



Rock River Reflections

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in cooperation with the Rock River Stormwater Group

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Token Creek Monitors Honored with 2022 Wisconsin Stream Monitoring Award

By Katy Bradford, Water Action Volunteers Program Manager



Barb and Paula collect a nutrient sample at Token Creek.

Barb Bauer and Paula Brandmeier began monitoring water quality at three sites along Token Creek in Dane County in 2016, when they were asked by the Rock River Coalition to help collect data on the stream.

For 7 months of the year, they visit the stream to measure water temperature, water transparency, and dissolved oxygen, and collect nutrient samples every

month and often through the winter to assess the levels of phosphorus, nitrogen, and sediment flowing through the creek.

This year, the University of Wisconsin-Madison Division of Extension and the Wisconsin Department of Natural Resources are pleased to name Barb Bauer and Paula Brandmeier the 2022 Wisconsin Stream Monitoring Award winners.

They were selected for their commitment to long-term stream monitoring, dedication to engaging others in the stewardship and restoration of the stream, and commitment to developing partnerships in the watershed to benefit the stream and downstream waters.

"They are generous with their time, and their passion for healthy waters has led them to go above and beyond in caring and advocating for Token Creek and its watershed," said Addie Schluskel, Aquatic Invasive Species and Stream Monitoring Coordinator with the Rock River Coalition. Token Creek is a productive and important spring-fed

trout stream that flows into the Yahara River and then into Lake Mendota, contributing more of the water flowing into Lake Mendota than any of the lake's other tributaries. As a result of these abundant springs, Token Creek has a large impact on the health of its downstream waters.

In addition to monitoring the creek, Bauer and Brandmeier have served as dedicated members of the Token Creek Conservancy Committee with the Village of Windsor for a combined 33 years. In this time, they helped to develop a Master Plan for the Conservancy, whose mission includes protecting environmentally sensitive resources in the Token Creek watershed. "We love the native orchids and cattails in the undisturbed sedge meadow – our favorite aquatic plant though is watercress, and we do have a ton of it!"

Bauer and Brandmeier have many reasons why they stay involved. "We both enjoy our mornings together while testing, doing our part to help the river and Madison lakes, and hiking up the creek and tributaries to locate areas that could use improvement."

They also enjoy "watching how the water quality has changed over the years, how the weather and seasons affect the water quality, and sharing our findings with others," such as talking to farmers in the Token Creek watershed on using natural barriers to prevent chemicals and fertilizers from running off into the water.

In their work to build community action for the health of the watershed,

they volunteer with the Token Creek Watershed Association and lead stream stewardship efforts at Token Creek Conservancy, including volunteer work parties focused on controlling invasive species in and around the stream. Over the years, they built long-standing partnerships with local churches and community groups to accomplish this work together.

Bauer, a retired Windsor Elementary School teacher, has volunteered to facilitate nature-based learning activities for DeForest Area School District elementary students at Token Creek Conservancy's Big Hill Learning Center.

When asked if they have advice to others who want to protect their local stream or river, they wrote, "Anyone interested in protecting their local stream or river should monitor if possible, educate others on protection of water because it is such a valuable resource, and keep nature alive in schools! Kids are our future!"

The Water Action Volunteers program at the UW-Madison Division of Extension supports more than 500 volunteers who monitor the water quality of their local streams across Wisconsin. The program is a collaboration between University of Wisconsin-Madison Extension and the Wisconsin Department of Natural Resources, in addition to over 45 partners across the state.

To learn more, visit: <https://wateractionvolunteers.org/>.

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Executive Director's Message

Becca Dymzarov, Executive Director

The optimism of springtime is invigorating! As the fresh air grows warmer and our daily dose of sunlight swells, I've become increasingly eager to dive headfirst into another productive season with Rock River Coalition. While we did great work in 2022, I am confident our impact will reach new depths in 2023 thanks, in part, to the direction provided by the recent finalization of our 3 to 5-year strategic plan.

The plan development process was not only an exercise in mapping the future of Rock River Coalition, but also a way for us to evaluate the current state of the organization. During development we assessed and mapped four key areas of implementation.

Our renewed commitment to justice, equity, diversity and inclusion is integrated into all parts of this plan. See our commitment to equity statement on the next page. This is a high-level summary of our strategic goals for the next 3 to 5-years:

Internal Operations

- Improve the structure and function of Rock River Coalition operations and internal governance processes.

Programs and External Operations

- Strengthen and expand our programming, outreach and partnerships to connect to and serve broader, more diverse audiences.
 - Strengthen Stream Monitoring Program.
 - Strengthen aquatic invasive species program.
 - Assess and expand educational initiatives.
 - Provide expertise & coordination to community projects.

Building Community & Developing Partnerships

- Grow and strengthen partnerships with organizations that share an organizational vision with Rock River Coalition.
- Communicate the value of Rock River Coalition water resource initiatives to a wider audience.

Expanding Fundraising

- Expand and diversify financial support of Rock River Coalition to ensure a sustainable organizational future.

