What is Expected of Me?

What we need most from Secchi and water chemistry volunteers is your time and keen observations of your lake. As a **Secchi volunteer**, you will determine how the water clarity of your lake compares to similar lakes statewide and watch for long-term changes. As a water chemistry volunteer, you will continue to collect water clarity (Secchi disk) data every other week throughout the open water season. Chemistry volunteers collect water chemistry data four times a year. Chemistry volunteers collect a phosphorus sample during spring overturn (or turnover) which happens within two weeks after ice out; and phosphorus and chlorophyll samples the last two weeks of June, July, and August. The Network provides all of the equipment and training needed to collect your water samples and data.

Chemistry monitoring requires minimal expense on your part. Volunteers are responsible for providing distilled water for cleaning water sampling equipment, and ice for shipping the water samples to the State Lab of Hygiene (WSLH). Volunteers also provide the boat and fuel to get to the sampling location (usually the deepest part of your lake). Chemistry monitoring requires a fairly substantial time commitment. Although Secchi disk sampling may only take a few minutes, lake chemistry sampling may take up to several hours to complete. The exact amount of time involved will depend on the size and depth of your lake and your familiarity with the sampling procedures. Like anything else, the more experience

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Season Schedule for Chemistry, Temperature and Dissolved Oxygen Monitoring

Parameters	April/May	June	July	August	September	October
Secchi	Every 10 to 14 days check satellite dates	Every 10 to 14 days check satellite dates	Every 10 to 14 days check satellite dates	Every 10 to 14 days check satellite dates	Every 10 to 14 days check satellite dates	1 to 3 times if possible
Phosphorus	Yes within 2 weeks of ice off	Yes last 2 weeks of June	Yes last 2 weeks of July	Yes last 2 weeks of August or early September	No	No
Chlorophyll	No	Yes last 2 weeks of June	Yes last 2 weeks of July	Yes last 2 weeks of August or early September	No	No
Temp. Profile	Yes	Yes	Yes	Yes	Yes	optional
D.O. Profile (If collecting)	Yes	Yes	Yes	Yes	Yes	optional

It is important to collect the April/May phosphorus sample when the lake is still "turning over" – ideally within two weeks of ice out.

If possible, there should be about one month between the summer chemistry (total phosphorus, chlorophyll) dates.

Ice out and ice on dates can be entered into the CLMN database.

Satellite dates and paths are listed on the CLMN web page.

Sample Schedule

A typical year of volunteer monitoring may look something like this:

February

Check your lake summary report from the CLMN website for accuracy. Volunteers who do not have access to the Internet will receive a paper copy of last year's lake summary report in the mail. Awards for length of service in CLMN or exceptional service will be distributed.

March

Volunteers should expect to receive their spring monitoring supplies (filters, labels, merchandise return labels, lab slips). Volunteers may be asked to attend a refresher course during March, April, or May and may be asked to pick up sulfuric acid vials and dissolved oxygen chemicals at a local Wisconsin DNR office. Print off your data sheets and remote sensing schedule.

The annual Wisconsin Lakes Convention is held in March or April.

April

Chemistry volunteers collect a phosphorus sample WITHIN two weeks OF ice off (during spring overturn) – this may occur in April or May. DO NOT collect a chlorophyll sample in April or May.

Continue taking Secchi readings every 10 to 14 days throughout the open water season.

May

If your first chemistry sample was collected in April, there is no need to collect a phosphorus sample in May.

Continue to take Secchi readings. New volunteers are trained.

June

Chemistry volunteers collect a chlorophyll and phosphorus sample during the last two weeks of the month.

Invasive Species Awareness Month.

July

Coordinate Secchi readings with satellite dates.

Secchi Dip-In

Chemistry volunteers take a chlorophyll and phosphorus sample during the last two weeks of July.

August

Coordinate Secchi readings with satellite dates.

Chemistry volunteers take a chlorophyll and phosphorus sample during the last two weeks of August.

September

Coordinate Secchi readings with satellite dates.

No chemistry samples collected.

October

Volunteers wrap up Secchi monitoring for the season.

No chemistry samples collected.

November

Make sure that all your data has been submitted to Wisconsin DNR. If data has been entered into SWIMS database you do not need to submit a paper copy. If you do not have Internet access, mail copies of your data using the addressed envelopes that are provided to you.

December

Check your equipment and report broken, lost or damaged equipment to your CLMN regional coordinator. Make sure that all chemicals and your electronic temperature meter are kept in a warm location and do not freeze.

The battery in your electronic temperature meter will last longer if you remove it before winter.

WHAT IS THE REMOTE SENSING PROGRAM?

