

Okoboji Protective Association

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O.P.A. NEWSLETTER

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"The OPA is dedicated to improving and enhancing the water quality and ecological health of Lake West Okoboji and the Iowa Great Lakes Watershed."

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President's Message

By John H. Wills
OPA President

Friends,

We welcome spring and many of our friends who travel south for the winter back to Okoboji. As I look out the window, writing this letter, it is cold, blustery and promising snow this weekend. That is not very spring-like, but we know that our warm Okoboji weather will be here soon. The call of the lake is strong and draws us.

Looking to the summer, I am excited because last fall we finished our visioning process that will allow the board to be more focused in providing the services and direction that you, the members of the Okoboji Protective Association want. Some great things are on the horizon for the OPA this summer and into the future. Among those things are helping with the Blue Water Festival, helping with the Prairie Lakes Conference and other important topics. We have a long history of working with the Lakeside Lab and with the new director, I know that relationship will continue.

Some issues that will be important but not very pleasant that the OPA will look at working on are curly leaf pondweed, zebra mussels and many other issues that sometimes takes someone or some group that is willing to educate others about the issues.

I mentioned our visioning process that was completed last year, which identified three main purposes that the OPA should focus its attention:

- To monitor projects and activities and ensure regulatory authorities fulfill their duties;
- To educate decisions makers, property owners and other stakeholders to adopt sustainable development practices;
- To act in responding to opportunities and threats in the watershed.

By moving forward with these three goals in mind, the OPA will be able to stay on course and ensure our influence and the motivation of our members.

The need to protect West Okoboji has never been greater, and the OPA will live up to its time earned and honored reputation as an organization that is out front protecting the lake we love. We have many great accomplishments that we can look back on, but we have even more accomplishments to look forward to. I am so proud of our organization and the people who are part of it.

I can only say to all of you, thank you for making the protection of our lake and its watershed possible. I also cannot thank you enough for your energy and the money that you pay to this organization to make all the protection of Okoboji possible!



Carpe Diem

By Mike Hawkins

Fisheries Management Biologist

Although I hate to admit it, carp are a big part of my job. As you might imagine, a fisheries biologist would much prefer spending time managing walleyes or bass or bluegills or pretty much anything else. Whether it's the recent jumping variety or the common variety that's been with us since Ulysses S. Grant won the presidency, carp are here to stay and unfortunately deserve a lot of consideration and resources.

Although much of our attention has been shifted to the new invasions of bighead and silver carp to the region, the most important and deleterious species, the common carp, has already been with us for nearly 150 years. Long enough that many people even think of this species as native. Its history of introduction, however, goes back a long way.

Common carp have even been listed as one of the "World's Top 100 Worst Invasive Species" by the International Council for Conservation of Nature. Federal agencies and many states also list the common carp as one of the most damaging invasive species. In many shallow, freshwater lakes and wetlands this species can cause significant habitat degradation and negatively impact water quality. As with many invasive species, these hearty fish exploit openings in compromised ecosystems.

The common carp was intentionally introduced into the United States. Often called the "German Carp" it was and still is a prized catch in much of Europe and Asia. The early settlers of North America desired a fish that would provide good fishing and a needed protein source as habitat and native stocks of fish declined across the new nation. The first carp made their way across the Atlantic on ships and were widely distributed across the country by the U.S Fish Commission during the late 19th century. The fish quickly escaped into rivers and lakes and began expanding in range and population. They now inhabit all of the contiguous 48 states.

During the early 1900's, common carp were targeted by commercial fishing operations and state agencies with large seines, gill nets, and a variety of traps in an effort to "fish them out" of some waters.

These efforts met with little success as common carp quickly reproduced and refilled the void created by these massive removal efforts.

By the 1970's, many agencies shifted their efforts to intensive gamefish management, complete chemical renovations, and stocking to bolster native species. Using this top down method was meant to control carp populations through predation and suppression of reproduction. These efforts were also met with limited success.

Today, a new generation of biologists is taking up the cause. We are using approaches that integrate many of the past methods of control but also focus on tactics generated from ongoing research by agencies and key universities. Using these integrated approaches guided by better science, we are beginning to see some success with results that could have lasting impacts to our natural resources.

Efforts to control common carp populations through reproduction control, water level management, massive commercial removal, and predator stocking are underway at a few area lakes like Center Lake. We will continue to expand these efforts to other area lakes and wetlands.

Management of our water resources is a challenging endeavor. We're facing threats from the landscape and from under the water. Only by partnering together to fostering innovation and resources to get the job done can we mitigate some of our past mistakes, ongoing pressures, and future challenges.



Thousands of Center Lake common carp trying to reach their spawning areas are stopped by a new rock barrier. These barriers allow water to pass while stopping fish. They are inexpensive but easy to design and maintain.