Working with our staff and board to create this plan has been an energizing experience, and I can't wait to spread that energy into the community. If you'd like to read a complete version of our strategic plan, visit rockrivercoalition.org. Some highlights of 2023 will include the return of the purple loosestrife biocontrol project, aquatic invasive species prevention, a paddling event with Color in the Outdoors, three rain barrel workshops, a shoreline restoration project in Watertown's Riverside Park, volunteer stream monitoring, phase II of the shoreline restoration at the Executive Residence, and more!

As always, our work is only possible through the support we receive from the community we serve, and through members like you. Thank you for being a part of our mission this year, and in the years to come.

Sincerely, Becca Dymzarov



Mission

"To educate and bring together people of diverse interests to protect and improve the economic, environmental, cultural, and recreational resources of the Rock River Basin in Wisconsin"

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RRC is a 501(c)(3) not-for-profit organization, providing equal opportunity in employment & programming.

President's Message

Eric Compas, Board President



How do we ensure equal access to the benefits of our basin to all that live here? Is that even something that the Coalition should be concerned about? In the fall I participated in two efforts focused on diversity and equity in environmental issues: 1) the development of the Wisconsin Environmental Equity Tool (WEET) with several state agencies and 2) our Justice, Equity, Diversity and Inclusion (JEDI) training and JEDI strategic planning process with August Ball of Cream City Conservation. While our nation is in the midst of grappling with the language and importance of race and privilege, several conclusions seemed undeniable.

Our basin is growing increasingly racially and ethnically diverse, many within our community are disproportionately impacted by negative

environmental factors, and, historically, people of color have not equally benefited from the recreational and amenity resources that exist within the basin. Quoting from our mission, the "economic, environmental, cultural, and recreational resources of the Rock River Basin" are not equally accessible to those within our community.

While it's beyond our scope and capacity to erase these inequities, we can do our part by educating ourselves and our community and developing a thoughtful and nuanced approach to when and where to intervene. Our recently released Roadmap to Diversity, Equity, and Inclusion reflects the results of these efforts and establishes new policies regarding hiring, board recruitment, training, and new partnerships.

We're planning not just a day or a month to highlight diversity but to make it part of everything we do. This isn't a new mission for the organization but – I believe – a deeper understanding of what our mission means to the community of people that we serve.

We hope you will join us in these efforts, undertake your own journey of self-reflection, and see the river, our community, and the Coalition from a new perspective.

By the way, if you want to help us, we are looking for two new board members to join us. Contact me if interested.

Eric Compas, RRC Board President

Learn about Aquatic Invasive Species with Rock River Coalition

By Addie Schlusell, Stream Monitoring and AIS Coordinator

Working Towards a More Inclusive Rock River Coalition

Our staff and board have dedicated time over the past year to evaluate our organization's commitment to justice, equity, diversity, and inclusion (JEDI). Our workgroup has identified opportunities to improve and has outlined steps to support our JEDI goals. The document we created to reflect these goals is a roadmap to provide us with a strategy to create and maintain an inclusive organization with equitable community programming. Our action items fall into three categories including: outreach, recruitment and partnerships; communications; and policies and procedures.

The following statement is a summary component of our documented commitment. Our full roadmap can be viewed on our website: www.rockrivercoalition.org.

Rock River Coalition Equity Commitment

Rock River Coalition has historically, for the most part, viewed our work on the Rock River Basin's environmental, recreational, cultural, and economic resources as separate from issues of equity and social justice. Today, we recognize that these issues are inextricably linked. We acknowledge that we have been slow to elevate equity as a core organizational value. We can and should do better.

We recognize that exclusion and displacement are woven into the history of the American conservation movement. Today, communities of color and other underrepresented communities are disproportionately burdened by the adverse impacts of land and water use and environmental policy decisions. By failing to acknowledge these past and present inequities, we play a role in perpetuating them.

We also recognize that our organization does not represent the current diversity of the Rock River Basin. We must become more socially and culturally responsive if we wish to remain relevant, grow more effective, and garner broader support for our environmental, recreational, cultural, and economic resources. Solving the daunting challenges facing our waters will require new ideas, collaboration, and unique perspectives. A more diverse, inclusive conservation movement is a stronger, more innovative movement.

Moving forward, Rock River Coalition is firmly committed to becoming a more socially and culturally responsive organization. Specifically, Rock River Coalition is committed to:

- Fostering an inclusive environment: embracing differences and ensuring that any individual or group feels a sense of belonging, feels respected and valued, and feels a level of support and commitment from others so that they can do their best work.
- Learning and attuning ourselves to how past conservation efforts have played a role in creating barriers to equitable conservation. We commit to applying this foundational understanding and more broadly-informed perspective of inequality to critically evaluate our policies, practices, and procedures, and to removing barriers to access.
- Maintaining and dedicating resources and thought to achieve these commitments.
- Engaging local communities of color and other underrepresented populations in decision-making, and working on building deeper relationships. We will work together to identify barriers and organizational intersections.
- Training our staff and board on inclusive communication and interrupting oppression. We are also committed to providing education and awareness around institutional racism, as well as historical and persisting inequities pertaining to environmental, recreational, cultural, and economic resources within the Rock River Basin.
- Maintaining a Justice, Equity, Diversity & Inclusion (JEDI) Committee that is active and provides continuous learning opportunities, holds the organization accountable, and sets future JEDI goals and actions.
- Shifting our staff, board, and volunteers to be more representative of the growing diversity of people in the Rock River Basin.
- Serving as a resource for other conservation groups, knowing that we are imperfect and that we have a long journey ahead of us.
- Integrating concrete JEDI objectives in strategic plan.
- Modernizing internal operations (such as policies, procedures, hiring processes, etc.) to eliminate bias.
- We acknowledge that following through on these commitments will be difficult and sometimes uncomfortable. We pledge to take the necessary risks and to challenge ourselves.



