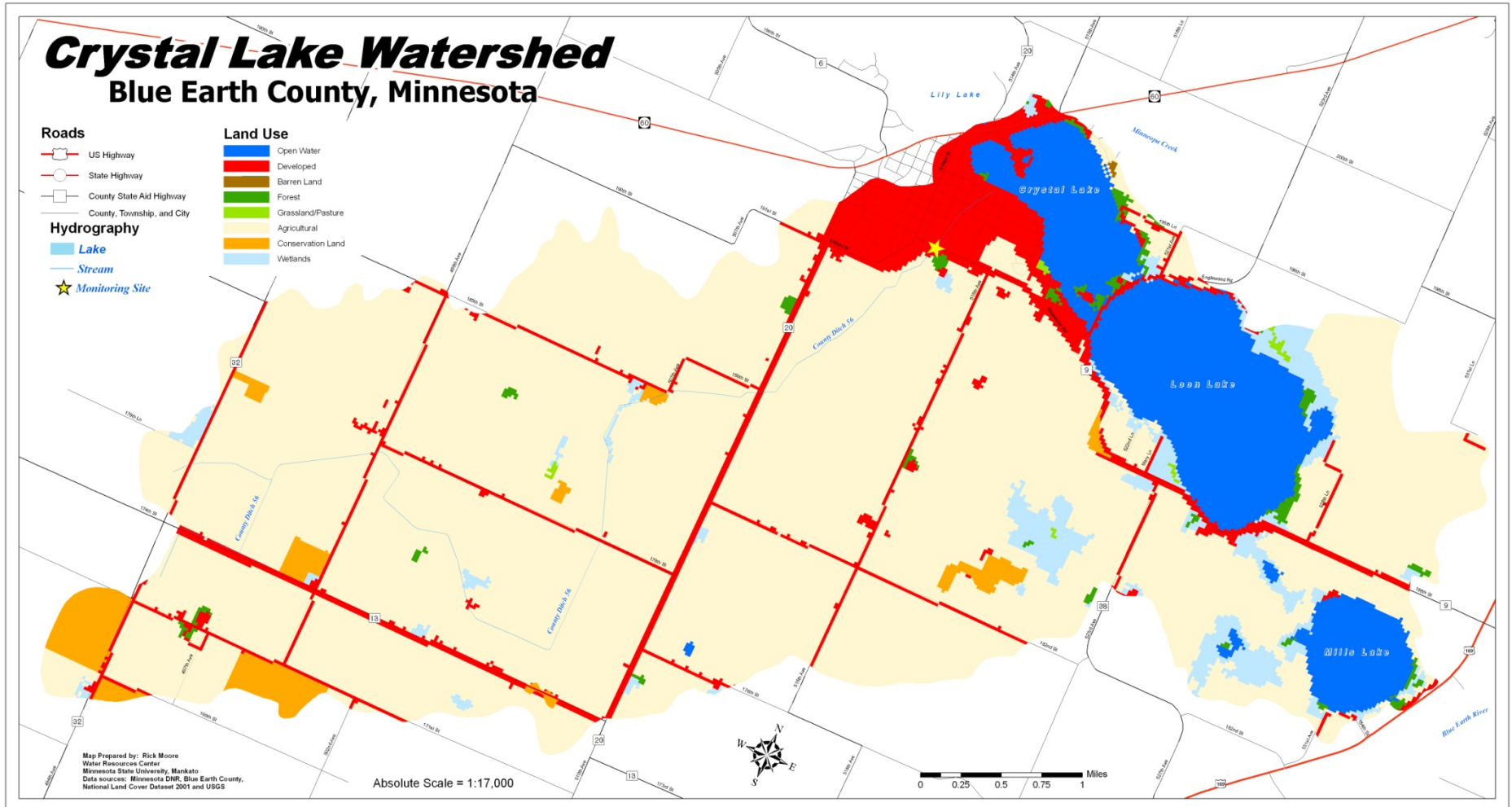


HARMFUL ALGAL BLOOMS— LOCAL PERSPECTIVES: CRYSTAL AND LOON LAKES, BLUE EARTH COUNTY

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Crystal Loon Mills Clean Water Partnership
Water Resources Center, MSU Mankato**

LAKES BACKGROUND



WATER QUALITY BACKGROUND

- 1995-1996 Clean Water Partnership Diagnostic Study indicates that the main water quality concern for the watershed is excess phosphorus
- Sept. 2004: Crystal Lake experiences toxic algal bloom
- In 2006 Crystal Lake listed on the 303(d) Impaired Waters list for excess nutrients, additionally Loon Lake is listed for aquatic consumption (mercury)
- Lake Crystal city swimming beach frequently closed due to high levels of fecal coliform bacteria

2004 BLOOM HIGHLIGHTS

- Despite what was described as an “overwhelming sewage-like smell” coming from the lake and an overall fluorescent green color with bluish green floating mats of algae, Crystal Lake still experienced heavy recreational use
- Sept. 28 – MPCA issues press release warning people not to swim or wade in the water and to keep pets and farm animals out until algae is cleared up
- Microcystin level in a sample from Crystal Lake during the bloom was ~7,190 ppb, “alarmingly high” toxin concentrations

IT'S BAAAACK!