Plans Coming Together for 2017 Okoboji Blue Water Festival

By Steve Weisman

It's hard to believe, but the second annual Okoboji Blue Water Festival is a little less than three months away! Yes, it's true! The date is set for Saturday, August 12 at Preservation Plaza and promises to be even bigger and better than last year!

"Thousands of people participated in last year's inaugural event," says organizer Greg Drees, "and response to the day's activities was incredibly positive."

And why wouldn't it be when you have a family friendly celebration of what is important to all of us: clean water! This year's event will include all kinds of opportunities for people of all ages.

Drees notes, "We will once again have over 30 water quality exhibitors sharing the importance of clean water, clean water themed kids' and family activities, fishing clinics and to top the day off, a concert by a rock and roll icon."

As successful as the 2016 Okoboji Blue Water Concert was, Drees promises more in 2017. "For one thing, we are actually going to make this a two-day celebration. Friday night will include two opening bands to help get the festivities started. Kicking off the evening at 7:30 will be JD McPherson, who has been described by critics as an eclectic mix of rock 'n' roll, rhythm and blues and rockability. McPherson will be followed on stage at 9 p.m. by Chris Isaak, whose career has been highlighted as a songwriter, studio and concert performer and actor."

One of the focuses in 2016 was the clean water panel that included a range of panelists from across the state with Joe McGovern, president of the Iowa Natural Heritage Foundation moderating the two-hour session. For 2017, Drees is putting together three different panels supervised by a moderator.

The first will be a panel of local speakers addressing water quality issues unique to the Iowa Great Lakes Region. The second will be a panel of speakers from across the state that will address broader issues and challenges statewide. The final panel will include a panel of 2018 gubernatorial candidates debating water quality and natural resources issues. "Although this is a celebratory event, we also want to focus on what is going on with our water quality and natural resources both locally and statewide."

By inviting politicians, we can hear their thoughts on these two key topics: water quality and natural resources. Our hope is that we can bring these discussions to those in attendance and that we can get more people in actively working to address these important issues."

Headliners

Last year the day was capped off by the incredible sounds of Boz Scaggs. This year listeners will get to hear the sounds dating back to the 1960s British Invasion: Eric Burdon and the Animals! Hits include "The House of the Rising Sun," "Don't Let Me Be Misunderstood," "We've Gotta Get Out of This Place," "When I was Young," "Don't Bring Me Down," "See See Rider," "San Francisco Nights," and "Sky Pilot" just to name a few.

There is little doubt that Burdon is one of the most enduring singer/songwriters of his generation! For five decades, his music has remained relevant. Even today, at age 75, he still slays a live show!

Drees adds, "Quality water resources define the Iowa Great Lakes community. This festival, which we believe will continue to grow, is a celebration of that tradition and a tool to continue to raise public awareness of the challenges ahead."

People interested in supporting the Okoboji Blue Water Festival can send their donation to:

HAPI (Historic Arnolds Park, Inc.)
PO Box 609

Arnolds Park, IA. 51331

On the check's memo, please write "Donation Restricted to OBWF."



Eric Burdon will be the headliner on Saturday, August 12 at the second annual Okoboji Blue Water Festival.



IOWA LAKESIDE LABORATORY 2017 SUMMER PUBLIC PROGRAMS

WILD WEDNESDAYS 2017: BUILD A BETTER WORLD

What lessons can nature teach us about building a better world? Find out at Wild Wednesday's free, fun, family oriented programs. 7:00 pm, Wednesday Evenings, Waitt Lab

June 14 Mud, Silk, Sticks and More: Animal Architecture

June 21 Saws, Jaws and Claws: Nature's Toolbox

June 28 Nature's Plumbing: How Water Gets Around

July 5 Soak It Up: Fun with Rain Gardens

July 12 Nature's Geometry - Dare to Find a Square!

July 19 Spineless Wonders: Life Without a Backbone

July 26 Micro to Macro: Let's Measure Up!

August 2 Untangling the Web: Food Web Detectives

LAKESIDE TREASURE HIKE! June 1 – October 1

This self-guided nature exploration and tour of Lakeside grounds is perfect for children, families, and "kids at heart" of any age. Pick up a treasure map at Lakeside entrance and go exploring for hidden clues and secret messages!

FRIENDS SCIENCE SEMINARS

Listen, learn and engage with scientists as they share their research. Topics TBA. 7:30 pm each Tuesday June to July in Mahan Hall.



ACADEMIC COURSES

Lakeside's field-oriented courses offer an experience of a life time! **Enrollment is open to students from any college or university.** Visit www.lakesidelab.org to register and for scholarship opportunities.