Searching for invasive species at Snapshot Day 2022.

Photo by Garrett Hopkins.

At Rock River Coalition, we are working to create a community that is more conscious of aquatic invasive species. When more people know how to clean their boats and waders properly, invasive species are less likely to spread to new lakes and rivers. When more people know how to recognize and report invasive species, new populations are recognized more quickly, so response efforts are more successful. New plants and animals arrive in Wisconsin all the time, so there is always more to learn!

We have a few exciting events this year that are perfect for anyone interested in getting out on our waters and learning more about invasive species. Volunteer opportunities are also available for anyone interested in monitoring for invasive species on an ongoing basis. Email addie@rockrivercoalition.org for more information about these opportunities or to register for the events below.

Turtle Creek Invasive Species Monitoring Days

Saturday, June 17
Wading at Nature at the Confluence, South Beloit, IL

Saturday, July 15
Paddling Turtle Creek, Highway 140 to Sweet Allyn Park, Beloit, WI

Paddle or wade Turtle Creek with us in search of invasive species! In summer 2022, invasive New Zealand mudsnails were found for the first time on Turtle Creek in Walworth County. In response, Rock River Coalition, in partnership with Nature at the Confluence and Friends of

Turtle Creek, will be leading a search for the snails and other invasive species on Turtle Creek. Collecting data about where the snails are located will help focus efforts aimed at preventing them from spreading further. All are welcome to learn about invasive species and search for them on foot with us on June 17. Paddlers with their own boats and experience navigating moving water are welcome to join us on July 15.

Snapshot Day

Saturday, Aug. 19
Janesville and other locations statewide

Join the statewide search for aquatic invasive species! On this one-day event, volunteers across Wisconsin help create a "snapshot" of invasive species in the state, verifying known populations and sometimes even finding new ones. No prior knowledge of invasive species needed! Rock River Coalition will host a group in Janesville, and other organizations will be hosting events across the state.

Exotic Pet Surrender Events

Events statewide, including in Madison on March 26 and Beloit on June 4

In some areas, there are no rehoming options for exotic animals such as fish, birds, and reptiles. Some pet owners that are unable to care for their pet may think that releasing the animal into nature is the right thing to do. However, releasing a pet is harmful for the animal and the environment. J&R Aquatic Animal Rescue hosts events across Wisconsin to give people a safe space to surrender their pets, no questions asked. For more information contact adoptions@jraar.org.

Invasive Species to Keep an Eye On!

By Addie Schlussel, Stream Monitoring and AIS Coordinator

While you're out on your favorite streams, rivers, and lakes, keep an eye out for these invasive species. These species are new arrivals in the Rock River Basin or haven't been found here yet, so reporting any new populations is crucial to keeping them in check. By reporting new invasive species, we can alert professionals who will work to reduce the risk of the species spreading further and may be able to control it while its population is still small and manageable.

New Zealand mudsnail

If you see a lot of tiny snails on a stream bottom, take a closer look to see if they might be New Zealand mudsnails. New Zealand mudsnails are less than a quarter inch long and have right-handed shells, meaning that if you hold them with the point facing up, the opening points toward the right.



These snails are often found at spots popular with anglers because they spread easily on the soles of waders. They have been found on Token Creek, Turtle Creek, and Badfish Creek, as well as several streams in western Dane County.

Asian clam

Asian clams can be recognized by the deep circular ridges on their shells. They have been found on Turtle Creek and several waterbodies in Janesville and Waukesha County.

In some places, it is more common to see discarded shells than living clams. Even if you only find a shell, you should still report it!



European frogbit

European frogbit is a floating aquatic plant that looks like a small water lily.

It blooms in mid-summer with small, white, three-petaled flowers. European frogbit hasn't been found in the Rock River Basin yet, but monitoring over the past two years has revealed extensive populations around Green Bay.



Starry stonewort

Starry stonewort is a grass-like algae that grows underwater. Its leaves can be difficult to distinguish from other algae, but it can be recognized by its "bulbils." These are reproductive structures that are white, star-shaped, and about the size of a grain of rice. They are found at the base of the plant, either underground or just above the bottom of the stream or lake. Starry stonewort has been found at several spots in Waukesha and Washington Counties, but it hasn't been found further west in Wisconsin yet



How to report an aquatic invasive species:

If you find one of these invasive species somewhere it hasn't been seen before, take a photo and/or collect a sample so that your discovery can be confirmed. Then email information about your discovery to your regional Department of Natural Resources Aquatic Invasive Species Coordinator:

Shelby Adler (shelby.adler@wisconsin.gov) in Dane, Dodge, Jefferson, Rock, and Columbia Counties, or **Patrick Siwula** (patrick.siwula@wisconsin.gov) in Fond du Lac, Washington, Waukesha, and Walworth Counties.



