

Volunteer Lake Monitoring Program

Greg Ratliff, Illinois Environmental Protection Agency

Kelly Deem, Lake County Health Department

Holly Hudson, Chicago Metropolitan Agency for Planning

Beau Henson, Greater Egypt Coordinator

2014 VLMP Tiered Approach

	Tier 1	Tier 2	Tier 3
Purpose	Education + Water Quality Assessments	Expanded Education + Baseline Water Quality Indicators + Water Quality Assessments	Expanded Education + Expanded Water Quality Indicators + Water Quality Assessments + TMDL2 Development
Monitoring Expectations	Twice/month (May – October)	Tier 1 parameters: Twice/month (May – Oct) + Tier 2 Water & Chlorophyll sampling at one site: 1 time /month, 4 months/year (May – August)	Tier 1 parameters & D.O. / Temperature profiles: Twice/month (May – Oct) + Tier 3 Water & Chlorophyll sampling: 1 time /month, 5 months/year (May – August, October)
Parameters	<u>Secchi</u> Transparency + Aquatic Plant Coverage, Apparent Color, Lake Water Level, Weather Conditions, Aquatic Invasive Species, Lake & Watershed Management	Tier 1 parameters + Water Chemistry sampling (Total Phosphorus, Total & Volatile Suspended Solids, Nitrate/Nitrite, Ammonia, Total <u>Kjeldahl</u> Nitrogen, Alkalinity, Chloride*) + Chlorophyll sampling* + Dissolved Oxygen (D.O.) / Temperature profiles*	Tier 1 parameters + Water Chemistry sampling (Total Phosphorus, Total & Volatile Suspended Solids, <u>Nitrate+Nitrite</u> , Ammonia, Total <u>Kjeldahl</u> Nitrogen, Alkalinity, Chloride*) + Chlorophyll sampling + Dissolved Oxygen (D.O.) / Temperature profiles
Available Slots	150	75	15
Volunteer Requirements	No Experience Needed , Access to boat with anchor, personal floatation equipment & internet access (if possible)	Previous year of consistent Tier 1	Previous year of consistent Tier 1 and previous Tier 2 experience.
Training	Personal Training	Centralized or Personal Training	Centralized or Personal Training (subject to individual audit)

*At selected lakes

2013 Tier 3 VLMP Participants

Tier 1

Secchi Depth Transparency
Macrophyte Coverage

Tier 2

Water Quality at one site:
Potentially - Alkalinity,
Chloride, Color, Ammonia,
Nitrate/Nitrite, Total Nitrogen,
Total Phosphorus, TSS/VSS
and Chlorophyll

Tier 3

Water Quality at 3 sites and
bottom sample at site one.
Chlorophyll Sampling at 3 sites.
Dissolved Oxygen at 3 sites.



2013 Tier 1 VLMP Lakes

- * Antioch/Lake
- * Bangs/Lake
- * Barrington/Lake
- * Beaver/Grundy
- * Black Oak/Lee
- * Campton/Kane
- * Campus/Jackson
- * Catherine/Lake
- * Channel/Lake
- * Charlotte/Kane
- * Chautauqua/Jackson
- * Countryside/Lake
- * Crooked/Lake
- * Cross/Lake
- * Eureka/Woodford
- * Fish Trap/Jo Daviess
- * Fyre/Mercer
- * Gages/Lake
- * Gamlin/St. Clair
- * Goose Lake/McHenry
- * Grass/Lake
- * Grays/Lake

- * Griswold/McHenry
- * Harrisburg Res/Saline
- * Herrin New (#1)/Williamson
- * Indian/Cook
- * Island/Lake
- * Jacksonville/Morgan
- * Jaycee/Jefferson
- * Joliet Jr. College/Will
- * Kinkaid/Jackson
- * La Fox Pond/Kane
- * Lake of Egypt/Williamson
- * Lambert/Du Page
- * Leisure/Lake
- * Lincoln/Grundy
- * Linden/Lake
- * Little Grassy/Jackson
- * Little Silver/Lake
- * Louise/Lake
- * Loveless/Du Page
- * Mauvaise Terre/Morgan
- * McLeansboro/Hamilton
- * Murphysboro/Jackson

