

CLEARLY

making a difference for

Wisconsin Lakes



Robert August
Lake Chetek, Barron County
770 acres



Mary Jane Bumby
Green Lake, Green Lake County
7346 acres



William Flader
Witters Lake, Waushara County
51 acres



Dale Jalinski
Bear Lake, Oneida County
512 acres



Howard Lang
Green Lake, Washington County
71 acres



Kevin MacKinnon
Delevan Lake, Walworth County
2072 acres



Gerald Ptuschinski
Porters Lake, Waushara County
65 acres



Tom Rulsch
McDonald Lake, Vilas County
39 acres



Kay Scharpf
Franklin Lake, Forest County
892 acres



Elaine Spees
Huron Lake, Waushara County
40 acres



Loren Swanson
Big Hills Lake, Waushara County
133 acres



Bill Whyte
Webb Lake, Burnett County
781 acres



Stanley Young
White Lake, Marquette County
92 acres



20 Years Monitoring and counting...

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Wisconsin Lakes

20 Years Monitoring and counting...



James Vennie III
Devils Lake, Sauk County
369 acres
Indian Lake, Dane County
66 acres
Fish Lake, Dane County
216 acres



Don Glaeser
Bullhead Lake, Manitowoc County
67 acres



Robert Kirschner
Crystal Lake, Forest County
63 acres



1987-2007

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Wisconsin Lakes

20 Years Monitoring and counting...



Ruby Braun
White River Flowage
Waushara County
133 acres



Rick Bruesewitz
Van Zile Lake
Forest County
78 acres



Leone & Richard Elgaard
Big Dummy Lake
Barron County
111 acres



Ron Jacob
Tuttle Lake
Marquette County
155 acres



Barb & Marc Spees
Lake Huron
Waushara County
40 acres



Jim Watson, Jr.
Swan Lake
Columbia County
406 acres

1988-2008



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Wisconsin Lakes

20 Years Monitoring and counting...



Lisa Conley
Lac LaBelle
Waukesha County
1164 acres



Del Dufrein
Sand Lake
Sawyer County
936 acres



Richard Lathrop
Presque Isle Lake
Vilas County
1280 acres



John Sipos
Golden Lake
Waukesha County
250 acres



Philip Fritz
Bass Lake
Marinette County
36 acres



Marj Mehring
Squash Lake
Oneida County
396 acres



1989-2009

Robert August – Chetek Lake, Barron County (770 acres). Began monitoring in 1986.

Have you noticed a change in water quality and aquatic plants in the last 20 years?

There have been no overall changes in water quality on Chetek Lake. Generally, the lake has good clarity in the spring, algal blooms in the summer and then good clarity again in the fall.

The aquatic plant community is cyclic – there are years with lots of plants and years when there aren't many. Plants are at different densities throughout the years. We have a plant harvester on the lake to cut navigation channels into the lake.

What changes have you seen on your lake in the last 20 years?

All of the desirable property has been developed, there is no real estate left on the lake, only wetlands and those areas that can't be developed. There is more fishing pressure on the lake, especially ice fishing.

How do you use the data that you collect?

The data is shared with the Chetek Lakes Protection Association. The data was used in a comprehensive lake study done by Barr Engineering that explored nutrient levels, water levels and the science of the lake. The study results encourage property owners to have native vegetation on their shoreline. I collect the data for future use of our resources, for future generations to use. We have to think about tomorrow.

Why did you decide to monitor water clarity?

I am volunteer #22, one of the first ones trained. We moved on to the lake in 1984 and I was interested in maintaining good water quality.

What are some of the highlights and disappointments on your lake in the last 20 years?

The Chetek Lakes Protection Association is very proud of the spawning reef that was placed in the lake and the program for stocking walleye. We place signs with the fishery information and place and maintain Aquatic Invasive Species signs. We also are promoting natural shorelines in order to preserve water quality.

The Association also cooperates with the DNR fisheries biologist in placing 30 to 60 fish cribs a year.

What accounts for your longevity as a volunteer?

There isn't much glory in being a Citizen Lake Monitor but you do it for the lake. If we can help scientists get a handle on lake chemistry, Lake Chetek should be in good hands for a long time to come. We have to be responsible for our natural resources and realize that all the things that we do impact our lake. We can keep heaping abuse on our lake, but eventually, something is going to happen. Maybe my monitoring can help keep that from happening.

Ruby Braun – White River Flowage, Waushara County (133 acres, maximum depth 20 feet). Began monitoring in 1988.

Walt and Ruby Braun have been married for 53 years – Ruby’s husband started writing to her when he was stationed in Korea. They finally met after being pen pals for 19 months – they fell in love. Ruby loves the property, the day this interview occurred, there were fifteen turkeys in the yard. Ruby plays the flute and piccolo in the Oshkosh Community Band, and Walt, her husband, bowls twice a week. Talking to Ruby made a cold winter day seem bright, sunny and warm.

Why did you decide to monitor water clarity?

I worked for the Department of Natural Resources in Madison and heard about the Self-Help lake monitoring program. I asked to be trained, and then started taking clarity measurements. I have a paddle boat and that is what I use to take my secchi readings, I am so comfortable there. In the last twenty years I have put a lot of miles on my paddle boat!

Have you noticed a change in water quality and aquatic plants in the last 20 years?

The water quality has not changed very much in the last twenty years. The Lake District uses a harvester and weed cutter, the aquatic plants are used for compost by area farmers. White River Flowage now has Eurasian water-milfoil (EWM), and the Lake District has used chemical treatments twice on the EWM.

What changes have you seen on your lake in the last 20 years?

There has been an increase in the number of houses and people living on the lake. With the increase in the number of residents there has been an increase in boating activity on the lake. My husband and I purchased the property in 1976 and moved permanently to the lake in 1990. There have been ten new houses built on the lake, about half of which are permanent residences.

How do you use the data that you collect?

I share the data that I collect with the Lake District. My husband is the Vice President of the White River Flowage Management District so we are both very involved in lake issues.

What are some of the highlights that you have seen on your lake in the last 20 years?

We have good water quality, which is the most important thing. In 1995, the water was lowered to repair the dam. It was fascinating to see what was on the bottom of the flowage – we found boats and anchors.

One day I was out in the paddle boat and I saw a fire rainbow – I hurried home to get my camera but it had disappeared – I hope to see another one.

What are some of the disappointments that you have seen on your lake in the last 20 years?

Eurasian water-milfoil was identified on the flowage in 2002, and since, there have been two chemical treatments. Boat traffic has increased, especially near shore, which tends to fragment the plants, especially the EWM.

What accounts for your longevity as a volunteer?

Walt loves anything that has to do with our area lakes and I can't think of anywhere else I would rather be.

Do you have anything else that you would like other citizen lake monitors or people on your lake to know about you?

We found this property when we were camping at the campground and fell in love with it. Every day that is warm, I jump off the pier and swim. We are a friendly group on the lake, everyone walks and visits with one another. This is our "paradise," and is everything we have ever dreamt of. We passed the love of water to our children and grandchildren. Our son says that he can lower his blood pressure just by thinking of the lake! We have six grandchildren, and they all love being here.

**Rick Bruesewitz – Van Zile Lake, Forest County (78 acres, maximum depth 17 feet).
Began monitoring in 1988.**

Mr. Bruesewitz is a professional chemist – the perfect volunteer to monitor clarity and chemistry on Van Zile Lake. Many CLMN volunteers are professionals who agree to take on water quality monitoring on their lake. Mr. and Mrs. Bruesewitz have owned the property on Van Zile Lake since 1984. The lake house is four hours from their home so vacations and visits are often coordinated with water quality sampling events. We thank Mr. Bruesewitz for his commitment and motivation, and his attention to detail.

Why did you decide to monitor water clarity?