Welcome to our spring 2023 communications intern, Anna Dugan

Welcome: RRC Communications Intern Anna Dugan

Please welcome Anna (she/her), our new Rock River Coalition communications intern! She will be working to keep our website updated, as well as creating graphics and posts for use on our Facebook and Instagram accounts. She is passionate about the protection of water resources and is looking forward to facilitating community outreach and communication opportunities. We are lucky to have her on the Rock River Coalition team!

Anna is currently a fourth-year undergraduate student at the University of Wisconsin Madison studying biology, Spanish and environmental studies, passions that she extends to her free time with scuba diving and exploring the outdoors!

Build Your Own Rain Barrel Workshops

Learn how to create and install your own rain barrel, an easy way to reduce your water footprint and to improve the health of the Rock River watershed!

The average American family directly consumes nearly 110,000 gallons of water each year, and if you include water used for producing food, energy, and consumer goods, that total jumps to 1.9 million gallons annually! However, a single 55-gallon rain barrel can save up to 1,300 gallons of water every year.

Rain barrels collect free rainwater from roofs to water gardens, trees, and lawns. This saves you money on water bills AND helps reduce demand for energy-intensive treated tap water, limits stormwater runoff and erosion, and saves water for use during droughts. Installing a rain barrel is one of the easiest ways to reduce your water footprint and help recharge our rivers, lakes, and aquifers.

These workshops are sponsored in partnership by Rock River Coalition: The City of Watertown, The City of Beaver Dam, The City of Milton, The Milton Public Library, Rock River Stormwater Group and WisPak.

Registration is required. Check our website, www.rockrivercoalition.org or contact info@rockrivercoalition.org for registration information. Registration closes 3 days prior to the event. Rain barrel materials will be supplied.

Upcoming Workshops Information:

Saturday, April 22 - 9:30 am to 11:30 am
Watertown Senior & Community Center at 514 S. First Street, Watertown, WI 53094

Saturday, May 20 - 9:30 am to 11:30 am
The Watermark at 209 S Center St, Beaver Dam, WI 53916

Saturday, June 10 - 10:30 am to 12:30 pm
Milton Public Library at 430 E. High St., Milton, WI 53563



Create and decorate your own rain barrel. Photo by Isabelle Paulsen

Mason Creek Re-meandering Project Completed

Darrell Smith, City of Oconomowoc Watershed Protection Program Manager

Tall Pines Conservancy, the Oconomowoc Watershed Protection Program and North Lake Management District are excited to announce the successful completion of the Mason Creek Re-meander Project last fall.

Several years of planning and fundraising went into the project, which created a 1600-foot section of meandered creek bed to improve water quality and natural habitat for the Class 1 trout stream that flows into North Lake.

Mason Creek is one of three streams in the Oconomowoc River Watershed that is impaired for phosphorous, and a study

Management (TRM) Grant and a DNR Surface Water Grant.

The re-meandering project will prevent approximately 100 lbs of phosphorous annually from entering North Lake, where algal blooms and lake weeds have been a concern



Before and after aerial pictures of the project area. This project will improve water quality and provide better habitat.
Photo by Stantec Engineering

completed by the Southeast Wisconsin Regional Planning Commission identified this channelized stretch of stream as a priority area to reduce surface runoff and nutrient loading. Three months of construction last fall created a naturalized stream course that reduces erosion, provides natural filtration of nutrients and allows for better connectivity to the riparian floodplain during periods of high flow.

Wondra Construction, Inc, the lead contractor on the project, had first-hand experience with higher flows during the project. A six-inch rain event occurred mid-September (estimated to be a 25 to 50-year rain event), and numerous springs were uncovered during digging of the new channel.

One spring in a lower section of the creek generated 100,000 gallons of water per day based on the pump capacity needed to remove it and keep the area "dry" for construction. Wondra used a network of road plate barriers and diversion channels to route the main channel water away from disturbed areas during construction.

Stream restoration was completed late November, as the new channel was tied into the inflow from upstream. Stantec Engineering designed the project with input from project partners and community members. Stantec also provided significant assistance securing state grants to assist with project costs, including a DNR Targeted Runoff

for residents and other stakeholders in the Oconomowoc River watershed.

According to Darrell Smith, Watershed Manager for the Oconomowoc Watershed Protection Program, "The project epitomizes partnerships-bringing together state and local funding, public and private entities to accomplish something that any one partner could not have done alone. It's a win for water quality and the overall ecology of Mason Creek. And because Tall Pines Conservancy has protected the property, the stream work and adjacent native plantings will benefit the area in perpetuity."



