

FROM THE WATERSHED streamings

Oconomowoc Watershed Protection Program Newsletter



2024 UPCOMING EVENTS

SATURDAYS / NOW-OCTOBER / 8A-12P

Oconomowoc Farmers Market

Bank Five Nine Campus Lot
155 W. Wisconsin Avenue

oconomowoc.org

SAT / AUGUST 10

16th Annual Ride to the Barns

A fundraising bicycling event to benefit land conservation.

tallpinesconservancy.org

WED / SEPTEMBER 4

FFLC & Cedar Creek Farmers Joint Field Day

Stone House Dairy, Hartford, WI

farmersforlakecountry.org

SUN / SEPTEMBER 15

Tall Pines Conservancy 25TH Anniversary Celebration

Join us at beautiful Folk Farm as we celebrate 25 years as a land trust.

tallpinesconservancy.org

THURS / SEPTEMBER 19 / 8:30A-4P

Healthy Lakes Conference

Oconomowoc Lake Club
Presented by Lake Country Clean Waters
lakecountrycleanwaters.org

OWPP & TPC LAUNCH CAMPAIGN

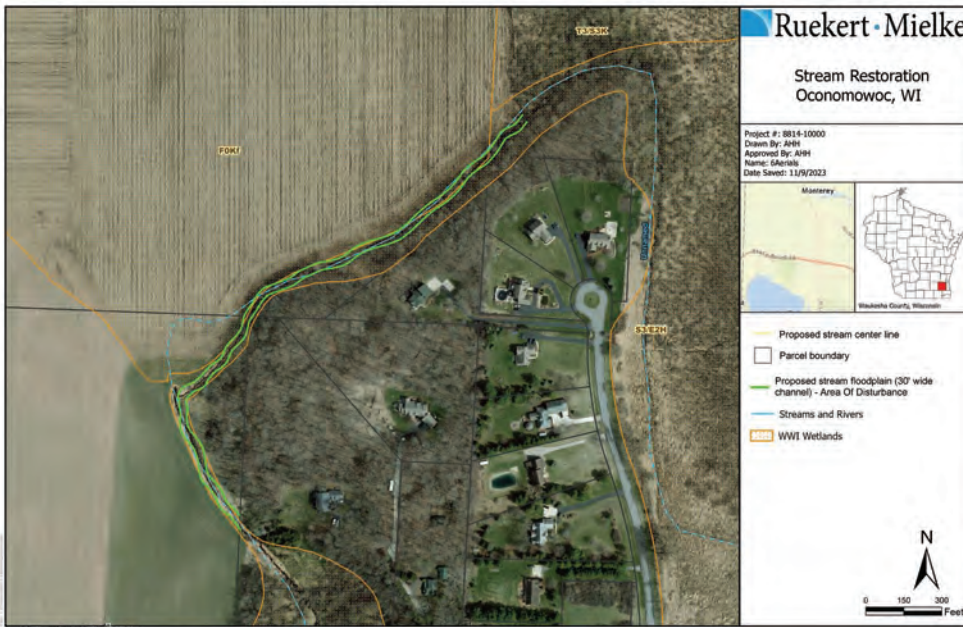
TO FUND COTTONWOOD CREEK RESTORATION

by Erik Joost, OWPP Program Director

The Oconomowoc Watershed Protection Program (OWPP) and Tall Pines Conservancy (TPC) are proud to announce the launch of another collaborative streambank restoration project that seeks to directly improve water quality for Lac La Belle. The project will take place along approximately 1,800 linear feet of Cottonwood Creek (also known as Golf

indicated that Cottonwood Creek is a significant contributor of sediment and phosphorus, negatively impacting water quality for Lac La Belle and neighboring communities.

The scope of work will involve slight re meandering, grading, stabilization, and ecological restoration along the streambank



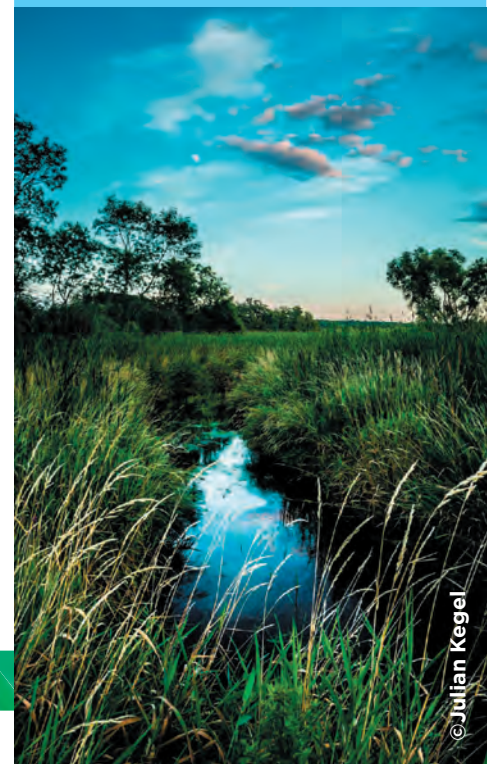
Course Creek), located to the north of Lang Road and just outside the Village of Lac La Belle.