VOLUNTEER OPPORTUNITIES

COFFEE AND GROUNDS

Work hard and learn about native ecosystems while restoring prairie and oak savanna at Lakeside. Then relax and make friends over coffee and rolls. Meet at the Waitt Lab at 8:30 am each Tuesday during snow-free months.

VOLUNTEER FOR WATER QUALITY!

The Cooperative Lakes Area Monitoring Project is looking for volunteers to monitor lake health. Free training and equipment provided. Contact 712-337-3669 Ext. 7 for information.

www.lakesidelab.org; www.facebook.com/LakesideLab; (712) 337-3669 Ext 7



Looking at the Impact of Clean Water

By Mark Schutt
District Conservationist

Water quality in the Iowa Great Lakes – it all is determined by your watershed!

In real estate they say location, location, location, and the same is true for water quality in the Iowa Great Lakes: look up stream and around you to see where your lake water is coming from.

You also should consider that likewise in real estate: Water is good, high quality water is better and clean water is best!

The question is this. How badly do we want clean water in the Iowa Great Lakes Region? Because scientifically and practically, we know how to do it. The only issue is the willingness of your watershed residents to achieve it!

The Iowa Great Lakes Region, more than any other place in Iowa, demonstrates the impact clean quality water has on a local economy. Real estate values vary with water quality of area lakes, the tourism industry benefits from cleaner water, water utilities costs can be reduced by source water of high quality. Public opinion of a region can depend on water quality.

Yet Iowa is and will always be an agricultural state, and when 80 percent or more of a watershed's land use is in agriculture, some want to say agriculture is the problem. Often it is the easiest to visualize, but this is short sighted and over simplified, because all land uses in a watershed contribute in different ways to the water quality in the system. The answer is, all land use issues in a watershed contribute and all need to be part of the locally derived solutions to protect and improve water quality. When groups want to only point to the others, we become divided and no progress toward the goal of clean water is made. If we do not work together to solve water quality problems, our water will decline in its quality.

Several programs exist for landowners and users in the lakes area to reduce water quality impacts to our lakes. Sources of funds come from the federal government, state government, local governments, local businesses, special interest groups and private citizens. We would like to have more applications for those funds than we have funds available. Contact your Local NRCS office to find out more about what is available at (712) 336 3782 or visit us at 3302 18th Street in Spirit Lake. Too often, citizens are unaware of available resources to solve the water quality issues.

In this area, there are some real leaders in Soil and Water Conservation practice implementation and in Urban Conservation. But there are still many critical areas of our lake watersheds that are untreated and contribute considerably to the degradation of the Okoboji chain of lakes. Agricultural water quality practices are generally voluntary and do not fall under any regulatory system that forces the best management practices to be used. Some municipalities in the lakes area, however, do require Urban storm water practices for new construction permits.

Agriculture is a business that has vast swings in net farm income. This has always been true and is not likely to change in the future. The disappointment is not seeing more applications in years farmers are flush. Now we are in a downturn, and everybody must tighten their belts to make a living.

The conservationist's frustrations related to water quality are that through decades of research and risk taking, the science of agriculture production has changed greatly, but adoption of proven practices that reduce erosion have not significantly increased. This leaves Iowa in a poor place, eroding the best soils in the world into the few water resources we have, degrading them further. This costs Iowa and the public double once when our land loses productivity, and again when sediment or pollutants need to be removed downstream to make the water clean enough to be usable.

OKOBOJI PROTECTIVE ASSOCIATION



Our basic soil and water resources are continually depleted at rates higher than necessary only because we are most comfortable farming using traditional methods and not using more modern management techniques.

The voluntary water quality approach works great when a community can come together and focus on solving a problem. When all stakeholders communicate and each makes improvements in their sphere of influence, the resource improves.

Water quality is all about infiltration of rainfall where it lands. Most erosion occurs when runoff concentrates and carries pollutants to your lakes and streams.

From an **agricultural** approach, you should promote these things:

- No-tillage on cropland between harvest and planting;
- Cover crop planting each fall to keep growing plants on the soil longer;
- Plant and maintain filter strips along crop fields that border ditches, streams, wetlands and lakes;
- Install and maintain waterways where needed so gullies do not wash soil into streams and ultimately into our lakes;
- Restoring wetlands where possible with buffer plantings for recharging clean water into our lakes.

From an **urban** approach, you should promote these things:

- Keep all your property covered in perennial deep-rooted plants. No bare soil to erode;
- Stabilize shoreline according to DNR guidelines;
- Control roof runoff and convey it safely to a stable location on property;
- Install properly designed rain gardens and other low impact development practices;
- Do not put anything into the storm sewer you do not want in your lake.