I saw a Self-Help display at the State Fair in Milwaukee and signed up. The next summer my secchi disk arrived and I was ready to start collecting data on this seepage lake. I started collecting chemistry data in 1995. I love to fish so thought it would be a good fit to find out more about the water quality on the lake.

Have you noticed a change in water quality and aquatic plants in the last 20 years?

There has been fluctuation in the water clarity information over the years. Average summer secchi readings decrease for a couple of years and then improve, that is why I thought I would collect chemistry samples so I would have more information in order to decipher the trend information. There is often a correlation between the weather or development on the lake and the secchi reading. There used to be more floating vegetation on the lake but that has changed. Now, there is more submergent vegetation. Water levels have been low for the last number of years.

What changes have you seen on your lake in the last 20 years?

About ½ of the shoreline is in forest crop so property development is limited. The properties on this lake are large enough to also limit development. There were a number of cottages built a few years ago.

How do you use the data that you collect?

We do not have a lake association on Van Zile Lake, but I share the information with neighbors.

What are some of the highlights that you have seen on your lake in the last 20 years?

Van Zile Lake is one of the prettiest lakes in Forest County. The pace is a little slower here and there isn't the development that you see in some other counties. There aren't many jet skis on the lake. It is quiet and beautiful. I have friends who fish on some of the urban lakes in Wisconsin, with more fishing and recreation pressure. Sometimes they have to wait a couple of hours so they can launch their boat – we don't have that issue in Forest County.

What are some of the disappointments that you have seen on your lake in the last 20 years?

On opening day, a few years ago, I launched the boat but left my keys in the car while the car was running. Someone had to come from Antigo to jimmy my window so I could get the keys out and shut off the car! I am not disappointed about anything having to do with water quality or the quality of life on the lake. We don't have many of the problems that face some other Wisconsin lakes.

What accounts for your longevity as a volunteer?

I love this lake and I enjoy collecting the water quality information. I am a chemist so I find the results of the testing fascinating, especially the dissolved oxygen testing. In order to last for twenty years as a volunteer you need to be motivated. The citizen lake testing program has improved through the years as well – lake summary reports are mailed out to volunteers more quickly so we can see the results of our efforts. Being a clarity and chemistry volunteer on a lake takes a fairly large time commitment but I am motivated by being able to see the trends in our water quality.

Mary Jane Bumby – Green Lake, Green Lake County (7346 acres). Began monitoring in 1986.

Have you noticed a change in water quality and aquatic plants in the last 20 years?

I grew up in the area and spent more than 40 summers on Green Lake.

In 1971 two non-native plants - Eurasian water-milfoil and curly-leaf pondweed were found – and they are still here. The District has plant data that goes all the way back to 1921, so we can compare plant densities over time. Green Lake District has developed a harvesting program which has been updated and modified over the years. The District Harvesting Committee became aware of the correlation between aquatic plants and the fishery resource and made modifications so plant harvesting starts after spawning ends.

We have United States Geological Survey monitors at two stations within the watershed. One station monitors runoff from 50% of watershed and the other monitors runoff from a 3-square miles area. This 3-square mile drainage area is the “worst” rural stream that USGS monitors in the state. Non-point source is the culprit.

The east side of the lake (Silver Creek) is a marginal housing area due to wetlands. There were lots of carp in this area. Carp were removed and the plants came back. Now the plants are so thick they are harvesting this area. We are again finding native minnows under the lily pads in this area.

I have been looking at the microscopic plants and animals since 1971. In 1971, there were green algae “scums” (Spirogyra and other algae) on the surface of lake. We are not seeing that now. Aphanizomenon (another species of algae) was thick in the 70s’s but has not been seen over last 15 years. Blue-green algae come in unless we are in a drought year and or have a lot of runoff from rain. In drought years the water is clearer. In rainy years the water is murky.

Macrophytes (plants) densities are down this year as compared to few years ago when they were thick in swimming areas and around piers --- but that varies from year to year.

I have learned so much about daphnia – they clear up the water early in the spring.

What changes have you seen on your lake in the last 20 years?

Best secchi disk reading was 50 feet. That is a record for Wisconsin.

Other changes in the watershed include development of farm land into residential land. More areas of the lake are sewerred. There are still many on site septic systems and holding tanks. Several developments are static and not moving ahead right now. Prices are high and there are lots of rules and regulations that apply to these properties. One area has sewer lines, municipal well water and roads, but the houses will be looking over roofs and will not have clear view of lake. Green Lake Conference Center is hoping to find a developer to build over 100 houses in their wooded area. This is on hold for now. Residents are concerned with the new high pressure development.

Small houses replaced with larger houses. Now there are shading issues - houses are so large that they cast shadows on the neighbor's homes. Now pie-shaped lots are being formed to maximize the number of lots that can be on Green Lake. There are lots of big piers.

How do you use the data that you collect?

On days I collect information I send it to about 15 residents around the lake. The data is also shared with the Chamber of Commerce; the Mayor, the Sanitary District, fishing guides, DNR, USGS and the Ripon waste water plant.

Why did you decide to monitor water clarity?

I served as Commissioner of the Green Lake Sanitary District and took secchi data to help the commission before the Self-Help Program began. We have some data from 1972. I was keeper of the data in the early years then began collecting the data myself. We have complete secchi data since 1980. We began collecting rainfall data in 1994. We have noticed that water quality is improving. USGS data also shows a slight improvement in water quality in our drainage area.

What are some of the highlights and disappointments on your lake in the last 20 years?

It is always fun to go and see what is out there. I love looking at the butterflies and birds. This year we had pelicans on the lake. A few loons visit the lake, but do not nest here. Right now the coots are flying through. The goose population is out of control. My Father grew up in this area. At that time Green Lake did not have a huge population of geese. Now they seem to stay as long as there is feed in the fields. There are some years that the goose fecal material is up to 6 inches thick on the ice. We have lots of gulls now – they fly from the landfill to the fields to the lake – now we are trying to keep them off docks. Humans are causing impacts even to the bird populations.

Land Conservation is working with us to help our understanding of the watershed.

I hope the data I collect will benefit future generations. I believe strongly in education and keeping the history of the lake alive.

**Lisa Conley – Lac LaBelle, Waukesha County (1164 acres, 45 feet maximum depth)
Began monitoring in 1989.**

Lisa Conley collects water clarity information on Lac La Belle as well as water chemistry and dissolved oxygen. Lisa is a Lake Leader (crew 5) as well as founder of the Wisconsin Lakes Partnership, a President of Wisconsin Association of Lakes and the first citizen president of the North American Lake Management Society.

Why did you decide to monitor water clarity?

I helped design and fund the Self Help Lake Monitoring program as part of the Wisconsin Association of Lakes Board. I wanted to see how well the program worked and also wanted to track water quality changes and trends on Lac La Belle.

Have you noticed a change in water quality and aquatic plants in the last 20 years?

The water is less clear than it was 20 years ago. We are seeing fewer aquatic plants but there is more diversity in the plant species. Eurasian water-milfoil is taking more of a back seat which is allowing more native plants to emerge. I think motor boat disturbance is a big factor in our relatively shallow lake.

What changes have you seen on your lake in the last 20 years?

We have noticed that the loons don't stay all summer. Also there are bigger motorboats and motors on the lake. Unfortunately there are more lawns so there is less shoreline habitat. There are also more man-made structures along the shoreline – larger piers and decks that also take away from the natural habitat.

How do you use the data that you collect?

The data that I collect is shared with the DNR-those lake summary reports are available to all to use. I also report the data to the Lake District and talk about it to my lake neighbors.

What are some of the highlights that you have seen on your lake in the last 20 years?