In recent years, the WDNR has implemented a satellite water program. This program originated in 1999 as a UW–Madison research project that has now transitioned into a WDNR operational program that estimates water clarity on approximately 8000 lakes annually across Wisconsin. The WDNR depends on citizen-based monitoring (CBM) for field measurements needed in satellite calibration. This powerful management tool that helps the agency monitor a large number of lakes in a cost-effective manner (less than $1 a lake). The large database supplied by this effort can assist managers is looking at the "big picture" with respect to Wisconsin's changing lake conditions, i.e. how are lakes changing in different regions of the state, different lake classes, different size lakes? In the near future, we hope to start examining how lakes are responding to past and future climatic conditions and landuse changes.

LAKE DISTRICT *• A special purpose unit of government with the cause of maintaining, protecting, and improving the quality of a lake and its watershed for the mutual good of the members and the lake environment.*

you have sampling, the smoother it will go. Volunteers who participate in chemistry monitoring will be asked to participate periodically in refresher sessions. These sessions ensure that everyone is familiar with current procedures and that all monitoring equipment is in good condition. Refresher courses also offer the opportunity to meet other volunteers and to ask Wisconsin DNR staff questions about monitoring and lake issues. Volunteers may also be asked to pick up spring sampling equipment at Wisconsin DNR offices or locations chosen throughout the DNR regions.

There are three things that may influence your enjoyment when participating as a citizen volunteer: your overall health, the type of boat you use, and whether or not you have a sampling partner. While the sampling duties are not too physically demanding, you should be in good overall health. A fishing boat or pontoon boat is ideal for sampling work and will be safer and more comfortable than a canoe. A sampling partner will make your job safer, easier, and faster as one person can record data while the other collects samples.

We ask that if you retire from CLMN you contact your CLMN regional coordinator. There is always more demand for water chemistry training and equipment from volunteers than there is available equipment. If you decide that you are unable to collect water chemistry and Secchi samples your equipment will be passed on to someone else on the lake or used on another lake.

If you pass your equipment on to another volunteer on the lake, please let your CLMN regional coordinator know. New volunteers need their contact information entered into the database. New chemistry volunteers should be trained by a CLMN staff member. Protocols often change and it is important that new volunteers get the most up to date training.

THE CITIZEN LAKE MONITORING NETWORK PARTNERSHIP

Volunteer citizen lake monitoring is a team effort with many players including citizen volunteers, Wisconsin DNR, UWEX and Wisconsin Lakes.

The citizen volunteer is the most important player in the lake monitoring network.

You know your lake on a day-to-day basis. You know the best spots to fish and what birds visit or nest on the lake. You know when the lake freezes over, when the ice goes out, and you know your neighbors and friends who love and use the lake. You volunteer to participate because of your genuine concern for the lake and your desire to learn more about it. Collecting water quality data is a step in the right direction to gaining a better understanding of your lake.

We depend on volunteers to share the information that they learn about their lakes with their Lake Association, Lake District, or other residents on the lake. You have the best access to your neighbors. Many volunteers share their lake status report every year at annual meetings. Your lake summary report, graphs, and narrative will help you to prepare this report. Your CLMN regional coordinator or Wisconsin DNR lakes coordinator are available to assist you if you need help providing this information to your lake group.

Another member of the partnership is the Wisconsin DNR CLMN Regional Coordinator and local staff.

Local staff is located in several Wisconsin DNR regional offices around the state. As a citizen volunteer, you may already know them or have worked with them in the past. If you have any questions about your lake and your monitoring duties, these are the first people you should contact to help answer your questions.

Wisconsin DNR CLMN staff located in Madison.

Staff help maintain and analyze the volunteer data, keep track of awards, produce reports, and logistically keep the Network running smoothly. .

By the conclusion of the sampling season you will receive an email or postcard reminding you that reports about your lake are available online at the Wisconsin DNR website. The reports summarize previous years' data collected on your lake. These reports include text, graphs, and pictures that help you understand how the data you collected in the past year relates to your lake.

The University of Wisconsin – Extension lakes staff.

The CLMN Statewide Educator is a UWEX-Lakes staff member. UWEX lakes staff ensure that trainers (Wisconsin DNR regional staff, outside agency trainers, and volunteer trainers) follow the Network's protocols when volunteers are trained. This ensures statewide consistency in data collected. UWEX staff write monitoring protocols; help to oversee the Quality Assurance/Quality Control portion of the Network; and order, build, and repair equipment for the Network.

All citizen volunteers receive *Lake Tides*, a quarterly newsletter published by the Wisconsin Lakes Partnership. The newsletter can also be viewed online at the UWEX-Lakes web page. Each issue of Lake Tides has several pages dedicated to topics of interest to CLMN volunteers.

Wisconsin Lakes provides a free *E-lake* letter. This publication has information on key lake issues, legislative activity affecting lakes, and upcoming lake events. The *E-lake* is delivered right to your email inbox! Occasional action alerts keep you informed of policy developments that may affect our lakes. To receive your free *E-lake* visit the Wisconsin Lakes web page.