Previous surveys along the segment of Cottonwood Creek identified areas of severe erosion, a result attributed to the encroachment of invasive species, severe weather events due to climate change, and previous channelization of the creek. Water quality sampling conducted by OWPP

channel, with the objective of restoring natural function to the stream. Ruekert Mielke was contracted to perform the initial planning and survey for the project and to assist with grant applications to support final engineering, permitting, and construction of the project.

OWPP and TPC have applied for grant funding from the Wisconsin Department

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MUD CHASERS RE-DEPLOYED

by Tom Steinbach, OWPP Program Advisor

2023 was a great year in terms of water quality in the watershed. Lower than normal precipitation amounts translated to low river flows and less erosion and subsequently less phosphorus moving through the system. The total precipitation for the year was only 30", about 3.19" of that total occurred in the months of May and June, that is about 6" less than our average for Oconomowoc. So, our Mud Chasers had a relatively uneventful year you could say.

This year, so far, we've had a much different weather pattern. While there wasn't much snow, we had a steady run of storms beginning in March. The precipitation total for March was 4.92" and in April 3.58",

May 5.38", and in June 7.89" and some major flooding conditions have occurred throughout the shed.

Our Mud Chasers continue to be an important part of our monitoring program and we are currently seeking new volunteers to fill in some gaps. Please let us know if you're interested in continuing if you helped in the past, or if you would like to join this effort. We are focusing on visual observations and Secchi tube readings as we go forward. Occasional sampling may be included, if deemed necessary.

Please contact Erik at 262-490-2222 with any questions on participating in this program. 🌍



THE IN'S & OUT'S OF LAC LA BELLE

by Erik Joost, OWPP Program Director

A water budget serves as a tool for understanding the hydrological dynamics, water quality, and ecological processes within a lake. By quantifying water inputs and outputs, a water budget provides a

comprehensive understanding to enable effective management of the water resource through informed decision-making. The Lac La Belle Management District (LLBMD) and the Oconomowoc Watershed Protection Program (OWPP) are teaming up to conduct a water and phosphorus budget study for Lac La Belle in 2024. This project involves monitoring water quality of both the lake and its tributaries multiple times per month. The data collected during monitoring activities includes measurements of the volume of water entering the lake, as well as its phosphorus concentration and temperature. It is anticipated that we will conduct flow monitoring and water quality sampling for the entire year. Local experts at SEWRPC (Southeast Wisconsin Regional Planning Commission) will assess the data and information we collect to produce the final reports and recommendations. These reports will include digitizing the lake's bathymetric map, refining the lake's direct watershed, and developing a water and phosphorus budget for the lake.



various stressors, specifically Phosphorus, which can degrade water quality quickly. Partnerships among these organizations who share a common interest in water quality are crucial for projects like this to succeed. The results of this study will help us better understand the pathways of phosphorus into the lake. Further, it will influence the focus of OWPP and LLBMD out in the watershed to reduce phosphorus loading sources. Water budgets provide scientific evidence to support regulatory measures, watershed management plans, and conservation initiatives aimed at protecting and enhancing water resources for present and future generations. 🌍



LLBMD Commissioner Jeff Bode volunteers to assist with gathering stream flow velocity data, which will be used to calculate total volume of water as well as Phosphorus load.

Lakes are vital ecosystems that provide immense value to those who are around them. However, they are susceptible to



Moving downstream in the watershed the next dam, located at Monches, was built in 1842 to power a grist mill located on Hwy K. The height of this dam is 11' and was a Swiss style mill operated through the end of the 1800s. The dam and mill pond remain in place. This dam was rebuilt in 2014.

The next dam is a small structure at the outlet of Lake Keesus. Built in 1931 to maintain the desired lake level, it has a drop of only 1 ft.

Downstream near North Lake, the Funk's Dam, located on Kilbourne Rd., was also built to power a mill. The elevation change here was 5 ft. The mill was abandoned in 1958 but the dam remained in place until 1992 when it was removed by the WDNR.