- * Napa Suwe/Lake
- * Nashville/Washington
- * New Thompson/Jackson
- * Nippersink/Lake
- * Paris Twin East/Edgar
- * Paris Twin West/Edgar
- * Petersburg/Menard
- * Pierce/Winnebago
- * Pine/Lee
- * Richardson Wildlife/Lee
- * Round/Lake
- * Sand/Lake
- * Sunset/Lee
- * Third/Lake
- * Virginia/Cook
- * Waterford/Lake
- * Woods Creek/McHenry
- * Zurich/Lake

2013 Tier 2 VLMP Participants

- * Altamont Reservoir/Effingham
- * Bass/Lee
- * Bird's Pond/Sangamon
- * Borah/Richland
- * Buffalo Creek/Lake
- * Candlewick/Boone
- * Carbondale Res/Jackson
- * Cedar/Jackson
- * Charles/DuPage
- * Chicago Botanic Garden/Cook
- * Civic/Grundy
- * Crystal/McHenry
- * Dawson/McLean
- * Decatur/Macon
- * Deep/Lake
- * Deep Quarry/DuPage
- * Devil's Kitchen/Williamson
- * Diamond/Lake
- * Druce/Lake
- * Fischer/Lake
- * Forest/Lake
- * Fourth/Lake
- * Governor Bond/Bond
- * Highland Silver/Madison
- * Homer/Champaign
- * Honey/Lake
- * Leopold/Lake
- * Loch Lomond/Lake
- * Long/Lake
- * Longmeadow/Cook
- * Loon, East/Lake
- * Loon, West/Lake
- * Mattoon/Shelby
- * Miltmore/Lake
- * Olney East Fork/Richland
- * Ossami/Tazewell
- * Otter/MaCoupin
- * Paradise/Coles
- * Pinckneyville/Perry
- * Slocum/Lake
- * Spring Arbor/Jackson
- * Spring Ledge/Lake
- * Stephen/Will
- * Summerset/Winnebago
- * Sunset/Champaign
- * Sunset/Macoupin
- * Sylvan/Lake
- * Taylorville/Christian
- * Timberlake/Lake
- * Tower/Lake
- * Twin Oaks/Champaign
- * Valley/Lake
- * Vermilion/Vermilion
- * Vernor/Richland
- * Wonder/McHenry
- * Woodhaven/Lee
- * Woods Creek/McHenry
- * Wooster/Lake