Above all, be involved: talk to your neighbors, share your concerns and offer solutions. When others know they are being watched, they act differently. Peer pressure is alive and well and if that is what it takes, I would endorse that practice. Change does not happen overnight, but it will never happen without working toward the goal. Water quality is a noble goal we all should aspire to achieve!



This is an example of a fall cover crop planting to keep growing plants on the soil longer to minimize erosion.





A Pollinator's Paradise

By Kiley Roth
Community Relations Coordinator

That is what we want the Iowa Great Lakes area to be, but right now, it isn't. Iowa isn't. The country isn't. The continent isn't.

Monarch butterfly populations have dropped drastically in the past 100 years, some reports saying up to 90 percent of the population has been lost. From habitat loss to loss of native food sources to unfavorable winter weather conditions have adversely affected the popular orange butterflies.

Bee populations have seen similar declines, drastically disappearing since 2006. Iowa honeybee keepers have lost 50-70 percent of their hives in recent winters due to colony collapse disorder, from harmful effects of pesticides and neonicotinoids and also from lost habitat and food sources.

The rusty-patched bumblebee was the first bee native to Iowa and the continental United States that has dwindled so much it was placed on the endangered species list earlier this year.

So, what do we do with this information? How can we make a difference?

First, plant natives. Native insect populations, both butterflies and bees, need native plants and flowers. They were created to feed off of these specific plants and to use them for habitat. Monarchs in particular need milkweed, as that is the only plant they lay eggs on and that their caterpillars eat. If there is no milkweed, there are no monarchs.

Second, beware of pesticides, insecticides and fertilizer use in your yards and gardens. These chemicals adversely affect our insect populations, and even when killing off some more "annoying" insects can throw off the balance in your yard or can affect non-targeted species. Plus, if you plant native species, they are much less likely to need fertilizers because they are acclimated to Iowa's climates and are drought resistant.

You can also make a difference by providing habitat for native bees. Because the approximately 200 species of native bees in Iowa are mostly solitary bees instead of social bees, they need places to nest. Some need areas of bare ground to burrow in. Some utilize hollow stems of dead plants. You can also create bee homes by bundling together hollow bamboo of different sizes or drilling holes in tree cookies. There are simple ways we can make a large difference for our pollinators.

- The Dickinson County Conservation Board has concentrated on advocating for pollinators in recent years. The Integrated Roadside Vegetation Management program in the county took off two years ago with the hiring of vegetation specialist Aric Ping. Ping has been putting together management plans for vegetation in county areas as well as working to reseed county rights-of-way with native plants that help with water quality as well as offer habitat and food sources to wildlife and pollinators.

- The Dickinson County Nature Center has focused on advocating in other ways, such as presenting programs on the importance of pollinators, creating an indoor honeybee hive to tell the bees' story, selling butterfly milkweed seedlings for people to plant habitat in their own yards and through the annual Bee & Butterfly Festival. This year's Bee & Butterfly Festival is slated for 4-8 p.m. Friday, Sept. 1, at the nature center. Bring family and friends to the free festival that helps foster an appreciation for pollinators by educating and entertaining. People will have the chance to tag a monarch butterfly, participate in programs about pollinators, view a honey extraction demonstration and take home pollinator-themed crafts

The nature center also has its small Pollinator Paradise area that is open each summer, in which monarch caterpillars are reared to adulthood and released into the wild. Exhibits talk about the importance of monarch, native bees and how to plant natives. An outdoor garden area also allows people to walk through native gardens to see what plants they might like to add to their own landscaping.



Generous donors have stepped up to help the Conservation Foundation of Dickinson County, the conservation board's non-profit arm, to raise money to construct a new Pollinator Paradise addition to the nature center in Okoboji. This \$1.7 million addition is scheduled to break ground this summer, and eventually will have children's museum-quality exhibits inside that will focus on the education and advocacy of pollinators, from bees to butterflies to hummingbirds.

The new Pollinator Paradise will be the first of its kind in the region, the state and possibly the country to focus on educating all ages about the importance of pollinators. It will be a true gem, a tourist attraction as well as an educational center on the forefront of the current push to promote pollinators.

To learn more about what the Dickinson County Conservation Board is doing to help pollinators, visit www.dickinsoncountyconservationboard.com or stop by the nature center at 2279 170th St. in Okoboji.

We can make Dickinson County a pollinator's paradise, and you can help!



This youngster experiences the thrill of handling a monarch butterfly.

IGLSD: Working to Protect Water Quality

By Steve Anderson
Superintendent of the IGLSD

It is pretty amazing to think that in two years, the Iowa Great Lakes Sanitary District will have protected the Iowa Great Lakes for 80 years. Over those 80 years, several things have come and gone for protection of the lakes, but the Sanitary District has continued upon its original mission of protecting the water quality of the Iowa Great Lakes and the public health of those who live and visit this area. It is hard to imagine where two million gallons of waste water daily would go, if not for the sanitary sewer in the cities and county that eventually get treated and discharged into Milford Creek.