Wonderful show of migrating ducks, swans, an eagle hunting carp. Moonlight on the lake and every different beautiful sunrise. Skating on black ice when you can see the fish swimming below – a paddle with the mist rising in the morning. The lake is full of magic.

What are some of the disappointments that you have seen on your lake in the last 20 years?

There are big gaps in understanding and action on the part of homeowners and municipalities on how to keep the lake healthy.

What accounts for your longevity as a volunteer?

I love this lake and want to keep track of its health. With the lake data that is collected we can give and get feedback for effective management. Also, it is an excuse for me to go paddling by myself in the middle of the day.

Do you have anything else that you would like other citizen lake monitors or people on your lake to know about you?

I want to convert our pontoon boat to solar electric.

Del Dufrain – Sand Lake, Sawyer County (936 acres, 50 feet maximum depth) Began monitoring in 1989.

Mr. Dufrain collects water clarity data as well as water chemistry and dissolved oxygen. He is a member of the Century Club. Del is a retired biology teacher. He and his wife, Sue, live full-time on Sand Lake.

What made you decide to monitor water clarity?

In the 1980's, the residents of Sand Lake and I noticed that the water clarity was declining; algal blooms were becoming more frequent and denser. Many people who lived on the lake were considering moving because of the algal blooms. In 1989 I decided to join the Self Help Lake Monitoring program to see if we could track water quality changes. I am a retired biology teacher and always interested in the biology of the lake so it seemed like a good fit for me to do the water quality monitoring.

In 1992 I was trained to collect water chemistry data on the lake. Bill Barton, a retired DNR warden helped out for a few years and then my wife, Sue, took over. Sue has been helping me ever since. In addition to collecting water chemistry I collected dissolved oxygen data from the lake. I had always used the Winkler titration method but then the Lake Association purchased a dissolved oxygen meter which makes it much easier to collect the data.

Have you noticed a change in water quality and aquatic plants in the last 20 years?

Twenty years ago we discovered that a local Laundromat was discharging untreated wash water into a creek that fed into Sand Lake. Once that point source was eliminated water quality improved. The water clarity has remained fairly stable for the last five or six years. Phosphorus levels in Sand Lake are comparable to phosphorus levels in other lakes in the area.

Water levels have declined in the past years. We have a healthy native aquatic plant community on the lake – an aquatic plant survey was done in 2008. There are a couple of areas where there are substantial large leaf pondweed populations – these are good fishing areas.

What changes have you seen on your lake in the last 20 years?

Sand Lake has one of the densest housing populations of the area lakes. The resorts that used to be found here have been sold and houses have replaced them. There isn't much land left that is available for development on the lake. A campground is located on one side of the lake which adds to the population using the lake.

Sand Lake is a good fishing lake but there isn't a lot of structure. Sand is the predominant bottom material. The lake doesn't get a lot of recreational use except on holiday weekends.

How do you use the data that you collect?

I have always given annual reports on Sand Lake water quality at the spring and fall meeting of our Lake Association. The folks who live on the lake are very observant. We use the water quality data to determine if water quality is improving, declining or staying the same over time – it is good to monitor the water quality trends over time.

What are some of the good things that you have seen on your lake in the last 20 years?

There have been improvements made for the fish population. In the 1980's Sand Lake was a naturally reproducing walleye lake. That has changed; the walleye population is maintained now through stocking. The change may be related to the disappearance of bulrush beds or other shore land changes. We have had a good stocking program in the last five years. The Tribe helps with the stocking program.

Sand Lake has very little structure in the lake so the Lake Association has worked to place fish cribs in the lake and has worked with the Fish Biologists to create better size limits for walleye. We encourage catch and release on the lake. The ice fishing is pretty good for crappie.

What are some of the disappointments that you have seen on your lake in the last 20 years?

It took a while for us to convince the DNR that the walleye were not naturally reproducing and for us to get cooperation with the stocking program.

What accounts for your longevity as a volunteer?

Sue and I live on the lake full time. It is important to monitor water quality on a yearly basis and to do that over time. I have an interest in the plants and animals that live in the lake and the lake ecosystem. We are bringing in some new volunteers now because we hope to see the water quality monitoring continue for a long time. Sonja Bierman is one of the new volunteers and helps with the data entry.

Do you have anything else that you would like other citizen lake monitors or people on your lake to know about you?

Sand Lake is a beautiful lake, easy to fish and fun to watch throughout the year. It is important for people who live on lakes to become involved in water quality monitoring – for the future of the lake.

Leone and Richard Elgaard – Big Dummy Lake, Barron County (111 acres, maximum depth of 54 feet). Began monitoring in 1988.

The most obvious question, of course, is “Where did the name come from?” Ms. Elgaard doesn’t know for certain but the story that she has heard is that a Native American fellow drowned in the lake and they called him a big dummy for drowning there – seems pretty harsh – the poor guy drowned after all.

Mr. and Mrs. Elgaard have been on Big Dummy Lake for 26 years.

Why did you decide to monitor water clarity?

Twenty years ago someone came to the lake association meeting and asked for a volunteer to measure water clarity. We volunteered and have been doing the job ever since. In 2003, we started collecting phosphorus and chlorophyll samples on the lake.

Have you noticed a change in water quality and aquatic plants in the last 20 years?

We have not noticed a decline in water quality or many changes in the aquatic plant community. A harvester was used for years on the lake to control the aquatic plant population, but there were always reserve areas where no harvesting was allowed. Chemical control is now used on some of the areas to control the plants.

Big Dummy Lake residents are concerned about the lake level which has been down the last few years. The fish seem to be moving to new areas in response to the lowered water levels. The fishing was better years ago.

What changes have you seen on your lake in the last 20 years?

There has been quite a bit of development in the last twenty years – larger homes replacing some of the smaller cabins. Two or three families live on Big Dummy Lake year round.

How do you use the data that you collect?

Richard gives an annual report to the Lake Association. Everyone on the lake knows that we are the people who collect the water quality information so when we are out fishing people come and ask what the secchi reading is. We have been able to share our knowledge of the lake and educate people along the way.

What are some of the highlights that you have seen on your lake in the last 20 years?

We love to fish and love seeing the wildlife when we are out fishing. Big Dummy is a beautiful lake, deep and clear, with no algae blooms. There are a lot of good people on Big Dummy Lake and if there is a problem, we all talk to each other and come to a resolution. Once when the Warden was out on the lake, he stopped a woman who did not have her fishing license with her in the boat. The Warden drove the woman in his boat back to her car to get the license and brought her back out to the boat to continue fishing. People are just nice here and it makes us feel good to be on the lake.

What are some of the disappointments that you have seen on your lake in the last 20 years?

There are larger boats on this 111 acre lake, and sometimes these boats chase the loons.

What accounts for your longevity as a volunteer?

We are concerned about water quality and love being out on the lake. Both of us are good anglers and love to fish. It is relaxing and it feels good to get away from the city.

Do you have anything else that you would like other citizen lake monitors or people on your lake to know about you?

We have passed our love of water, especially Big Dummy Lake, to our children and grandchildren. They all love the cabin, and spend as much time in the water as they are able. The grandchildren spend so much time in the water that they are shriveled much of the summer!

William Flader – Witters Lake, Waushara County (51 acres). Began monitoring in 1986.

Have you noticed a change in water quality and aquatic plants in the last 20 years?

Witters Lake is a seepage lake, the lake level fluctuates from year to year depending on rainfall. There hasn't been a substantial change in water quality or aquatic plant growth in the last 20 years that I have been monitoring.

What changes have you seen on your lake in the last 20 years?

We live on a small lake; there are 80 members in our Lake Association. There is a public landing but in years with low water levels it is pretty shallow so we don't get a lot of outside boat traffic. Development pressure has remained pretty constant in the last 20 years. There used to be more year-round homes on the lake, now there are more seasonal residences.