THE CLMN LAKE MONITORING NETWORK HAS TEN PRIMARY GOALS

1. **Quality and Accessible Data.**
   Following collection protocols will enable you to collect quality data on your lake. Recording your Secchi disk readings and water chemistry data carefully, regularly and according to procedures, will provide valuable information about your lake. When you report your data to the Network, it is readily available through a database on the Internet. The Wisconsin DNR relies on your data. Without your help, very few lakes would be monitored.

2. **Document Water Quality Changes Over Time.**
   The Network's aim is to document water quality changes over time by summarizing the data that you collect and sharing that data with other volunteers and organizations. This is particularly important for those lakes where little or no data exists. You will be collecting baseline data that cannot be captured again in the future; and that will be used for decades to come. You will be able to compare your lake to hundreds of others using the statewide Summary Report. After several years of monitoring, your regional coordinator can work with you or your Lake Association to determine whether or not your lake should receive more intensive monitoring or management attention.

3. **Educated and Informed Citizen Monitors.**
   The Network's goal is to help you learn more about basic **limnology**. By collecting, summarizing, and reviewing your data, you will increase your understanding of your lake's overall water quality and will be able to share this information with your Lake Association or other lake residents. The information you collect can be used to help make decisions about your lake (e.g., use restrictions, **watershed** management decisions, aquatic plant management, etc.).

4. **Greater Number and Frequency of Lakes Monitored.**
   The Wisconsin DNR relies on citizen volunteers for most of its data. In a given year, Wisconsin DNR staff can only get out to a limited number of lakes, and often only get to these lakes once a year or once every five years. Your help allows many more lakes to be monitored on a much more frequent basis.

5. **Enhanced Participation in Statewide Network of Volunteer Monitors.**
   The Network is a partner in a statewide network with other Wisconsin monitoring groups, such as, LoonWatch, Water Action Volunteer Stream Monitoring, and others.

6. **Quality Support.**
   Support staff, located in Madison and Stevens Point, are available to help you with database or data reporting questions and awards. Each region of the state has a regional coordinator who trains volunteers and answers questions about equipment, sampling procedures, and annual reports.

7. Reduced Administrative Overhead (state, community, and citizen).

Volunteer help reduces the Wisconsin DNR's operating costs and helps streamline workflow. By having volunteers sample lakes that need to be monitored, the Wisconsin DNR saves time and money involved in having staff travel to those lakes in order to collect the data. Those staff can in turn concentrate their efforts on other lakes. It is the Network's goal to keep monitoring and data reporting as simple and efficient as possible for the citizen volunteer.

8. Engage Others in Support of the Network.

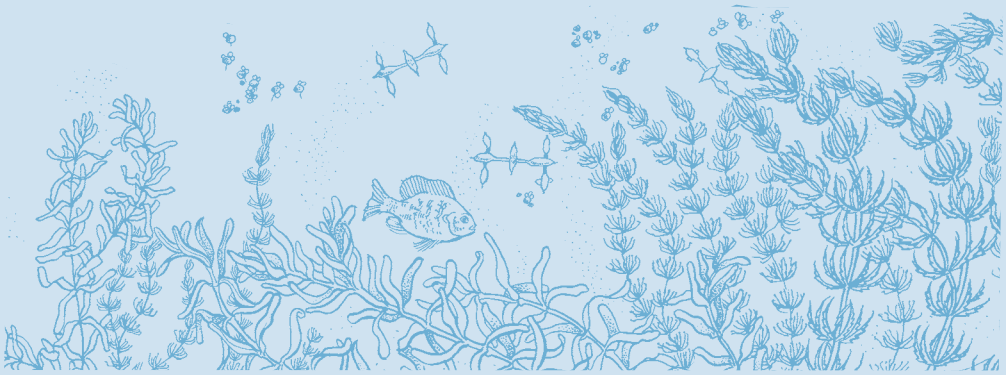
The Network is supported through a partnership, not just the Wisconsin DNR. The University of Wisconsin-Extension, Wisconsin Lakes, and private entities are engaged in providing support and services to the statewide network. Volunteers often serve as mentors or trainers for other volunteers.

9. Tie-in to National Lake Research and Monitoring.

Data is often used for lake research. For example, volunteer data has been used to successfully derive water clarity data on thousands of lakes from satellite imagery. You can see the results of this effort and learn more about satellite imagery and water clarity at **www.lakesat.org**. Volunteers are also annual participants in the "Secchi Dip-In," an international effort to monitor lakes. Visit **www.secchidipin@nalms.org**.

10. Recognize and Appreciate Citizen Involvement.

At the end of each monitoring season, the Network provides length of service awards. Volunteers who have taken 100 or 500 Secchi readings on their lake receive recognition as well!



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LIMNOLOGY *• The study of inland lakes and waters. The study of the interactions of the biological, chemical, and physical parameters of lakes and rivers.*

WATERSHED *• The area of land draining into a specific stream, river, lake or other body of water.*