The Sanitary District continues to work on cleaning and inspection of the sewer lines this summer. The focus this year is to finish West and East Okoboji Lakes. So you may see staff in the area with the jet truck and tanker cleaning the sewer system. That is then followed by the camera truck that will inspect the newly cleaned pipes. If issues are found the District will take steps to make sure the system is fixed.

The Sanitary District continues to work to meet the goals of the new permit that was issued back in 2015 from the Iowa DNR. Currently a new ultraviolet (UV) disinfection system is being installed at the waste water treatment plant. This system is used to not kill but instead to prevent bacteria in the treated waste water from reproducing. The UV unit will make recreation safe for people who use Milford creek for swimming, canoeing, kayaking and other recreation uses. The Sanitary District has until July of 2018 to have the unit installed and operational.

Extension of public sewer to the south end of Center Lake has been a topic of discussion for the last year with the OPA and others. In April of 2017, HR Green, the Sanitary Districts Engineering firm, presented three options for installing sewer to the south end of Center Lake. The recommended system will include new gravity sewer, relocation of existing force main sewer pipes and a new lift station.

Total cost to sewer the south end of Center Lake is estimated to be \$6.2 million dollars. To relocate the force main sewer lines, which needs to be done with the project, is an additionally estimated \$3.3 million. The Trustees will discuss options for getting sewer installed at future meetings. The purpose of the study is to determine if public sewer can be installed and an estimated cost for the installation of the sewer.

As always we ask for the public to help the Sanitary District to watch for issues. The District has over 100 miles of sewer pipes and 64 lift stations around the Iowa Great Lakes. There are several systems that help monitor the lift stations if there are issues, and they do send alarms to staff. These alarms may not always work, so we ask if you see a flashing light or a siren going off at a lift station to call the Dickinson County Dispatch at 712-336-2626. The Dispatch will call staff to the location. The District would rather see 50 people call in on an alarm instead of missing and having waste water end up in a private home or in the lakes.



Lakeshore Landscaping Ordinance

By Steve Weisman

Following a series of landscaping issues along the shores of West Lake Okoboji last year, the Okoboji City Council put a moratorium on issuance of any lakeshore landscaping or construction permits until a better more consistent ordinance could be devised. With that goal in mind, the Okoboji Planning and Zoning Commission went about the job of addressing the shoreline issues. The commission looked at conservation methods developed in both Minnesota and Wisconsin to come up with a plan to address recent issues and to safeguard the integrity of the shoreline of the lake.

The planning and zoning commission's proposal defines once unclear terms in Okoboji's lakeshore codes and ordinances. It also better outlines landscaping methods to prevent erosion. What it really does is protect all parties involved including other lakehome owners.

There is now more emphasis on using natural materials when conducting landscaping as well. The ordinance also requires that projects be completed in one summer working season.

Both the Lakeshore Permit Application and the new landscaping ordinance (Ordinance 231) can be found on the Okoboji city website (www.okobojicity.com). Once at the site, go to the tab Government and scroll down to zoning and click. There you will find Lakeshore Landscape Permit Application. Click on this and the application will be downloaded.

The process

This is what the process now looks like:

APPLICATION SITE PLAN - A detailed site plan certified by a Professional Structural/Civil Engineer, Geotechnical Engineer, Landscape Architect or Qualified Representative of the Dickinson County Soil and Water Conservation District is submitted as follows:

1. Site plan must demonstrate the necessity for bank reconstruction e.g., Erosion of lakeshore bank as result of surface water drainage from subject property and adjacent property; Erosion of the lakeshore bank occurs as a result of the wave action of the lake against the lakeshore, and landscaping the lakeshore will prevent further erosion from occurring; Erosion of lakeshore bank as a result of subsurface water drainage.
2. Site plans shall be drawn to a scale of 1"= 40' or less.
3. Site plan shall include a detailed drawing of the subject lot with the location of all existing and proposed improvements.
4. Site plan shall include the nature and location of all existing drainage facilities.
5. Site plan shall include the specific identification and populations of current vegetation including percentages of herbaceous vs. wood vegetation.
6. Site plan shall include the configuration and approximate grade or slope of existing shoreline bank in relation to the high water line.
7. Site plan shall include a detailed plan and elevation view to scale of all proposed landscaping modifications including proposed drainage facilities and runoff control, bank stabilization, ground water interception, green face promotion, plants and all other related landscaping modifications.

CONSTRUCTION SCHEDULE: For the permit to issue, a detailed construction schedule must be submitted that includes a completion date NOT to exceed 12 months from the date permit is issued. Approximate construction cost: \$ Name and address of general/landscape contractor:

In addition, the city engineer will complete a walk-through and inspection of completed landscaping project to ensure it meets the construction plan outlined in the permit application. The zoning administrator and the city will then review the project before it is signed-off on.