How do you use the data that you collect?

I share the data with my Lake Association.

Why did you decide to monitor water clarity?

My parents had a cottage on a lake in Sheboygan County and I was Secretary of that Lake Association many years ago. There was a lot of discussion on water levels on that lake so when I moved to Witters Lake, that interest followed me.

What are some of the highlights and disappointments on your lake in the last 20 years?

Ten years ago, there was substantial flooding around Witters Lake. There were many septic systems that were flooded, that was a frustrating time for me.

We have tried to convince landowners on the necessity of leaving natural shorelines or restoring those that were disturbed. We are fortunate in having a lake with quite a bit of undeveloped shoreline. Over the years, our lake association has given awards to those folks who have good shorelines. We have a pleasing aesthetic even though some buildings are pretty close to the lake.

Why did you decide to monitor water clarity?

We started a feasibility study in 1977 and started taking clarity readings at that time. I was the Chairman of the Lake District at that time and I still am.

Steven Frey – Cedar Lake, St. Croix County (1107 acres). Began monitoring in 1986.

We were unable to get in touch with Mr. Frey.

Philip Fritz – Bass Lake, Marinette County (36 acres, 50 feet maximum depth). Began monitoring in 1989.

Mr. Fritz has collected water clarity data for 20 years and is a member of the Century Club. When Mr. Fritz was called for an interview he said volunteerism was about the lake, not about him!

Bass Lake is located in an agricultural setting with only 5 dwellings on its shores. Bass Lake has faced a long history of water quality challenges primarily caused by agricultural runoff from feedlots and unconfined manure stacks. The lake once held a diverse sport fishery which included largemouth bass, northern pike, yellow perch, and various species of sunfish. The Wisconsin Department of Natural Resources even began stocking brown trout; that was the mid 1960's. By 1975 hypolimnetic oxygen began to decline to levels that could not support a coldwater fishery and the stocking was suspended. Fish kills became common and between 1977 and 1991; the average dissolved oxygen concentrations one meter below the ice was 2.24 mg/l dipping regularly below 1mg/l. The small surface area (37.4 acres) and great depth (62 feet) create a large hypolimnetic volume that contributes to the severe algal blooms and fish kills that were common in the lake. On numerous occasions during the last 20 years phosphorus concentrations have exceeded 200 ug/l after spring turnover. In the summer of 1998 hypolimnetic phosphorus levels were greater than 1,700 ug/l and when the lake turned over in November, total phosphorus at the surface was 872 ug/l and dissolved oxygen plummeted to 0.5 ug/l.

In 1984 the lake was entered into the Wisconsin DNR Nonpoint Source Pollution Control Program with the goal of reducing runoff pollution from agricultural sources. Local farmers gave full cooperation and although the runoff reduction helped, phosphorus levels remained in excess of 1,000 ug/l on several occasions. By 1990 it was becoming apparent that the excessive phosphorus was due to internal loading from the lake sediments. A monitoring event in 1996 showed that phosphorus levels exceeded 16,000 ug/l, clearly indicating that the barnyard runoff issue needed to be revisited and revamped.

In 1999, with the watershed phosphorus loading under control, the lake was treated with alum to inactivate the phosphorus laden sediment. Since alum treatment, average Secchi readings have increased from 7 feet in 1999 to 12.6 feet in 2008 with a high average of 17.2 in 2004. The restoration project has achieved TMDL targets and phosphorus concentrations have been reduced from an average of 490 ug/l to 10 ug/L with the most recent sample at 13 ug/L in June of 2008. The reduction in total phosphorus has reduced the blue-green algae bloom that once covered the lake and no fish kills have been noted.

Largemouth Bass are common and panfish and trout are present in Bass Lake. A fisherman on Lake Link posted: "The lake is Gin clear, but still the bass in the lake are gigantic!"

Don Glaeser – Bullhead Lake, Manitowoc County (67 acres). Began monitoring in 1987.

We were unable to get in touch with Mr. Glaeser.

**Ron Jacob, Tuttle Lake, Marquette County (155 acres, maximum depth 33 feet).
Began monitoring in 1988.**

We were unable to get in touch with Mr. Jacob.

Dale Jalinski – Bear Lake, Oneida County (312 acres). Began monitoring in 1986.

Have you noticed a change in water quality and aquatic plants in the last 20 years?

Water clarity has improved since I began monitoring 20 years ago. There is a small algal bloom every year but it hasn't increased. There may be a few more plants than there were in 1986.

What changes have you seen on your lake in the last 20 years?

There is much more development on Bear Lake now than there was. At least 85% of the land around the lake is developed. There are more permanent residents now than there were. There used to be more seasonal residents. When I first came to the lake, there were small cottages, now those have become large homes. There is some additional boat traffic that goes along with the increase in development.

How do you use the data that you collect?

I share the data with the Lake District and the DNR. I summarize the data every year and present it at the District meeting. I also keep track of precipitation and ice off and ice on.

What are some of the highlights and disappointments on your lake in the last 20 years?

The change in water levels in the past was pretty drastic, there was a problem with beavers. We have since installed a new spillway and that has moderated the water levels. It took 7 years to get the new spillway built, but we are proud of that as a Lake District. We also have participated in a stunted panfish removal project. We are a little disappointed that the walleye population isn't improving but with more stable water levels, that may come. We have a good working relationship with the DNR fisheries biologist.

We have many people within the Lake District that help out. We have a great lake and we hope to keep it that way. It would be helpful to have lake summary reports that better summarize the data and have a breakdown of the data every five years. That way, we can look at the summary and see if there is something on the lake that needs attention.

Robert Kirschner – Crystal Lake, Forest County (63 acres). Began monitoring in 1987.

Have you noticed a change in water quality and aquatic plants in the last 20 years?

Although there has been moderate year-to-year variation in water clarity and water quality, overall there does not seem to be a significant change. The lake has always supported a very sparse aquatic plant community, and that continues today.

What changes have you seen on your lake in the last 20 years?

Although the number of motorboats has not changed appreciably, the size and power of them has increased substantially. In addition, the use of jet skis has increased dramatically (they were essentially nonexistent 20 years ago). And while the noise levels and pitch of the more recently manufactured jet skis are less bothersome than the early models, they continue to be so annoying to me in the late afternoon and early evening that I am seriously considering moving to a no-wake lake.

How do you use the data that you collect?

It provides a quantifiable, science-based benchmark to look beyond “normal” year-to-year variations in lake quality and allows one to ascertain if significant trends are occurring.

Why did you decide to monitor water clarity?

How could I not? “Practice what one preaches!”

What are some of the highlights that you have seen on your lake in the last 20 years?

The spring peepers in chorus welcoming me as the sun sets over the lake after slipping out of work a few hours early on Friday afternoon.

What are some of the disappointments that you have seen on your lake in the last 20 years?

The removal and destruction of vegetation in the shoreline zone continues, often in the interest of creating or expanding lawns. The nighttime sky grows ever brighter – not from the stars or the moon, but from the reflected glare of powerful mercury/sodium yard lighting.

What accounts for your longevity as a volunteer?

So long as the loons keep coming back each spring, I’ll keep monitoring the lake for them.

Do you have anything else that you would like other citizen lake monitors or people on your lake to know about you?

The township lake regulations (i.e., no-wake from 4 p.m. until 9 a.m.) are largely ignored. Methinks / mehopes the day will come when we better appreciate how our neighbors define “the perfect day at the lake.”

Howard Lang – Green Lake, Washington County (71 acres). Began monitoring in 1986.

Have you noticed a change in water quality and aquatic plants in the last 20 years?

Water quality on Green Lake has remained fairly stable. We are fortunate that we don't have Eurasian water-milfoil or curly-leaf pondweed on our lake. I have been doing aquatic plant monitoring on the lake for the last 10 years.