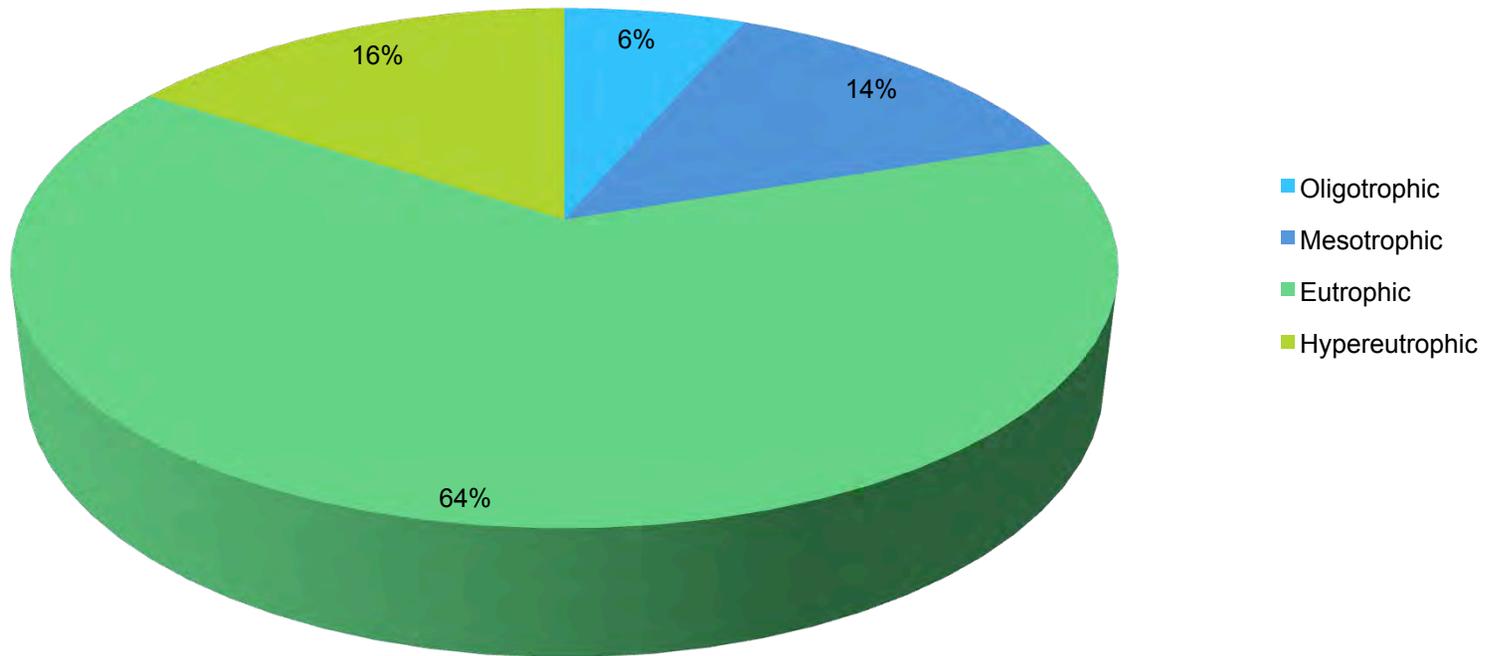
2013 Tier 3 VLMP Participants

- * Apple Canyon/
Jo Daviess
- * Bertinetti/Christian
- * Bloomington/McLean
- * Canton/Fulton
- * Charleston SCR/
Coles
- * Evergreen/McLean
- * Galena/Jo Daviess
- * Herrin Old (#2)/
Williamson
- * Killarney/McHenry
- * Lake of the Woods/
Champaign
- * Miller/Jefferson
- * Sara/Effingham
- * Silver/McHenry
- * Spring/McDonough
- * Springfield/Sangamon
- * Three Oaks North/
McHenry
- * Three Oaks South/
McHenry

Median Secchi Transparency for 129 Illinois Lakes



2013 Trophic State Distribution



New HAB Component



Reporting HABs

- * If you suspect that blue green algae are blooming on your lake or a public lake you've visited; you can report it to Illinois EPA.
<http://www.epa.state.il.us/water/algal-bloom/index.html>
- * As soon as possible after seeing the bloom; download a form at the Illinois EPA website and fill out any information you can describing the bloom. Take at least two photographs of the algae. One photo should be a close-up of the algae scum. Another photo should be taken of the landscape to help identify the location of the bloom/scum on the lake.
(EPA.HAB@illinois.gov)
- * If you are a VLMP volunteer, you may also contact your VLMP coordinator and request that they file the report of the algal bloom on your behalf. If you would like information and updates on the condition of the bloom you reported, make sure your contact information is on the form.

Bloom Report Form

Please provide information about the potential blue-green algae bloom observed. Information can be entered into this electronic form and saved onto your computer. Please save and e-mail a completed copy of this form to EPA.HAB@illinois.gov. Please include at least two digital photographs (one close up & one landscape photo to show the surroundings) as additional e-mail attachments.

Bloom Location:

Water Body Name:

Date bloom observed:

County:

Drinking water source(yes, no, unknown):

Publicly owned lake(yes, no, unknown):

Digital photos attached(yes, no):

Report Completed By:

Name:

Organization:

Title:

Phone #:

E-Mail:

Are you a VLMP volunteer/coordinator (yes, no):

Bloom Description and Sampling Information:

Please describe the location of the bloom in the water body (e.g. center of lake, boat dock, beach, etc.):

Did you notice any colors in the water column (yes, no)?

Please describe the color(s) you see:

Was there a foul smell associated with the bloom (e.g. septic, rotten, fishy, earthy, etc.)?
Please describe:

Was there a foul smell associated with the bloom (e.g. septic, rotten, fishy, earthy, etc.)?

Please describe:

Please estimate the size (sq. feet) of the bloom:

Can you see a surface scum (an accumulation of algae at the surface) or algae floating near the water surface (algae at the surface can look like grass clippings, green /blue thick foam, spilled paint (yes, no, uncertain)?

Is the bloom near a public beach, boat ramp or marina (yes, no - please specify name)?

Is the bloom near a public water supply intake (yes, no, unknown – specify water system name if known)?

Were samples taken (yes, no)?

If yes, what types of samples, when and where were they collected, and where were they sent for analysis, results, etc?

Do you know if other water quality information is available (please specify)?

Agency Use Only:

Action taken, if any (advisory posted, owner notified, factsheet handed out, etc.)?

What Happens Next?