Mussel madness

By Eric Stoll

GM Milford Municipal Utilities

At the beginning of every spring, I fill out my NCAA men's basketball bracket and follow my favorite teams. We call this March Madness. The madness is all about the buzzer-beaters and chaos that accompanies the tournament. We all know that buzzer beaters and chaos are not exclusive to the NCAA tournaments; they can also apply to the Iowa Great lakes. Milford Municipal utilities (MMU) experienced a little madness when it was discovered zebra mussels had invaded the Iowa Great Lakes.

In June of 2013, we received a press release that four invasive Veliger's (Juvenile Zebra Mussels) were found in East Okoboji. This caught our immediate attention as our source water body is West lake Okoboji, and all of the Iowa Great Lakes are interconnected. We contacted our local colleagues and inquired how they were dealing with this threat. Central Water System (CWS) located on West Okoboji just completed a substantial upgrade in February of 2013. We found CWS utilized a Cooper Alloy screen along with a Sodium Permanganate injection ahead of the filters. We then reached out to other surface water utilities in Iowa that draw from zebra mussel infested waters. At the same time, we were also consulting the IDNR on what they have encountered throughout Iowa. The common design solution was a copper screen and a dosage of Sodium Permanganate.

I shared our findings with the MMU Board, and they immediately understood the importance of finding a solution quickly. As we continued to internally discuss finding a solution that would best fit our needs, we decided to find out how water utilities on Lake Michigan were fending off the zebra mussels. Municipal Utilities in Iowa have state advocate associations, and they also have national associations. We referred to our American Public Power Association directory, and David Coleman our water Superintendent began calling Utilities in Michigan that sit on the shores of Lake Michigan. Why would we call electric utilities? Just like in Iowa many electric utilities also have the responsibility of drinking water. Electrical power plants require water for steam so they, too, are affected by intake restrictions.

Two weeks later we received a call from a Public Power Community in Michigan, and they shared a different technology being used in the Michigan Great Lakes Region. Copper Ion Generator Technology uses electrolytically produced ionic copper to control veliger settlement. In other words, the young zebra mussels won't attach to intake pipes because they despise copper. The level of copper added to the raw water is 5-10 parts per billion (ppb), which is an environmentally acceptable level.

We determined that producing ions may benefit our system as we would avoid permanganate purchases, and we could use our own wholesale electricity to produce the ions of copper. We shared our findings with our Consulting firm HR Green, and they agreed to investigate further.

Copper Ion Technology had never been used in Iowa for drinking water so we weighed in on the pros and cons and determined it was worth the effort to demonstrate a 12-month pilot study with the IDNR. The EPA has identified action levels at 1.3 mg/L for copper that translates to 1,300 ppb. We felt that adding 5-10 ppb of copper to raw water is significantly less than the action level. Twelve months of data monitoring and sampling results followed as we continually submitted our findings to the IDNR for approval. On August 31, 2015, we received approval from IDNR to continue the operation of the copper ion technology. That was our buzzer-beater!

The fall of 2015 produced an alarming sight when docks and hoists in Browns Bay were removed for the winter season. All of the submersed metal surfaces were completely covered with mussels. We have witnessed mussels attached to boat motors, nets, docks, hoists, swim rafts, ladders, rocks and they are clogging irrigation pipes. Adult zebra mussels can even survive out of water and can be spread from one water body to another. That is chaos for everyone in the Iowa Great lakes Region!



Copper Ion Generator Technology uses electrolytically produced ionic copper to control veliger settlement.



First Ever Climate Conference in the Iowa Great Lakes

By David Thoreson

Last August 2016, the Iowa Great Lakes hosted The Prairie Lakes Conference and Blue Water Festival, the first-ever water quality conference and celebration in the lakes area. OPA board members John Wills and Greg Drees were instrumental in creating these new events. They were overwhelmingly successful and paved the way for our wonderful lakes area to move from water quality issues into atmospheric science. Our spirit of cooperation on water issues provided the perfect bipartisan platform to discuss climate related issues and how to work cooperatively to solve new environmental problems facing us now and into the future.

The North Wind Region of the Citizens' Climate Lobby (CCL) assembled at the Iowa Lakeside Laboratory March 17-19, with over 100 attendees. The regional conference was open to the public with great local participation. The bipartisan CCL has over 150,000 members nationwide and lobbies elected officials to adopt a carbon fee and dividend policy to combat the detrimental effects of burning fossil fuels and the associated carbon pollution accumulating in our atmosphere and oceans. The policy encourages a transition to clean and renewable energy sources like wind, which powers 37 percent of Iowa's energy needs, making us a leader in the USA.