What changes have you seen on your lake in the last 20 years?

There are more year-round homes on Green Lake and more motor boat use. There is a concern on the lake that the increase in boat traffic will cause shoreline erosion which will also impact water quality.

Although we don't have zebra mussels, Eurasian water-milfoil or curly-leaf pondweed in our lake now, there is a lake near by with zebra mussels. There is concern that these might spread to Green Lake.

How do you use the data that you collect?

I share the information with the Green Lake Property Owners Association. I also include the information in a newsletter that is written for the Association.

Why did you decide to monitor water clarity?

I monitor clarity, water chemistry, aquatic plants and aquatic invasive species on Green Lake. I have been monitoring clarity for 30 years.

What are some of the highlights on Green Lake?

I am very pleased that there is a new volunteer trained in 2006 that will help out with the monitoring. The increase in awareness in aquatic invasive species will help to preserve water quality and will get more people out on the lake monitoring for invasive species.

Richard Lathrop – Presque Isle Lake, Vilas County (1280 acres, 80 feet maximum depth). Began monitoring in 1989.

Have you noticed a change in water quality and aquatic plants in the last 20 years?

The water quality does not appear to have changed much in the past 20 years (clarity always declines through the summer probably due to internal phosphorus recycling). Submersed aquatic plant growth has been sparse due to large populations of rusty crayfish, although densities of crayfish did seem to decline for a period allowing plant growth (especially broadleaf pondweeds) to increase slightly. Crayfish densities have been creeping back up a little more recently, but not to the levels they were some years ago. Maintaining low crayfish densities I believe is critical for the lake ecosystem. There also have been some changes in the bulrush beds along the north shore of the lake at least in one area as people are using this area for boat parking parties and water skiing start-ups.

What changes have you seen on your lake in the last 20 years?

Water levels have declined significantly in the last few years due to less precipitation in northern Wisconsin. I've also seen a lot of new large houses be built on undeveloped shoreline. In a couple of cases, the shoreline alterations were massive and destructive to the lake. A few years ago, one large house built on the east shoreline with a very steep long slope ended up having a whole stand of trees slide down into the lake. In some cases, natural forest vegetation was cleared away so that lawns could be planted.

What are some of the highlights that you have seen on your lake in the last 20 years?

Forming the lake association was a good thing that happened on the lake.

What are some of the disappointments that you have seen on your lake in the last 20 years?

Many summers around mid- to late July the lake has had a Gleotrichia bloom such that if there is a south wind, the bloom will pile up along the north shore around our pier. This concentration of the blue-green algae renders the water highly objectionable for swimming for short periods of time until the wind shifts and disperses the algae. Poorly planned shoreline development has a negative impact on the lake as well as the trend to more powerful boats and noisy jet skis.

What accounts for your longevity as a volunteer?

My interest in limnology is the reason I have been a volunteer, as I know that long-term Secchi data are valuable for detecting water quality changes in the lake. If the water quality declines, it is important to have data to document it.

Kevin MacKinnon – Delavan Lake, Walworth County (2072 acres). Began monitoring in 1986.

Have you noticed a change in water quality and aquatic plants in the last 20 years?

Delavan Lake undertook a whole lake rehabilitation project fifteen years ago. Since then, there have been positive changes in water quality. Before that time, there was one secchi reading of 3 inches. Now, secchi readings average between 8 to 10 feet. The lake rehabilitation project consisted of dam modifications, sediment retainment ponds, a wetland restoration project and a whole lake alum treatment. The objective was to reduce the nutrients coming in to the lake. The trophic state of Delavan Lake has changed from eutrophic to mesotrophic.

What changes have you seen on your lake in the last 20 years?

The change in water quality is one of the most obvious changes. In 1981, a sewer system was installed that handled the residents around Delavan Lake. At that time, there were 2000 customers. There are now 3000 customers in the Sanitary District. We have everything from seasonal to year round homes. There is likely a new property owner on Delavan Lake every day. It is difficult to keep up with the new people moving on the lake and understanding what their expectations of water quality are. There is no general consensus of what a lake should be when you have so many people coming and going. There is a lot of pressure from urban development. Another change in the last 20 years is the fishery. Long ago, there was a diverse native population of fish in Delavan Lake. That diverse population was replaced by rough fish such as carp and big mouth buffalo. A project was undertaken to kill the fish in the watershed. Some carp have returned to the system, but once again, there is a diverse fishery. By the mid-70's, there were two species of plants in Delavan Lake, curly-leaf pondweed and white water lily. Now there is a more diverse population of native plants (22 species of macrophytes in the last plant survey) and the curly-leaf pondweed is not much of a problem. We do have Eurasian water-milfoil. It is amazing that the native plant species remained dormant for 20-30 years.

How do you use the data that you collect and why did you decide to monitor water quality?

I started monitoring the lake in 1983 with the U.S.G.S. After that time, I just continued monitoring under the Self Help program. I work with the Sanitary District but there is a lot of coordination with the District and the volunteers on the lake.

What are some of the highlights and disappointments on your lake in the last 20 years?

The lake rehabilitation project is certainly a highlight – restoring aquatic plants and a diverse fishery and improved water quality were always the goals. We are fortunate to have a good bank of data for the lake but we need to stick with it and create some long term trend data, to look at the extremes and the averages. Hopefully in the future we will have better control of the data that we are collecting, a new gauge on the downstream end will help us out. We also need to establish some stormwater management protocol for the lake to ensure that the nutrient load is not increasing.

Marj Mehring – Squash Lake, Oneida County (396 acres, 74 feet maximum depth). Began monitoring in 1989.

Marj collects secchi data on Squash Lake as well as water chemistry and dissolved oxygen. It is a great feat to have taken dissolved oxygen readings using the Winkler titration method for so many years on a lake that is 74 feet deep at the deep hole! Marj is a member of the Century Club and participated in the integrated sampler comparison study. She has attended Clean Boats, Clean Waters training and is an avid paddler.

When I talked to Marj she said “It’s About the Lake, it isn’t About Us”.

Why did you decide to monitor water clarity?

I lived on Rollingsstone Lake in Langlade County 20 years ago and they asked for volunteers to do water clarity monitoring. I volunteered because I thought it was interesting and fun. When I moved to Squash Lake, I continued to collect the data.

Have you noticed a change in water quality and aquatic plants in the last 20 years?

For the last two years we have seen an increase in the amount of algae in the lake, I think it is related to the warm summer temperatures and the drop in water levels in the lake. When I first moved to Squash Lake water levels were very low - they increased to normal and now are dropping again. Water levels are cyclic and these cycles are natural. Years ago when the water levels were low my bay was very shallow and muck was stirred up.

We have seen more aquatic plants in the last two years.

What changes have you seen on your lake in the last 20 years?

I have seen more boats on the lake and more people using the lake. Hot summers bring people to lakes!

How do you use the data that you collect?

I share the data with the Squash Lake Association and other interested parties.

What are some of the highlights that you have seen on your lake in the last 20 years?

I love being out on the lake on warm, sunny days. I enjoy the beauty of the lake and seeing the loons and eagles and the sunlight sparkling off the lake.

What are some of the disappointments that you have seen on your lake in the last 20 years?

Even though I know water level changes are a natural phenomenon the low water level is a disappointment to me. Low water levels also seem to bring an increase in algae on Squash Lake.

What accounts for your longevity as a volunteer?

I have always been interested in aquatic biology and just love learning about Squash Lake. I also recognize that the data we collect will be used in the future and may help to preserve our aquatic resources. We need to think about future generations and what we are leaving them. Also, there is no pressure in being a CLMN volunteer. You are able to set your own schedule.

Do you have anything else that you would like other citizen lake monitors or people on your lake to know about you?