Ground view of the upper Mason Creek meandering project completed 11/22/22.
Photo by Darrell Smith

Warming Temperatures Affect Wisconsin's Waters

By Dea Larsen Converse, Communications Director, Wisconsin Initiative on Climate Change Impacts

A focus on climate impacts to water resources in Wisconsin from the Wisconsin Initiative on Climate Change Impacts (WICCI) shows that warming temperatures and changing precipitation patterns are impacting Wisconsin's wealth of water resources. The last two decades have been the warmest on record in Wisconsin and the past decade has been the wettest.

"The warming climate is having an impact on water resources in Wisconsin. We need to increase the magnitude and urgency of actions to protect and restore habitat and enhance water quality to make Wisconsin's waters more resilient to climate change." – Katie Hein, WICCI Water Resources Working Group Co-Chair

Average precipitation and extreme storm events that deliver large amounts of water in short periods are increasing in Wisconsin. Areas with permeable soils where the water table is near the surface, like lake shorelines and wetlands, can flood after periods of higher-than-average precipitation. Streams also flood during large storms, causing damage to infrastructure, habitat loss, and risks to human health. The fast-flowing water during floods increases erosion and can also cause deep channels to form that intensify the flow of stormwater. These channels further reduce flood storage, degrade water quality, and increase downstream flooding.

The warmer water temperatures combined with more runoff from extreme precipitation events also

threaten water quality. In built areas with large amounts of impervious surface, runoff receives little natural filtration, enabling sewage overflows and a wide variety of pollutants to reach surface waters. Statewide, nutrient runoff from agricultural lands fuels algal blooms, a major water quality issue. Erosion and sedimentation are also a concern in many areas, including forested lands.

As lake water temperatures have warmed overall, the risk of fish kills and toxin-producing algal blooms is increasing. As the air temperature continues to warm, lake surface water temperatures in all lakes will also warm, changing lake ecology. Fewer lakes will be able to support cool-water fish like walleye and warm-water fish like largemouth bass will be much more common as waters warm by mid-century.

Yet, there is hope. The WICCI report suggests solutions to prepare for and minimize climate impacts to water resources, like increasing water storage across the landscape, installing green infrastructure, and protecting wetlands. Visit the Water Resources Working Group webpage to learn more at <https://wicci.wisc.edu/water-resources-working-group/>

There is hope for the future, but it is up to us.

WICCI is a nationally recognized collaboration of scientists and stakeholders working together to help foster solutions to climate change in Wisconsin.

Yahara Watershed Monitoring Season Kickoff

Saturday, April 1, 9 a.m.–12:30 p.m.

Dane County Land and Water Resources Department

5201 Fen Oak Drive, Madison, WI

We are excited to welcome our returning Yahara Watershed volunteers to the 2023 monitoring season!

Volunteers in the Yahara Watershed are encouraged to kick off the monitoring season with us on April 1.

We will distribute monitoring supplies and learn about accessing and interpreting data and entering it in the updated SWIMS database. Volunteers with dissolved oxygen meters and thermistors can also learn more about how to use this equipment. Register online or contact addie@rockrivercoalition.org.



Photo by Isabelle Paulsen

Cover Crop Selection and Management to Reduce Nitrate Leaching Risk

Chelsea Zegler, UW-Madison Division of Extension, Agriculture Water Quality Outreach Specialist

Nitrate loads to groundwater have increased statewide, with studies estimating that over 10% of private wells in Wisconsin exceed the health standard of 10 mg/L (Wisconsin Groundwater Council 2022).

In areas with over 75% agricultural land use, the percentage of private wells exceeding the standard increases to 20%. Elevated nitrate levels in groundwater can have serious human health impacts on infants and pregnant women, and has possible correlation with various cancers and thyroid function in adults.

Around 60% of the Rock River Basin is in agriculture, to view local water quality results from private wells check out the University of Wisconsin-Stevens Point Well Water Viewer.

Nitrate is a plant-available and water soluble form of nitrogen that can move through the soil profile and ultimately into groundwater. Nitrate also contributes to eutrophication in larger surface water bodies. Most nitrate leaching in agricultural systems occurs during fallow periods, when no living roots take up nitrate from the soil. After annual crop harvest and in the spring before crop planting, soil is often warm enough for microbes to produce nitrate by breaking down soil organic matter, crop residue, manure, or leftover fertility. When a rainfall or snowmelt event occurs, infiltrating water removes nitrate from the root zone.

For example, one study with a corn, soybean, wheat rotation measured 80% of the nitrate lost to groundwater during a 3 year rotation occurred during the corn stage, mainly after corn harvest and before soybean planting (Syswerda et al., 2012). Future climate models predict increased precipitation during the winter and spring. Excessive rainfall events, especially when the ground is



Figure 1: Soil profile with residual radish root channel, which can act as a preferential flow channel for water and nutrients entering the groundwater.

Photo by Jamie Patton.

fallow, is likely to make nitrate losses to ground and surface water more difficult to control.

