

MINUTES
HARMFUL ALGAL BLOOM WORKGROUP
March 13, 2008
10:00 a.m. – 12:00 p.m.

Eller O/M Building Room 203
Texas A&M University

Attending the meeting were Joan Glass, Steve Twidwell, Meridith Byrd (TPWD), Chris Kolbe (TCEQ), Kirk Wiles (DSHS), Lisa Campbell and Cheryl Gilpin (TAMU). Attending by phone were Barbara Dorf (TPWD) and Rick Stumpf (NOAA).

Current *D. acuminata* bloom

Meridith began the meeting by, along with Kirk, giving a short timeline of the current *D. acuminata* bloom, which is the first time a toxic bloom of this species has been recorded in Texas.

- February 14: Lisa Campbell e-mailed Meridith, Tracy Villareal and Ed Buskey (Mission-Aransas NERR) informing them that *Dinophysis* sp. were showing up in images taken by her Imaging Flow CytoBot (IFCB) at Port Aransas. Meridith contacted Kirk to give him a heads-up.
- February 25: Lisa e-mailed to say that *Dinophysis* sp. counts were still high in her images and that she sent a water sample to Bob Dickey (FDA) for okadaic acid analysis. Ed replied to say that his counts were now at 165/mL up from 50/mL and that *Dinophysis* was dominating the community and clearly a bloom.
- March 1: Kirk notifies the state epidemiologist about the bloom and asks to be contacted with any reports of food poisoning.
- March 3: Alex Nunez e-mailed Meridith. He had responded to a report of discolored water in the Port Aransas marina and identified *Dinophysis* sp. as the culprit. Meridith notified Kirk, Lisa and Tracy of this.
- March 4: Lisa's water samples have tested positive for okadaic acid (OA). DSHS begins their sampling to look for bioaccumulation and sends oyster samples to FDA for analysis. Speculation that the species is *D. acuminata*.
- March 7: DSHS receives word that their oysters are toxic, less than 2 hours later closes bays, issues [press release](#) and recall for shellfish harvested as of March 1. Dealers immediately cooperate. The Rockport/Fulton community is notified in time to purchase new oysters from Louisiana to be served at Oysterfest that weekend. Oysters harvested from Aransas Bay are allowed to be returned to the bay.
- March 8: Kirk has all the shipping records from Texas shellfish dealers; oysters have been sent to LA, MS and FL for redistribution. 8 shipments of 300-500 sacks (at 110 lbs each) had left Texas.
- March 10: TPWD, DSHS, UT and TAMU convene on a conference call to outline a monitoring plan.
- March 11: A MERHAB proposal for rapid response funding is created and sent through TPWD for the necessary approval before it can be submitted.
- March 13: DSHS collecting oysters in Tres Palacios, Matagorda, Lavaca, Powderhorn Lake, and Espiritu Santo bays (2 samples from each site) as a precaution. If meat samples are found to contain OA then additional bays will be closed.

Kirk pointed out that toxic shellfish have been found in areas without discolored water, which according to the literature is not uncommon. For example, Mud Island has the lowest cell counts but the highest oyster toxicity (and also the largest oysters.) No cells

are found at some sites until Pass Cavallo, which suggests possible Gulf transport of the bloom? He also said that viable cells have been found at salinities as low as 15ppt and there are reports from Europe of occurrences at 5ppt. This raises the questions:

What are the limiting factors?

How is the bloom being transported?

Do we have the ability to get offshore samples?

Karen Steidinger confirmed the species as *D. acuminata* with some *D. fortii* and *D. caudata* occurring as well. Lisa reports increasing numbers of *Prorocentrum* sp. in the IFCB samples.

Meridith distributed a printout of [DSP information](#) from the Woods Hole Oceanographic Institution's website.

Updates:

Bloom Updates

Golden alga has not been as large of a problem this year as in recent years, possibly due to the large amounts of rainfall in 2007 and the relatively warm winter. The Pecos River has had curiously high cell counts and toxicity but no dead fish. The Brazos River has been largely quiet with the exception of a golden alga-related shad kill on Buffalo Springs Lake. Lake E.V. Spence on the Colorado River has had a fish kill due to golden alga, but other sites along the Colorado have been unaffected. In the Red River basin, Baylor Lake has been the only waterbody to experience a fish kill, though high cell counts have been found at Lake Diversion and Lake Texoma.

TPWD-funded Golden Alga Projects

Meridith was unable to get an update on the projects before the meeting, but able to speak on her own projects. The pre-bloom study of Lake Whitney has shown no signs of golden alga. One more trip (April) is planned for this study.

Meridith and Janet Nelson completed their sampling of the tidal portions of 10 rivers for golden alga: Sabine, Trinity, Brazos, Colorado, Lavaca, Guadalupe, Aransas, Nueces, Arroyo Colorado, and the Rio Grande. Samples have been preserved in glutaraldehyde and will soon be shipped to PhycoTech for analysis. (Samples were shipped Mon, March 17.)

TPWD Golden Alga Coordinator Position

The position has been offered. No word yet on a possible start date.

TPWD Golden Alga Symposium

Meridith is traveling to Dallas on March 18 with other TPWD staff to visit 3 possible locations for the Symposium. Once a location has been secured a second announcement will be distributed.

Don Anderson of WHOI will be the plenary speaker, presenting a talk on HABs with an emphasis on *P. parvum* and potential management scenarios. Dave Hambricht of OU will be speaking on different aspects of *P. parvum* toxins.

Phytoplankton Monitoring Network

Meridith has been in touch with Dr. Steve Morton since the beginning of the *D. acuminata* bloom. He confirmed that volunteers have found cells at Christmas Bay and San Luis Pass. The PMN folks will be sending Meridith their volunteer data that includes *Dinophysis*.

Imaging Flow CytoBot (Lisa Campbell, TAMU)

Lisa gave a quick update and Power Point presentation on the IFCB. Though it was designed for early detection of *K. brevis*, this *D. acuminata* bloom has shown that the IFCB does work as intended, as the IFCB began seeing increases in cells about 3 weeks before the bloom erupted.

HAB Response Plan

Meridith is still revising the HAB Response Plan and promises for the revisions to be complete by the next meeting.

Other Updates

Chris Kolbe brought hard copies of project summaries that TCEQ will soon make available at <http://www.texaswaterdata.org>. The current project summary involves HAB monitoring in the Brazos River Basin.

Steve Twidwell brought photos of water fern (*Azolla caroliniana*). He found the plant while investigating a complaint regarding “red colored” water in Elm Creek near Granite Shoals (which directly enters Lake LBJ.) Elm creek was reduced to a standing perennial pool near the road crossing at the time of the investigation. The red colored water turned out to be a very dense growth of water fern, a free-floating fern in the Salviniaceae family that resembles “duckweed” in appearance. Young plants are typically a light grey-green, but often turn pink, red, or dark brown with age. The dense growth of water fern on the surface of the Elm Creek pool resulted in very poor underlying water quality (D.O. 0.4 mg/L; pH 9.7 std. units). Six small bluegill sunfish were found dead around the periphery of the pool

Action Items

1. Meridith will obtain a list of Texas sampling sites from the PMN. (left over from previous meeting)
2. Meridith will continue updating the HAB Response Plan.

Next Meeting

No date was set for the next meeting. Meridith will send out a meeting date in the next couple of weeks.