
- FHAB Program
    - Monitoring Strategy released for internal review

- Freshwater HAB Program received dedicated funding for staff, monitoring, and implementation of monitoring strategy.

12:00 pm Wrap up

12:10 pm Adjourn