I enjoy helping people learn more about Wisconsin lakes and I hope that the data we collect helps us to preserve these treasures for future generations. I like sharing the information that I gather with others.

Gerald Ptaschinski – Porters Lake, Waushara County (68 acres). Began monitoring in 1986.

Have you noticed a change in water quality and aquatic plants in the last 20 years?

There have been slight changes in water quality but overall it has been pretty stable. The population of aquatic plants has remained fairly stable as well. A plant survey was just completed on Porters Lake and there is good plant diversity. We don't have curly-leaf pondweed or Eurasian water-milfoil. There is purple loosestrife on the lake but since beetles were released, we feel that we have the population under control.

We go through the University of Wisconsin – Stevens Point task force for chemistry analysis and have been doing that for many years.

What changes have you seen on your lake in the last 20 years?

The makeup of the lake residents has changed and there is shift in the recreational population. In the old days, people looking for recreation on their lake would catch fish or frogs. Now, there are more personal watercraft and larger boats. Seasonal residences have been replaced by permanent residences.

We have been treating purple loosestrife on the lake for several years and are educating people on Eurasian water-milfoil. The best approach to controlling aquatic invasive species is through education.

How do you use the data that you collect?

Data that I collect is shared with lake residents and with the consultants working on the lake reports.

Why did you decide to monitor water clarity?

Before we became a qualified lake association I volunteered to monitor clarity – maintaining water quality was an important issue for me. Going to the Lakes Convention renews my interest from year to year and gives the lake association ideas on how to keep people interested and involved. Hopefully, Porters Lake is keeping current.

What are some of the highlights and disappointments on your lake in the last 20 years?

Going from a Lake Association to a Lake District generated lots of interest and really got people involved.

We did some northern pike stocking on Porters Lake but that didn't pan out. We stock fish and pay for it ourselves.

People watch over Porters Lake and take an interest in water quality. That is one of the highlights. I don't think that we have had any disappointments – being involved tends to keep bad things from happening. We have normal fluctuations but nothing worth mentioning.

Tom Rulseh – McDonald Lake, Vilas County (39 acres). Began monitoring in 1986.

Have you noticed a change in water quality and aquatic plants in the last 20 years?

There have been some changes in water quality but I feel that they are cyclical – things like algae and water levels are affected by temperature and rainfall. There appear to be more small plants in the lake than there used to be. Water levels are down.

What changes have you seen on your lake in the last 20 years?

There have been six new residences constructed in the last 20 years. Of these one is full-time. That is a pretty big impact on a 39-acre lake. Most of our residences are seasonal. We have a no-wake lake with a primitive public access.

How do you use the data that you collect?

The McDonald Lake Association was formed more than 20 years ago. We have an annual meeting and the Citizen Lake Monitoring Network data is reported at that meeting. We use the data to look at trends and compare the data over time.

What are some of the highlights and disappointments on your lake in the last 20 years?

We are just happy to be on the lake. Most of the residents are of a like mind and that is comforting. One cause of concern is the sale of some vacant land adjacent to the lake. We don't know what this land will be used for. We have loons and eagles on the lake, the fishing has been good – we have no complaints.

Kay Scharpf – Franklin Lake, Forest County (892 acres). Began monitoring in 1986.

Have you noticed a change in water quality and aquatic plants in the last 20 years?

Water quality and water clarity on Franklin Lake has remained fairly constant. There have been rusty crayfish in the lake for about 30 years, now it appears that the population of rusty crayfish is declining. Last year we noticed more aquatic plants in the lake. Clarity is a little lower this year than normal

What changes have you seen on your lake in the last 20 years?

Property owners on Franklin Lake are blessed with good water quality. Two-thirds of the land adjacent to Franklin Lake is owned by the U.S. Forest Service. Only one-third is privately owned so we don't have the development pressures that many lakes have. For these same reasons, Franklin Lake has not seen many changes.

How do you use the data that you collect?

I share the data with the Lake Association. Entering the data into the database makes it available for the public to use.

Why did you decide to monitor water clarity?

My interest in water quality began in the 70's when our newly formed lake association needed someone to collect water samples for Dr. Crabtree at UW Stevens Point. The lab there did coliform counts and we were hoping to pinpoint failed septic systems. Self Help started in 1986 and it seemed like a good fit for me to continue water quality sampling. I just continued on and went from secchi disk to the expanded chlorophyll, phosphorus and oxygen levels. We now have established a good water quality baseline record for Franklin Lake and I feel that it is important to observe and follow changes.

What are some of the highlights and disappointments on your lake in the last 20 years?

We have always had good water quality and water clarity on Franklin Lake and we are all grateful for that. The Lake Association and foundation has always been very supportive of the work that I do and good about purchasing equipment. We were one of the first lakes in the northern region to have a dissolved oxygen meter.

I would like to praise the genius who invented the Integrated Sampler. What a simple thing after that clumsy Van Dorn. Then the old phone reporting system almost ended my monitoring career. The on line reporting came just in the nick of time.

I am sure that my fellow monitors can relate to some of the following episodes I have had while in the boat collecting samples: notes blowing into the water, forgetting my pencil, motoring home dragging my anchor and not to mention forgetting to attach my anchor to the boat. There is the matter of hording ice cubes. After saving ice cubes for days for the mailer, it is aggravating to find that your husband used them for drinks.

I get satisfaction from involving others in lake monitoring. I feel it is important to pass on water quality information to the lake association and create awareness for arising problems such as Eurasian water-milfoil and zebra mussels. Thanks for the monitoring opportunity.

**John Sipos – Golden Lake, Waukesha County (250 acres, maximum depth 46 feet).
Began monitoring in 1989.**

Why did you decide to monitor water clarity?

In 1989 I purchased our property from my mother and joined the board. I offered to do the water quality training and testing and never stopped dipping the disc bi weekly. My family has lived on Golden Lake since 1891 – I love the lake.

Mr. Sipos said that the lake has golden colored clay on the shorelines – Golden Lake is descriptive of that. Mr. Sipos collects water clarity information as well as water chemistry, dissolved oxygen and temperature profiles.

Have you noticed a change in water quality and aquatic plants in the last 20 years?

The water is actually clearer now, probably because of zebra mussels which first appeared in 2003. Our record secchi depth is 34' recorded on 6-9-07 breaking the old record by 3'. Weeds are numerous in 5-12' of water coming to the surface and clogging motor props. Eurasian milfoil is here but the beds release by the roots in late summer and fall. The beds continue to move to different areas of the lake. The channels on the north end are closing down with the growth of cattails progressively moving outward.

What changes have you seen on your lake in the last 20 years?

Higher taxes, bigger houses, less friendly new residents, more environmentally conscious lake users policing their own garbage and helping to maintain the beauty of the lake, Too much lawn fertilizing taking place

How do you use the data that you collect?

We have used the data to prove clarity levels advancing and not declining.
We are using the water depth readings to establish a high water and no wake flood marks

What are some of the highlights that you have seen on your lake in the last 20 years?

I was able to raise my two sons on the same lake I have lived my whole life.
It is a great pleasure to see other families and their friends bonding on/around golden lake. I have met many people in the state who clearly remember, like it was yesterday, their days on the water at golden lake. It is enjoyable to see their smiling faces recalling the hours spent here. I know and completely understand their feelings.

What are some of the disappointments that you have seen on your lake in the last 20 years?

The parking lot near the boat landing was reconstructed recently. There are sixteen actual parking spaces but people have started parking on the grass which increases the number of spaces to more than 20. Twenty boats on a 250-acre is a lot. The parking lot issue will be addressed this summer and parking will be more restrictive.

I miss those life long friends and neighbors who have passed away and neighbors who have moved away who were close friends. The thought that the taxes will chase us off the lake and not let our family continue here as we have been since 1881. The zebra mussels!!!
Too many government rules and regulations.