The next dam was at Hwy 83 and also powered a mill. Downstream of North Lake the next dam was at Stone Bank near Hwy K. It was built in 1842

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DAMS & WATER QUALITY

by Tom Steinbach, OWPP Program Advisor

To some, a dam is simply a picturesque waterfall. To others it may represent a bygone era where water provided the main force to power important machinery. For certain, dams have, and still do, affect water quality in all watersheds.

In our watershed there are five dams remaining, down from the original ten in the late 1800s. Currently remaining are the dams at Monches, Hwy 16, Oconomowoc Lake, Fowler Lake, and the outlet of Lac La Belle.

Dams were originally built for functional purposes. Today the larger dams still serve a very important purpose. Power generation is the function of most large dams today, but they also serve to control water flow and provide the means for critical shipping corridors. One of the most notable purposes of the original dams built in the early 1800s were those built for grist mills and sawmills. The early dams were primarily built of wood and often failed several times before they were finally rebuilt with concrete. Later in the 1800s, dams were also built to facilitate the moving of logs during the logging period between 1880 and 1920. Logs were generally harvested during the winter months and moved to the rivers so they could be moved downstream by the river currents in spring and summer. To enhance the river's normal hydraulic flow, dams were built to back up large pools of water and then later opened to flush the great numbers of cut timber downstream to the sawmills.

Starting in the upper reaches of our watershed, the dam on Coney Creek was built in 1856 to power a new sawmill built by Johann Messer located at the current Richfield Historical Society and Nature Park. In 1871 a grain mill was added. The dam was decommissioned as a power source in the 1930s after electricity became available to run the mill in 1927. The dam has remained as pieces of broken concrete rubble since 1960. The mill has been restored and is a great structure to tour if you get the chance.



DAMS & WATER QUALITY... [from page 3]

to power a sawmill and then shortly thereafter a gristmill. The dam and mill were built by John Johnson and the settlement was called Johnson's Mill. This dam had an elevation drop of 11' and was the first dam built on the "Coonomowoc" River. The settlement name was changed to Newberg in 1843 and then changed to Stone Bank in 1858. The sawmill provided much of the lumber for the Watertown Plank Road that would connect Milwaukee to Lake Country.

Moving further downstream the next dam was located at the outlet of Okauchee Lake near the current Road T public boat landing. The first dam at this location was built in 1895 and had a drop of about 6 ft. In 1909, the Oconomowoc Town Board approved a proposal from Henry Schoelkopf to build a concrete dam and power house in place of the original dam. The new dam was finished in 1911 and was called the Oconomowoc River Power Company Dam and Schoelkopf received a 25-year contract to light the streets of Oconomowoc. The dam provided electricity to the area through the early 1900s, eventually being decommissioned when a new dam and lake were planned downstream. The new lake would be called "Upper Oconomowoc Lake". The City of Oconomowoc also owned a power dam at this location to provide power for the Oconomowoc Electric and Lighting Company.

The next dam and the "new dam" mentioned above is located at Hwy 16 at the outlet of Upper Oconomowoc Lake and is the tallest dam in the watershed



with a water level drop of about 12'. The dam was constructed in 1961 and is located just upstream of the public boat landing visible from Hwy 16.

Moving further downstream, the next dam is located downstream of Oconomowoc Lake and is one of the smallest dams in the watershed with a water level drop of only 1'. This dam maintains a consistent water level for Oconomowoc Lake.

Moving downstream the Peacock Dam at the outlet of Fowler Lake is located just upstream of North Lake Rd. in the City of Oconomowoc. The water level here drops about 7'. The flume and spillway



south of the dam where the original mill was located is still used to maintain the level of the lake. The dam was built in 1837, but it washed out several times. A navigation lock system was added in 1885. The sawmill and gristmill operated here until 1935.

And the last dam in the watershed is located at the outlet of Lac La Belle at West Wisconsin Ave. in the City. This dam also has a relatively low delta height of 1 ft. and controls the water level in Lac La Belle. It also serves as a carp barrier to prohibit carp from entering the lake from downstream.

SO HOW DO DAMS AFFECT WATER QUALITY?

In every stream or river a certain amount of silt is continuously carried downstream. This silt settles out at times during low flow periods but is re-suspended when peak flows return. Dams create quiet pools or ponds where silt falls out of suspension. Behind every dam there is usually an area where the silt depth will

be substantial. At the point where the stream or river transitions into the quiet water there is often an area which will be deep with sediment. Similar to lakes, mill ponds act like filters to capture silt and sediment even though that is rarely the intended function. Eventually the mill ponds fill up with sediment and are sometimes dredged out.