This was the 4th annual North Wind Region conference bringing together CCL volunteers from Iowa, Minnesota, Nebraska, North Dakota and South Dakota to learn, share, strategize, energize and act. With national and global policy directors in attendance, the idea of carbon pricing was discussed in detail along with connected issues including agricultural practices, soil carbon sequestration, water quality issues and renewable energy's impact on the economy. Iowa elected officials in attendance were Rep. John Wills, Sen. David Johnson and Rob Hogg, and gubernatorial candidate Rich Leopold.

I have been very active in bringing the CCL ideas and a regional conference to our Iowa Great Lakes. Water quality and climate issues directly connect. The carbon fee is a market-driven approach to our future energy needs and is gaining momentum. I have been to Washington, DC, lobbying with CCL and have seen their bipartisan approach to solving problems.

It's a breath of fresh air in this heated political environment of 2017. We live in a region with tremendous renewable resource potential and yet we are under-represented in discussions. This conference gave us a voice and a vital seat at the table. I'm proud to say that a new IGL CCL Chapter was created because of the conference.

Mark Reynolds, the Executive Director of the CCL, was in the Iowa Great Lakes for the conference. Reynolds explained CCL's approach, "Engaging with our government requires us to seek common ground between Republicans and Democrats. When we listen to each other, we find that the greatest concern about acting on climate change – whether through regulation or carbon pricing – is the impact it will have on our economy, the fear that jobs will be lost."

He continued, "We can alleviate those fears and find common ground with a market-based solution that holds polluters accountable for the damage caused to our air, water and climate. Such a market-based solution needs to be revenue neutral, thereby preventing it from increasing the size of government. A steadily-rising fee on carbon, with all revenue returned to households, would bring down greenhouse gas emissions while boosting the new economy."

The carbon tax plan was recently introduced to the Trump administration by former Bush administration Secretary of State/Treasury James Baker, former Secretary of State George Schultz and former Secretary of the Treasury Henry Paulson. This is another demonstration of the growing support for bipartisan action on carbon pricing and dividend.

We are living on a planet that is completely interconnected by our shared environmental systems and by new unforeseen threats now affected by destabilized weather patterns. It is within this new framework that the Iowa Great Lakes, with our wonderful spirit of cooperation on water issues can, and should, become a leader on climate solutions and education.

For further information on the CCL:
<https://citizensclimatelobby.org/about-ccl/>



Group photo of the North Wind Region of the Citizens' Climate Lobby (CCL) that assembled at the Iowa Lakeside Laboratory March 17-19.



The New Face at Iowa Lakeside Laboratory Regents Resource Center

By Mary Skopec, Ph.D.
Executive Director, ILLRRC

Two curious deer and a beautiful sunrise welcomed me to Iowa Lakeside Laboratory on December 20, 2016. From that moment, I knew that I had made the best choice of my life – to move to a community where the water quality is valued and protected, where nature strolls up to my office on a daily basis and where I can work with the most talented, passionate and brilliant scientists in the world.

Iowa Lakeside Lab has played a prominent role in the history of the Iowa Great Lakes – immersing students in the study of nature and helping to form our understanding of the ecological balance in these precious lakes. For more than 100 years, Lakeside faculty and students have been building an unparalleled wealth of knowledge regarding the prairies, wetlands, and lake ecosystems of this unique landscape.

My goal is to honor the tremendous history and contributions of the scientists that have preceded me, but also look to expand the vision and purpose of the Lab to meet the challenges of the next century. The Okoboji Protective Association is a key partner in this effort. For more than two decades, the OPA has been supporting Lakeside Lab students through scholarships and internships. Without the extremely generous support of the OPA, many of these students would be unable to spend time at Lakeside.

However, this benefit also accrues back to the Lakes region - these students garner skills that can be used to protect our natural resources for generations to come. One local company recently reached out to Lakeside to help develop a “pipeline” of students to fill their employment vacancies for jobs relating to fisheries, aquatic ecology and algae.

Pre-service training opportunities or internships are an essential component for young Iowans looking to build a career. One of my goals is to expand the type and number of internships available to Lakeside students – moving their boundless energy into the lakes community on projects ranging from energy audits to lakeshore stabilization.

Additionally, OPA’s contributions to Lakeside for the Cooperative Lakes Area Lakes Monitoring Program (CLAMP) have been critical in developing a long-term and sustainable source of water quality monitoring in the Iowa Great Lakes region. As Executive Director, my vision is to grow this one-of-a-kind, citizen-monitoring program. We successfully applied for a 2017 Okoboji Foundation – Youth in Philanthropy grant to purchase microscopes for citizen volunteers to identify blue-green algae species and to test the water for the toxins that are sometimes produced by the algae. The OPA funding for CLAMP was a critical component in leveraging Lakeside resources for this new initiative. Results of the blue-green algae toxin monitoring will be available this summer on the CLAMP website at <http://clamp1909.blogspot.com/>

I look forward to continuing the valuable partnership between the OPA and Iowa Lakeside Lab and exploring new collaborative ideas on how we can protect and improve the Iowa Great Lakes.