What accounts for your longevity as a volunteer?

The task is easy and important. I spend many hours on the lake and enjoy doing the disk readings. If the zebra mussels continue to thrive I will need a longer oar as the secchi disc rope is only 30' long.

Do you have anything else that you would like other citizen lake monitors or people on your lake to know about you?

Lake property owners need to remember that the citizens of Wisconsin own the lakes. It is very easy to have lake residents, lake associations or districts, become greedy/selfish and try to limit access by the public. Too many rules and regulations can choke the fun out of lake use also. The lake is here for all state residents to respectfully use and enjoy whether boating, swimming, fishing, sailing or paddling. Doing so will insure that the lake will be here for many future generations. Please enjoy one and all!!!!

Elaine Spees – Huron Lake, Waushara County (40 acres). Began monitoring in 1986.

We were unable to get in touch with Ms. Spees

Barb Spees – Lake Huron, Waushara County (40 acres, maximum depth 46 feet). Began monitoring in 1988.

Barb passed away in December 2007. She collected water quality information with her sister, Elaine Spees and her nephew, Marc Spees for 20 years. We would like to thank the Spees family for their work and their continued support.

Marc Spees – Lake Huron, Waushara County (40 acres, maximum depth 46 feet). Began monitoring in 1988.

[Have you noticed a change in water quality and aquatic plants in the last 20 years?](#)

A slight change. I know that the readings indicate not much change at all; but, I think there is a little more presence of algae and we do get some globs of blue-green algae at times. That never occurred in the past. If you want to go back forty or more years; then I'd say there was more of a change. The water was clearer in my youth. I'd snorkel quite a bit and even swimming it was of no consequence if you opened your eyes under water. There was not the fine film of algae on the water plants. My Dad had made a viewing box and you could see clearly to depths much greater than you can today. There used to be more of the tall plants with the leaves coming off the stem, sorry I can't bring the plant name to mind.

[What changes have you seen on your lake in the last 20 years?](#)

Other than the fluctuation in levels; I think the most dramatic change has been a decrease in the number of crayfish and the rise in number of snails. The greater presence of snails probably started more than twenty years ago. I think the crayfish started dwindling about a decade ago. I do think I'm noticing a greater number of bass swimming about the dock than twenty years ago. Of course, the bigger ones are smarter and seen less frequently.

[How do you use the data that you collect?](#)

Our data has been used at the lake association meetings. We keep the data and always talk about the annual summary. We have a cottage journal and with that keep an informal history of the family and the lake. I think we gather the information more for the folks at the DNR to help keep tabs on the health of the lake. I do realize that we are pretty fortunate and the lake is pretty healthy.

[Why did you decide to monitor water clarity?](#)

As I stated, our pal started us out and it became a fun thing to do; seeing what the lake was like on any particular day. Again, it was interesting to see the annual summaries and to look at the lake throughout the years. It is always a good thing to perform small bits of community service and we do think our little bit helps with the common good.

What are some of the highlights and disappointments on your lake in the last 20 years?

Highlights:

More eagles stop by. We see kingfishers on occasion. I know a six and a half pound bass was caught by a boy a few years ago. Most of the highlights are our families activities on the lake and at the cottage.

Dissappointments:

That film of dead algae that can cover the plants and bottom. Of course, we have the concern of the current low lake level. I know that the fluctuation is normal; but, you can't help worrying if the high volume pumps have diminished the ability of the lake to rise. I do think we've been in a drought or drought like cycle for the last decade or so and do hope we are coming out of it. My forebears pass on that in the end of the nineteenth century they used to hay on what was Plainfield Lake. My parents and Grandparents used to swim and fish in Plainfield Lake in the '30's and '40's and now it's a meadow again. I only mention that because I'm aware of the Plainfield tunnel and the flow of water in it.

What accounts for your longevity as a volunteer?

It brings a simple joy of learning and community service. I know I was a little lax last summer; I just had a lot on my plate. I hope to collect more this summer.

Do you have anything else that you would like other citizen lake monitors or people on your lake to know about you?

Yes. However this would not be the forum in which to do so. Instead, I'd invite you stop by and have a cool beverage and a dip in the lake on a hot summer day.

Loren Swanson – Big Hills Lake, Waushara County (133 acres). Began monitoring in 1986.

Have you noticed a change in water quality and aquatic plants in the last 20 years?

Overall, water clarity has not changed very much. Fifteen years ago, USGS noted an increase in nitrogen levels and located the source. Some septic systems were replaced and holding tanks installed.

Lake level is very low this year.

What changes have you seen on your lake in the last 20 years?

We have EWM on our lake now. Two years ago we started to chemically treat the larger beds. With treatment and restoration, we hope that the native plants will some day replace EWM.

How do you use the data that you collect?

I share the information with the Lake Association. I have always enjoyed keeping track of water clarity.

Have you seen a change in development on the lake?

There was a girl scout camp on the lake that owned 1900 feet of frontage. That was developed and sub-divided so that there are now 19 one hundred foot lots. The Lake Improvement Association worked with the developer and the new property owners so that each lot has a green space. We tried to educate potential buyers and the new property owners so that we would all share common values concerning water quality.

What are some of the highlights and disappointments on your lake in the last 20 years?

Getting individual property owners to up-grade failing septic systems was a huge accomplishment and good for the lake. The Association did a good job of education and working with property owners.

There are always a few individuals on a lake that don't see the importance of natural shorelines or best management practices for managing stormwater run-off. But on the whole we had good success with education.

I am happy with the changes that Self Help has made. It is much easier to enter data into the database now than it used to be. Jennifer Filbert has done so many good things for the program!

James Vennie – Devils Lake, Sauk County (369 acres) and Indian Lake, Dane County (66 acres) and Fish Lake, Dane County (216 acres). Began monitoring in 1987.

James Vennie III is a Hydrologist with the DNR and works out of the Central Office in Madison. You may recognize the name – Jim helps analyze CLMN data and works on database and web page issues. He understands water- whether it is on the surface of the land or underground. He is a tremendous resource. Jim didn't want to be interviewed and certainly doesn't want to get an award for collecting clarity data on Devils Lake, Sauk County and Indian Lake and Fish Lake, Dane County. He said that he hasn't been a good volunteer for the last couple of years and hasn't taken as many secchi readings as he should have. The interesting thing is that Jim is one of a few CLMN volunteers that doesn't live on a lake. In the early days, Jim took his family with on outings to collect secchi data, now the kids are grown and he just doesn't get out in the canoe so often.

Devils Lake has the best clarity of the three lakes – the lake is contained within the Devils Lake State Park. Since the lake is within the park, there isn't much development pressure. A research project is being conducted on Devils Lake. For the last five or six years the bottom layer of water is siphoned out of the lake. The idea is that fall siphoning will remove some of the phosphorus that resides in the bottom sediment. Phosphorus is a nutrient that fuels aquatic plant and algae growth so removing some of the phosphorus should improve the clarity of the water by removing the nutrient that fuels algae growth. Another research project on Devils Lake is a water diversion project that diverts cleaner water with low nutrient levels into the lake.

Fish Lake has substantial development and agricultural pressure placed upon it. Eurasian water milfoil (EWM) has been found in Fish Lake for as long as Jim has been monitoring. He remembers a time back in 1978 when there was a conference held in Wisconsin to discuss how to control EWM and Fish Lake was a topic of conversation back then.

Jim analyzes lots of water clarity data as well as water chemistry data. He said that lakes are able to renew themselves to a certain degree but that nutrients cycle round and round and there is not a whole lot that we can do about it. The secret, of course, is to prevent excess nutrients from getting into the lake in the first place. Development likely causes an increase in sedimentation, algae and plant growth.