This high-risk time period of the winter and spring limits the effectiveness of in-season practices like nitrogen timing and placement. One proposed solution in annual cropping systems is to integrate cover crops. Cover crops have historically been recognized for their soil erosion control but can have an impact on nitrate leaching too. However, not all cover crop species have been shown to decrease nitrate leaching. Farmers and agronomists should consider nitrogen uptake, water dynamics, and timing when deciding on a species or mixture to plant to minimize nitrate leaching.

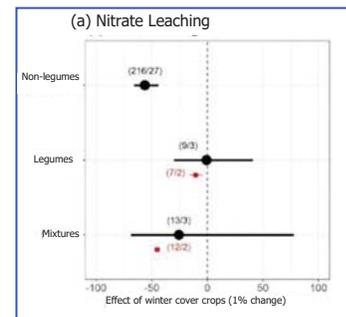
Species Selection

Overwintering cover crops have the greatest potential to reduce nitrogen leaching. Cereal small grains like rye, triticale, or wheat maximize the amount of water taken up and transpired by the crop, and have the maximum potential for accumulating nitrogen in biomass. Wisconsin has limited growing degree days after conventional crop rotations, and these species are able to actively take up water and nitrogen when the potential risk for leaching is the highest.

Many farmers note that fields with cover crops can be planted earlier than fields without cover crops in wet spring weather. Through transpiration, cover crops evaporate water from the plant and soil surface. This transpiration process, more so than using the water to store as biomass, reduces the amount of water and nitrate moving through the soil and past the root zone. Choose a fibrous root cover crop that overwinters for maximum nitrate leaching reduction, as preferential flow channels can be created by other varieties like brassicas (Figure 1).

Cover crop biomass is related to nitrate leaching reduction, as cover crops store nitrogen in an organic form in their biomass which decreases the amount of soluble nitrate in the soil (Thapa et al., 2018). Biomass accumulation is related to planting date and species selection. A winterkilled cover crop like radish or oats, has a limited growing window to accumulate biomass in the fall, is not actively taking up nitrate in the spring and can even actively release nitrogen as it decomposes after frost. Adding winter wheat or an alternative forage into a rotation leaves adequate time for cover crop establishment, but choosing a corn silage or soybean hybrid with an earlier maturity may have a big impact on the cover crops' potential groundwater quality benefits.

Not all over-wintering cover crops have equal impact on nitrate leaching. Legumes have a symbiotic relationship with bacteria that allows them to fix nitrogen from the air, bringing additional nitrogen into an agricultural system. A review of the scientific literature comparing nitrate leaching in plots with cover crops and without cover crops, showed that non-legume cover crop species are significantly more effective in reducing nitrate leaching compared to legumes (Figure



2; Thapa et al., 2018). Mixtures of species have a wide range of results, and may be key to reducing nitrate leaching while minimizing the yield impact on the following crop.

Producers use cover crops for a variety of reasons in their farm operation, from weed management to erosion control and even to help minimize nitrate leaching. Complex biogeochemical cycles like the nitrogen cycle rarely have any silver bullet solutions, cover crops included. Cover crops can have a big impact on nitrate leaching in annual cropping systems, but communities should prioritize planting cereal grains, as early as possible and allow for long periods of growth in the spring before termination to make a substantial impact.

Syswerda, S. P., Basso, B., Hamilton, S. K., Tausig, J. B., & Robertson, G. P. (2012). Long-term nitrate loss along an agricultural intensity gradient in the Upper Midwest USA. *Agriculture, Ecosystems & Environment*, 149, 10-19.

Thapa, R., Mirsky, S. B., & Tully, K. L. (2018). Cover crops reduce nitrate leaching in agroecosystems: A global meta-analysis. *Journal of environmental quality*, 47(6), 1400-1411.

Wisconsin Water Week: Lakes and Rivers Convention

The Wisconsin Lakes Partnership invites your group to join us as we celebrate Wisconsin Water Week, April 17-21, 2023.

Water is fundamental to Wisconsin's identity. Wisconsin Water Week is a time for everyone and anyone to learn more about what's happening with our precious water resources and how they can be involved in protecting and restoring it. In addition to the Wisconsin Lakes and Rivers Convention in Stevens Point, Water Week will offer numerous local, regional, and statewide opportunities for people to connect and engage with others on water-related issues.

All events and resources will be shared on the Wisconsin Water Week website: <https://wisconsinwaterweek.org/>

If you have any questions, please email wewaterweek@wisconsinlakes.org.

Farmers for Lake Country Expands into Rock River Basin

Paul Meuer, Tall Pines Conservancy Land Protection Manager

Farmers for Lake Country (FFLC) is a farmer-led group that is focused on sharing information and resources about farming practices that promote water quality and soil health. FFLC has benefitted farmers with cost share funding for conservation practices with financial support from the Oconomowoc Watershed Protection Program (OWPP), Tall Pines Conservancy (TPC), and grant resources. These efforts have not only supported the economic viability of farming within the region but have also resulted in the reduction of approximately 2,400 pounds of phosphorous loading within local waterways and measurable improvements in soil health.