In our watershed there are two dam projects that didn't go well from a water quality standpoint. When the Funk's dam was scheduled to be removed the silt and sediment that had collected in the millpond for decades was to be removed prior to any work on the dam. Unfortunately, the dam was removed without removing the silt first and most of it ended up in the inlet of North Lake. The dredging project that occurred in North Lake in 2022 and 2023 was done to remove that sediment.

The Monches dam rebuilding project in 2014 also caused, to a lesser degree, a loss of sediment downstream, partially due to heavy rains that occurred during the project.

The dams in our watershed will without a



doubt remain in place for the long term. To control lake levels during low flow and peak flow conditions a cooperative system of controls is in place. But it becomes a difficult system to manage when low and high flow extremes occur and there is either not enough water, or too much water moving through the system.

For each dam in the watershed a unique history and legacy exists. In future 'Streamings' we'll dive into more of this history. Stay tuned. 🌊

TALL PINES CONSERVANCY

A LEADER IN WATER CONSERVATION

by Susan Buchanan, TPC Executive Director

You may think that a land conservancy, such as Tall Pines, is all about saving land but I'm here to tell you that **SAVING LAND IS SAVING WATER**, and as the only nationally accredited land trust in Waukesha County we are accomplishing this in six ways:

- 1) In a very basic sense, by saving the land we are decreasing impervious surfaces and thereby protecting the groundwater/aquifers that provide many communities with clean drinking water.



- 2) TPC is working with our easement landowners across the Oconomowoc Watershed on implementing best practices on their lands, thereby lowering the phosphorus in our streams, lakes and rivers.
- 3) As a major partner in the Oconomowoc Watershed Protection Program, we have taken a watershed approach to our conservation work. In addition, we are working with the farmer-led group called "Farmers for Lake Country" that reaches producers in the watershed and provides peer to peer education on sustainable practices.
- 4) And, we are a major partner in "Lake Country Clean Waters" whose purpose is to share education and resources between our 45 lakes in "Lake Country".



HISTORY OF THE OWPP ANNUAL PADDLE

by Erik Joost, OWPP Program Director



Tom Steinbach at the
2016 Paddle, Fowler Lake

The OWPP (Oconomowoc Watershed Protection Program) Annual Paddle Event began in 2015. The first event, intending to kick off the City of Oconomowoc's Adaptive Management permit, was promoted as follows:

"The event will be a celebratory event to mark the beginning of a long term, unprecedented watershed project for the Oconomowoc river basin."


At this time, who would have guessed the event would be in its 10th consecutive year, attracting more than 475 attendees? During this time, our paddle events have joined in partnership with Tall Pines Conservancy and featured educational presentations on a variety of topics from students at Oconomowoc High School, St Paul's Lutheran School, and friends of OWPP as well as volunteer assistance from the Boy Scouts, Greener Oconomowoc, City employees and local businesses. We even had a delegation from our Sister City in Dietzenbach, Germany join us in 2019! 🌍

- 5) Currently, we hold easements on approximately 45 acres of land on properties directly on waterways such as North Lake, Pine Lake, Beaver Lake and Mason Creek. Shortly, we'll be closing on 60 acres of wetland with a stream that directly enters Lac La Belle. acres in the Town of Merton. This will positively impact the water quality in North Lake through less sedimentation and phosphorus. Therefore, Tall Pines is committed to not only protecting our land but also to clean and healthy water in our lakes as well as our drinking water in the area we so fondly call "Lake Country". 🌍
- 6) We have re-meandered Mason Creek back to its original course along our 26

OWPP & TPC LAUNCH CAMPAIGN TO FUND COTTONWOOD CREEK RESTORATION... [from page 1]

of Natural Resources Surface Water Grant Program. Final engineering plans and permitting will be completed later this year, with construction anticipated to begin Winter 2025.

If you are interested in becoming involved, learning more, or would like to contribute to support the Cottonwood Creek restoration effort, please email either:

Erik Joost
ejoost@oconomowoc-wi.gov
or
Paul Meuer
paul@tallpinesconservancy.org. 

Total anticipated costs associated with the engineering and construction of the project can be upwards of approximately \$700,000. Additional support will be provided through local municipalities, Waukesha County, and the private landowner.

Celebrating
TALL PINES CONSERVANCY
25TH ANNIVERSARY
SUNDAY, SEPTEMBER 15, 2024

REGISTER AT:
tallpinesconservancy.org



WHO'S WHO

For more information on the OWPP, please contact us:



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