Ecology students measuring basic water quality at Lakeside Lab



Educational Opportunities in the Iowa Great Lakes

By John H. Wills

Clean Water Alliance Coordinator

Spring has sprung and soon the lakes area will be bustling with activity and boats will be plentiful on our waters. Last year our area was blessed to have two great educational opportunities that were also entertaining. The OPA was instrumental in the completion of both activities.

The first of these was the Prairie Lakes Conference, which brought world class speakers and educators to talk about the latest in water quality topics, while the second was the Okoboji Blue Water Festival where the famed singer Boz Skaggs performed in front of a packed Preservation Plaza.

This year both the Prairie Lakes Conference and the Blue Water Festival will be available for all to attend. The Prairie Lakes Conference will be held on August 9, 10, and 11 and starts the evening of August 9 on a farm North of Spirit Lake for a soil health field day. Even though this is going to be held on a farm, both agricultural and urban people will benefit from the message. Then on August 10, the Prairie Lakes Conference will start at Arrowwood Resort with a nationally recognized speaker heading things off and culminating on August 11. Information can be found at <http://plciowa.com/>.

On Friday the Okoboji Blue Water Festival will begin in the evening with JD McPherson and Chris Isaak taking the stage. Saturday there will be family friendly activities and displays all day culminating with Eric Burdon and The Animals singing in the evening. The entire week will be full of activities and educational opportunities for all. To get more information about the Okoboji Blue Water Festival or to donate you can go to <https://www.okobojibluewaterfestival.com/>.

The Okoboji Blue Water Festival was created by the Okoboji Protective Association (OPA) in 2016 to raise public awareness of water quality issues in the Iowa Great Lakes. The OPA, founded in 1905, is a 501(c)-3 non-profit organization dedicated to the protection and enhancement of West Lake Okoboji and the Iowa Great Lakes watershed.

Together the Prairie Lakes Conference and the Okoboji Blue Water Festival will educate around 10,000 people about water quality and the importance of caring for our lakes. This is a strong testament to many groups and organizations in the lakes area that we can bring the quality talent and speakers that were here last year and will be here again this year to do this great educational program.

I look forward to seeing many of you at both of these functions to learn more about our lakes and watershed along the way. Thank you to the many who have donated, worked hard at these functions or simply attended one or more of them. It is greatly appreciated!

In Remembrance...

As an organization, the Okoboji Protective Association expresses its deepest sympathy and condolences to the family of Harley A. Whitfield, who passed away on January 9, 2017 and the family of Julie Fillenwarth, who passed away on April 14, 2017.

Harley was active in Okoboji for many years, serving on the board of directors for the Okoboji Yacht Club and the Okoboji Protective Association.

Meanwhile, Julie's lifelong passion was promoting Okoboji, helping organize the Okoboji Tourism Association, serving on the board of Historic Arnolds Park and as a long time member of the Okoboji Protective Association.

OPA President John H. Wills notes, "Harley Whitfield's passing is one of sadness, and we will remember his commitment to Okoboji with fondness. The loss of Julie Fillenwarth will be felt throughout the Iowa Great Lakes. Julie was a stalwart member of the community and the definition of a caring individual who wanted the best for our lake. Both of these longtime members of the OPA will be missed, and our hearts and prayers go out to their families and friends."



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OPA Mission and Goals

“The Okoboji Protective Association is dedicated to preserving and enhancing the ecological health of West Okoboji Lake and the entire Great Lakes watershed.”

Our Goals:

1. To prevent invasive species.
2. To preserve and protect the wetlands in the Iowa Great Lakes watershed.
3. To participate in the control of lake development to prevent environmental threats.
4. To promote sustainable urban and agricultural development that won't upset the delicate balance of the lake and its watershed.
5. To inform the community of ecological concerns and actions that must be taken to act on those ecological concerns.

OPA Newsletter

P.O. Box 242
Okoboji, IA 51355

The OPA Newsletter welcomes submissions from its readers.

Editors:..... Barbara Mendenhall
Steve Weisman

World Wide Web

OPA
<http://www.okobojiprotectiveassociation.org>

OKOBOJI PROTECTIVE ASSOCIATION MEMBERSHIP FORM

Clip and mail this form with your check to: OPA, PO Box 242, Okoboji, IA 51355
If you have already renewed your membership - thank you.

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