Until recently, this financial support was limited to the 49-mile Oconomowoc River watershed, which consists of approximately 83,000 acres. Thanks to additional funding from the Department of Agriculture Trade and Consumer Protection (DATCP), as well as TPC and other private funders, FFLC has expanded its operation area into additional watersheds – including the Rock River, Ashippun River, Bark River, Pewaukee River, and parts of the Fox River. The expanded area now encompasses 467,041 acres and stretches south to Mukwonago, west to Watertown, and north to Hustisford and Hartford.

As a result of this expansion, many more farms will now be eligible for cost share funding for water and soil health friendly practices such as cover crops, no tilling, and planting green into living cover. Anyone, regardless of geography, is welcome to attend FFLC meetings and workshops as the group seeks to expand its impact.

For the latest news and events, sign up for the Farmers for Lake Country email newsletter by contacting Paul Meuer at paul@tallpinesconservancy.org or 262-309-0500 and visit our website at farmersforlakecountry.org.



Farmers for Lake Country has expanded its operation area to now include portions of the Rock River, opening funding opportunities for more farmers.

Become a RRC Member

Memberships are critical in accomplishing our work. We thank you for your support!

Name _____
 Title _____
 Affiliation _____
 Address _____
 City _____ State _____
 Zip _____ Phone (____) _____
 E-mail _____

Annual tax-deductible membership fees

Individual memberships begin at the \$25 Dragonfly level. Please consider becoming a Stonefly or Dobsonfly to make your impact go further.

- \$1000: Stonefly** **\$100: Caddisfly**
- \$500: Dobsonfly** **\$50: Mayfly**
- \$250: Alderfly** **\$25: Dragonfly**
- \$15: Damselfly (Student/Senior)**
- \$50 Affiliates**
Includes small businesses, organizations, lake districts, small municipalities and municipal departments.
- \$125 Municipal**
Provides membership for all municipal departments. Includes discounts at member events and workshops.
- \$250 Corporate**

Additional tax deductible donation

\$_____ Donations are greatly appreciated and can be targeted towards specific projects:
 Please use my donation for _____
 Please use where it is needed most

Chapter members — I am a member of the:

- Friends of Badfish Creek Watershed
- Johnson Creek Watershed Alliance
- Maunsha River Alliance

Please mail this form with check to:

Rock River Coalition
864 Collins Road
Jefferson, WI 53549



Or pay online using PayPal at
www.rockrivercoalition.org.

Brews & Bingo Rock River Coalition Fundraiser

6-8 p.m., Monday, June 26th
Tyranena's Beer Garden, 1025 Owen St., Lake Mills, WI

Once again, Tyranena Brewing Company will be hosting a "Brews & Bingo" fundraiser to benefit the Rock River Coalition (RRC). The event will take place at Tyranena (1025 Owen Street, Lake Mills) from 6pm to 8pm on Monday, June 26. There will be \$10 bingo cards with the chance to win many prizes. Tyranena will also be generously donating \$1 for every pint served during the event.

All proceeds will support the work of the Rock River Coalition including their volunteer stream monitoring program. The event will include a food truck where people can purchase food from 5:30-8:30 p.m. Participants are also welcome to bring their own food for dinner. Eric Compas, the RRC President, said "The RRC is very excited to partner with Tyranena Brewing Company. We are looking forward to a fun evening of Bingo and tasty beer to share the work of the RRC in Tyranena's beautiful beer garden."

Stacey Schraufnagel, Tyranena Front Operations Manager stated, "Tyranena is committed to improving our community and we're always looking for partners that help us continue to expand our support of great causes and organizations. We're really excited to add the Rock River Coalition to that list of partners, and we hope our community comes out to join us for a great night in our beer garden."

Madison Mallards Rock River Coalition Fundraiser

6:05 pm, Tuesday, June 13th
The Duck Pond at Warner Park, 2920 N. Sherman Ave, Madison, WI

The Madison Mallards (baseball) will be hosting a fundraiser to benefit the Rock River Coalition (RRC). The Madison Mallards will play the Fond Du Lac Dock Spiders. Tickets will be \$13. The Mallards will generously donate \$8 for every ticket purchased. In order for Rock River Coalition to receive the \$8 tickets must be purchased through a special link on our website.

All proceeds will support the work of the Rock River Coalition including their volunteer stream monitoring program.



Rock River Coalition Annual Meeting and Awards Ceremony

Date: Tuesday, May 16, 2023
Time: 5:30-8:30 p.m.

Location: Pharmacy Public House at 203 N Main Street, Lake Mills, WI

Agenda

- 5:30 Meet and Greet: with members, friends, board of directors and guests – cash bar
- 6:00 Dinner: TBD There will be options.
- 6:30 Annual Meeting and Board Member Election (during dinner)
- 7:00 Presentation of Protector and Friend Awards

All members of the Rock River Coalition are encouraged to attend our annual meeting on Tuesday, May 16th to gather with those passionate about RRC activities and to honor our 2023 Protector and Friend Awards recipients! We recognize our Protector awardees that have served their community to make a difference in the Rock River Basin within our environment, recreation, and local economy, as well as our Friends who have been essential to the growth and flourishing of RRC. We hope that you can join us for this celebration of these individuals and all who are involved at Rock River Coalition.