But, Jim said there are lots of things to be thankful for. On the whole, Jim believes that lakes are improving more than they are getting worse. Jim is thankful for the increase in the number of lake associations and lake districts and the interest that people are showing in our water resources. Wisconsin has statutes and laws to protect our lakes and streams and natural aquatic plant communities. Money is available for lake grants and land is being set aside in Land Trusts, Wild Rivers and Lakes and the Lake Stewardship program. People are starting to understand the value of sensitive areas on their lake and Jim is pleased to see that happen. He's thankful that people know water is a precious resource that needs to be protected from invasive plants and thankful for volunteers who love lakes and want to protect them. And we are thankful that we have Jim!

**Jim Watson, Jr. Swan Lake, Columbia County (406 acres, maximum depth 82 feet).
Began monitoring in 1988.**

Why did you decide to monitor water clarity?

I was on the Board of Directors of the Swan Lake Association and recognized the need for monitoring and keeping records. It is something that probably should have been done many years earlier. I spend much more time on the lake than anyone so, I am the logical person to do the monitoring.

Have you noticed a change in water quality and aquatic plants in the last 20 years?

The most significant changes on the lake happened more than 20 years ago, before any sampling was done or any records kept. The lake changed from a clear water state with vegetation consisting of tule reeds, large leaf pondweed and coontail to a turbid, algae dominated condition with an invasion of carp and Eurasian water-milfoil (EWM). By the 1960s most of the thick stands of tule reeds and other protective vegetation had been rooted out by carp. Shallows matted with milfoil and thick layers of blue green algae became common in the summer and shade out native plants. By the early 1980s, water quality had improved greatly and we no longer see blue green alga blooms. The improvement is likely due to removal of upstream sewage treatment plant discharge. For the last twenty years water clarity has remained fairly steady with poor clarity during warm months. Green algae, carp and EWM are still a problem so Swan Lake is a long way from its original condition. During seasons of severe dry spells, it often remains very clear even into mid-July and native vegetation like the large leaf pondweed will come back in some areas. This shows the potential we could have if runoff of soil and excess nutrients from the watershed could be reduced.

What changes have you seen on your lake in the last 20 years?

Most of the small summer cottages have been replaced with huge homes. More and more shoreline is developed into homes and condominiums. Native shoreline vegetation continues to be replaced by mowed and fertilized lawns. Invasion of gizzard shad has made for tough fishing for the larger gamefish that are still abundant in the lake but are so well fed that they rarely show interest in lures. We have frequent high water events during summer and fall and frequent low water events during the spring so there have been poor spawning conditions for northern pike the last twenty years.

How do you use the data that you collect?

I keep a baseline of data to compare any changes with activities or changes in the watershed.

What are some of the highlights that you have seen on your lake in the last 20 years?

The stocking of musky by a local club and the DNR created a trophy fishery. DNR stocking of walleye fry built up a good population of catchable fish of this desired species. This lake has always needed more predator fish to control the abundant baitfish present. Largemouth bass, always present, are large and abundant now. Smallmouth bass have appeared in good numbers some years too.

What are some of the disappointments that you have seen on your lake in the last 20 years?

I am disappointed in the number of northern pike in the lake – likely due to poor spawning conditions throughout southern Wisconsin. The explosion of gizzard shad has hurt the game fishing. Although they are a food source that grow some tremendous game fish it is hard to catch anything. The shad also compete for the available zooplankton needed as food for many of the desirable fish at certain growth stages so they have hurt the success of fry stocking and survival. Also, shad may be causing more algae growth and turbidity due to grazing of zooplankton. Shoreline development and loss of native shore vegetation is also a great disappointment.

What accounts for your longevity as a volunteer?

Someone needs to monitor water quality so I stepped forward. I have lived on the lake for over fifty years and spend most of my free time on the water so I might as well be collecting samples!

Do you have anything else that you would like other citizen lake monitors or people on your lake to know about you?

Most of the people who live around Swam Lake know me. My family began visiting the lakeshore for camping and picnics in the 1850s. My great grandparents and grandparents built cottages on the lake in the 1920s. I've lived on the lake nearly 53 years. My whole family – my parents, my two sisters with their families, and my wife and I all have homes within 800 feet of the lake. Fishing, swimming, waterskiing and being on the lake during all seasons is the primary focus of my lifetime. I can remember sitting in on Lake Association meetings with my mother and father at a very young age and have been on the Board of Directors most of my adult life.

Bill Whyte – Webb Lake, Burnett County (781 acres). Began monitoring in 1986.

Have you noticed a change in water quality and aquatic plants in the last 20 years?

Overall, water quality has not changed very much, and it varies from season to season. This year we had low water levels and warm weather and a resulting algal bloom.

What changes have you seen on your lake in the last 20 years?

The makeup of the lake residents has changed and there is shift in the recreational population. In the old days, people looking for recreation on their lake would catch fish or frogs. Now, there are more personal watercraft and larger boats. Seasonal residences have been replaced by permanent residences.

We have been treating purple loosestrife on the lake for several years and are educating people on EWM. The best approach to controlling AIS is through education.

How do you use the data that you collect?

Data that I collect is shared with lake residents and is used to educate the property owners about water quality issues. Also, the data that CLMN volunteers collect is helpful to fishermen to determine the thermocline, water clarity and dissolved oxygen. I have fished this lake for more than 60 years and use the data all the time.

Why did you decide to monitor water clarity?

A landowner wanted to chemically treat aquatic plants in Webb Lake, I wanted to talk to people about some of the consequences in using chemicals in the lake. I retired in 1994 and wanted to give something back to the community. I think it is especially important to educate young people to have a new generation of conservationists.

Have you seen a change in development on the lake?

We used to have small cabins and family resorts on the lake, now there are larger, more expensive permanent residences. In 50 years, lakeshore development will consist of all large homes. The small weekend cabin will be a thing of the past. I am also concerned that the values and land ethic is changing – we don't seem to be in tune with nature any more.

The future may consist many more keyhole developments – this will lead to more pressure on our lake with boats and fishermen. We need to plan for the future on how we deal with multiple use conflicts.

What are some of the highlights and disappointments on your lake in the last 20 years?

Webb Lake received a EWM education grant and we recruited volunteers to monitor the boat landing. We had many volunteers come forward to lend a hand.

Unfortunately, there has been an increase in the number of chemical permits being issued due to social and political pressure. We need to determine how chemicals are impacting the aquatic ecosystem.

Stanley Young – White Lake, Marquette County (92 acres). Began monitoring in 1986.

Have you noticed a change in water quality and aquatic plants in the last 20 years?

Water clarity readings have a small downward trend. We still have good water clarity on the whole.

Water level on White Lake is within one inch of being as low as it ever has been in our records.

We used to use a harvester on the lake to manage the aquatic plants, now we use chemical control.

What changes have you seen on your lake in the last 20 years?

The lake is pretty much developed. There are 90 cottages/homes on the lake, of these twenty are permanent.

How do you use the data that you collect and how did you become involved in Self Help?

I read about the Self Help program back in 1986. I sent a letter to Carolyn Rumery and she trained me. The Lake Association bought the first secchi disk that we used. I share the information with the White Lake Property Owners Association and the White Lake Management District. Samples for chemical analysis have been sent to U.W. Stevens Point Task Force for analysis for the last 20 years.

In 1989, the Association bought a dissolved oxygen meter. That meter is still in use.

Have you seen a change in development on the lake?

There is little property left on the lake for development. In the future, more of the residences could become permanent homes.

What are some of the highlights and disappointments on your lake in the last 20 years?

The Lake Association and District work hard to educate people about the right things to do to help our lake. Sometimes, it is a little frustrating to get people to recognize that the little things we all can do will help our lake in the long run.