2007 BLOOM TIMELINE

- June 13, Wed. – PCA staff visit Crystal and Loon Lakes to take pictures of ongoing bloom; early in season for such a severe bloom
- June 14, Thurs. – PCA collects water samples on Crystal and Loon Lake, posted warning discussed
- June 18, Mon. – Loon Lake sample negative for toxicity, bloom appears to have subsided for time being



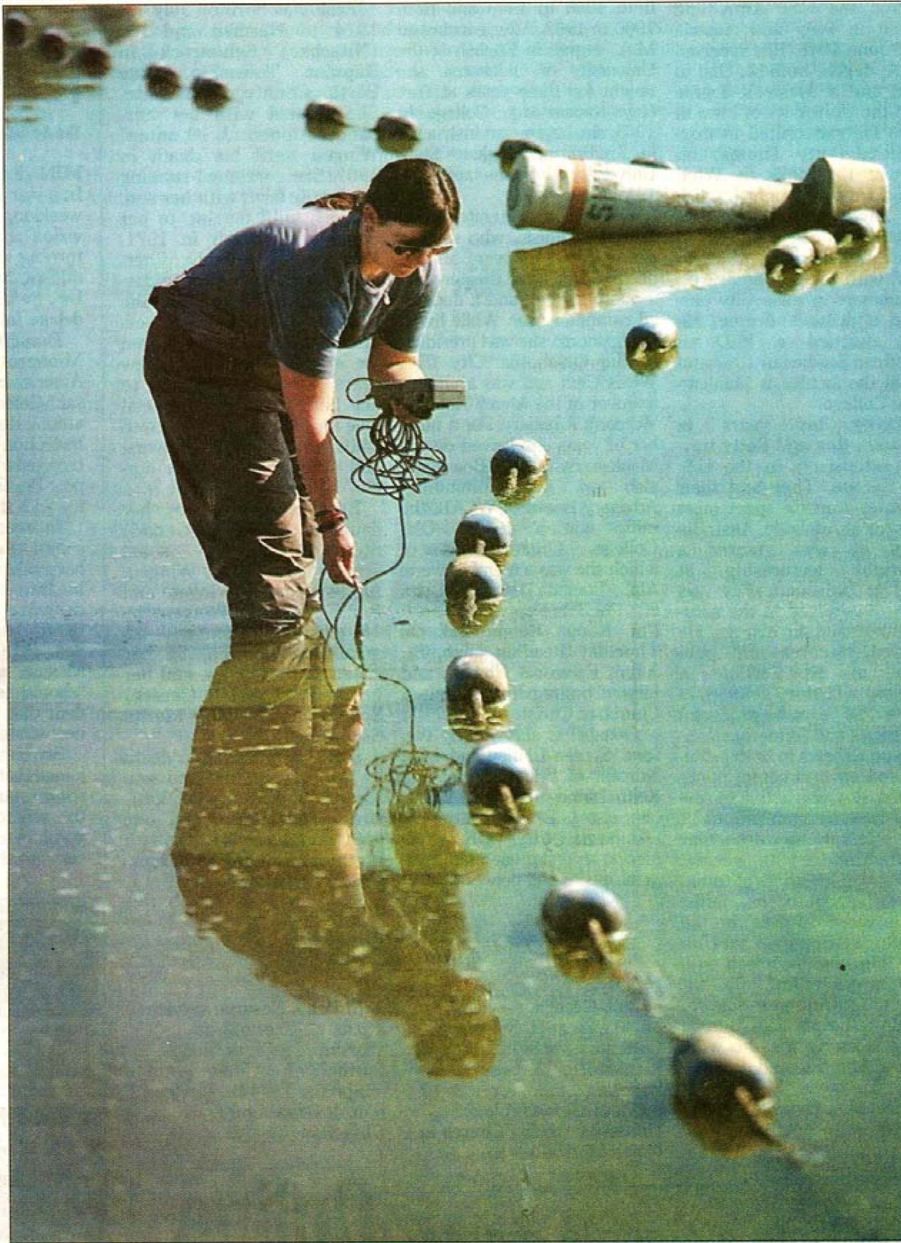
2007 BLOOM...ROUND TWO

- June 23-26, Sat-Tues. – Bloom intensity increases again; 26th WRC receives call from BEC Health Dept. with report of sick child, dead animals, BEC contacts MN Dept of Health
- No wildlife on Crystal Lake, even where nuisance populations of cormorants and geese normally congregate
- June 27, Wed. –City of Lake Crystal closes swimming beach until further notice and posts PCA toxic algae warning posters at all public docks
- June 28, Thurs. – PCA press release in Lake Crystal Tribune, as well as state-wide highlighting bloom
- Microcystin samples from Crystal Lake showed concentrations of 3,800 ppb

LESSONS LEARNED

1. Sight and Smell alone NOT a deterrent for recreational activity
2. Who to Contact?
 - If you get sick after swimming in the lake, contact Blue Earth County Health
 - If your animals get sick or you see dead animals, contact PCA
 - If you're unsure about the safety of the water, DON'T GO IN! Contact City Hall and voice your concern, see if there have been any warnings posted.

SOOOOOO ... WE'RE NOT GOING SWIMMING?



John Cross

Sarah Duda test for levels of dissolved oxygen in Crystal Lake. While the swimming buoys remain out, there is no swimming in the lake these days as severe algae blooms have left a green, stinky and potentially dangerous mess on the lake.

PRESS & PUBLICITY

- Involve sooner rather than later
- Help get the word out
- Sometimes “scare-tactics” are to your benefit
- Transparency, you have “nothing to hide”
- Adds legitimacy

SUMMARY

- COMMON SENSE RULES!!!
 - If the water looks unsafe – keep out!
 - If you think you (or your animals) may have come in contact w/toxins, seek medical attention FIRST.
- For Human Health Issues: Contact County or State Health Departments
- For Animal Health Issues: Contact Minnesota Pollution Control Agency

LESSONS FOR LGUS & PARTNERS

- Offensive odor and obvious floating algae mats are not deterrents to recreational activities
- Important to keep in touch with all partner agencies that may have jurisdiction or stake in the bloom
 - Municipality, PCA, County Health Dept., State Health Dept., DNR, etc.
- Better to be proactive than retroactive!