- * If the report and photos indicate that a bloom or scum has the potential of producing toxins, a HAB responder will be sent to investigate the bloom as soon as possible. This could be an Illinois EPA employee or a VLMP coordinator.
- * The HAB responder will investigate and provide technical assistance and if necessary, will collect samples.

HAB Responder

- * A HAB Responder will use the report to locate the bloom, and may contact you for further information. The Responder will collect a sample for microcystin. On a case by case basis, the Responder may collect samples for chlorophyll, nutrients, field parameters, and weather and site related information.
- * **The** Responder will then analyze the microcystin sample using a qualitative Microcystin Test for Recreational Waters.
- * The Responder will log all information into a database and provide results to the reporter.
- * If the test reveals levels of microcystin above 10 ppb, the remaining sample will be sent for further quantitative analysis. At this time an advisory could be posted at the lake warning people of the elevated toxin levels on the lake.
- * After receiving the quantitative results, stakeholders will be notified and advised.
- * Additional qualitative samples will be taken, on a site specific basis, for the lifting or extending of a closure or advisory of the lake.

HAB Safety

- * Extreme caution should be taken in the case of any exposure to a possible Harmful Algal Bloom.
- * People should avoid direct skin contact with the water, inhaling droplets of the water, and ingesting any water.
- * When working near or investigating blooms safety equipment including gloves, carpenter's masks, waders, goggles, and personal flotation devices is recommended.
- * If you come into contact with a HAB wash your skin and any equipment with soap and tap water immediately after exposure. Do not use lake water that looks clear to clean. Even lake water that appears to not have algae in it, can have toxins associated with it.
- * Do not allow pets or children to come into contact with the water, even water surrounding the scum that looks clear, may be contaminated with toxins.

Contact Information

* Harmful Algal Bloom (HAB) contact email:
EPA.HAB@illinois.gov

* Primary Contact: [Teri Holland](#),
217-782-3362

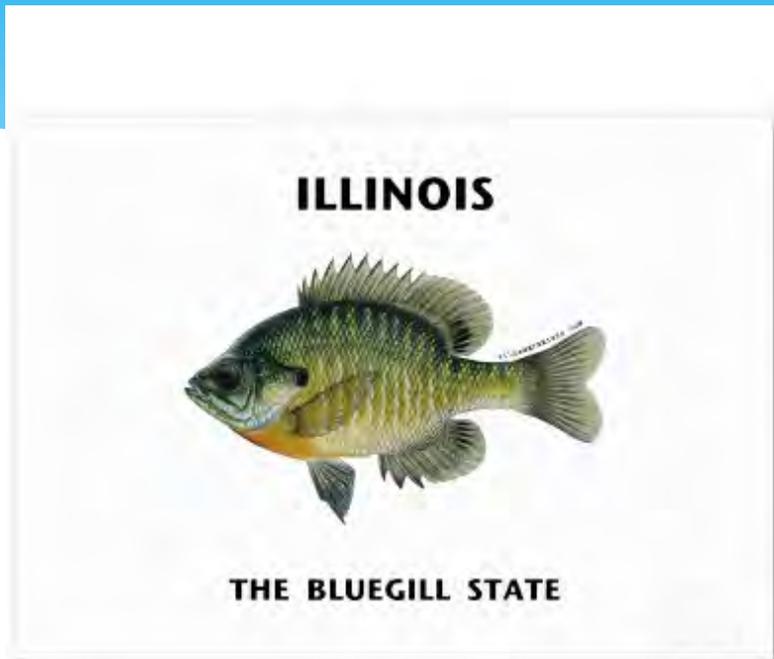
* VLMP Coordinators:

- * Greg Ratliff, Illinois Environmental Protection Agency, greg.ratliff@illinois.gov, 217-782-3362
- * Kelly Deem, Lake County Health Department, Kdeem@lakecountyil.gov, 847-377-8030
- * Holly Hudson, Chicago Metropolitan Association for Planning, Hudson@cmap.illinois.gov, 312-454-0400
- * Beau Henson, Greater Egypt Regional Planning and Development Commission, beauhenson@greateregypt.org, 618-997-9351

* Illinois EPA Field Biologists:

- * Northern Regional: Diane Tancl, diane.tancl@illinois.gov, 847-294-4105
- * Central Regional: Phyllis Lau, phyllis.lau@illinois.gov, 217-557-8744
- * Southern Regional: Mike Bundren, mike.bundren@illinois.gov, 618-993-7220

Thank You



Home Page: www.epa.state.il.us/water/conservation/vlmp