Registration is required for this event with a fee of \$30 per person and can be paid online.

We ask that you register by May 9. Registration information can be found on our website: www.rockrivercoalition.org.

Awards

Protector, Individual

Bill Boettge: Before moving out of the Rock River Basin in 2022, Bill was the co-chair and a founding member of the Dodge County Alliance for Healthy Soil – Healthy Water and President of the Beaver Dam Lake Improvement Association. Through these organizations, he played an integral role in educating shoreline and agricultural landowners about water quality and building partnerships around water. He was also a strong advocate for Rock River Coalition in the Dodge County community.

Jim Amrhein: Prior to his retirement in 2022, Jim worked as a Water Quality Biologist at Wisconsin Department of Natural Resources. During his over 30 years at DNR, Jim worked with many volunteer stream monitors and landowners to solve water quality issues in streams across southern Wisconsin. Jim was an expert resource to Rock River Coalition and recently played a key role in establishing our stream monitoring program in Dodge County.

Protector, Organization

Dodge County Alliance for Healthy Soil: The mission of the Dodge County Alliance for Healthy Soil – Healthy Water is to build a community dedicated to soil and water health. The Alliance, a self-funded non-profit organization, connects the farming community with the lake community while promoting Dodge County successes, education, and projects that improve soil and water. The Alliance has promoted Rock River Coalition in Dodge County and helped us connect with leaders in the local agricultural and lake communities to work towards shared goals.

Fox Lake Inland Lake Protection and Rehabilitation District: The Fox Lake Inland Lake Protection and Rehabilitation District is dedicated to Fox Lake's water quality. Dodge County's Fox Lake has been on the EPA's impaired waters list since 2006 because of its excess phosphorus and sediments. In 2022, in partnership with WDNR, Dodge County, the Town of Fox Lake, and other local partners, Fox Lake Inland Lake Protection and Rehabilitation District (FLILPARD) and the environmental consulting firm EOR wrote a nine key element watershed plan. Focused on actionable conservation projects, this plan will serve as a roadmap towards healthier waters in and around Fox Lake. They have also been instrumental in helping RRC recruit volunteer stream monitors near Fox Lake.

Protector, Educator

Creative Marketing Unlimited (Protect Wisconsin Waterways): This group of UW Whitewater students manages most of the outreach and education efforts as well as the online and social media presence for the Rock River Stormwater Group. The Rock River Stormwater Group is comprised of several municipalities located within the Rock River watershed. They meet monthly to extend an agenda of stormwater quality education, awareness, and improvement.

Friends

Janie Riebe: Janie has been a strong advocate for the mission and work of the Rock River Coalition since 2019. She has been a volunteer stream monitor, served on our strategic planning committee and on our Justice, Equity, Diversity and Inclusion Workgroup and has helped to secure funding for our; volunteer stream monitoring program, strategic planning, stream land restoration projects, data visualization to name just a few through grant writing.

Dave Hoffman: David Hoffman was on the Rock River Coalition Board from 2014 through 2019. He served as Secretary for several years. Dave worked to secure grants to help fund equipment needed for the Coalition's Stream Monitoring Program. Forging and maintaining partnerships was another key role that Dave accomplished during his tenure. For instance, he was our liaison with the Rock River Trail.

Calling All Stream Stewards to 2023 Monitoring Workshops

By Addie Schlüssel, Stream Monitoring and AIS Coordinator

As our streams emerge from their winter freeze, our volunteers are getting their nets and thermometers ready to start another monitoring season! Would you like to join them?

From April or May to October, our 180+ volunteer stream monitors collect monthly data about the health of our streams across the Rock River Basin. Wisconsin Department of Natural Resources and various county Land and Water Conservation Departments use the data to better understand watershed protection and restoration needs.

Want to help protect a stream near you? Consider attending one of our hands-on training workshops. Anyone interested in volunteering or just learning more is welcome. By the end of the workshop, you'll know how to measure water quality and be ready to adopt your own stream monitoring site. No experience or equipment needed!

Interested? Email addie@rockrivercoalition.org for more information or to register for a workshop.

Stream Monitoring Workshop Dates

Saturday, April 29:

Waunakee (Dane County)

Saturday, May 6:

Watertown (Dodge/Jefferson County)

Saturday, May 6:

Genesee (Waukesha County)

Saturday, May 13:

Clinton (Rock County)



Volunteers collect aquatic insects on Jackson Creek in Walworth County. Photo by Sue Heffron.

Join Us!

Rock River Coalition is seeking two new board members with diverse experiences and backgrounds to serve on its board of directors. Members of the Board offer strong strategic guidance, organizational governance, and uphold and advance the organization's mission and values. Both 2- and 3-year terms are available. Virtual and in-person options are available for our monthly meetings.

Those interested should email 1) a cover letter detailing their interest in the position and 2) a resume to info@rockrivercoalition.org. Please use "Rock River Coalition Board Application" in the subject line. Applications are due by April 30, 2023. Should you have any questions, please contact Rock River Coalition's Executive Director, Becca Dymzarov at becca@rockrivercoalition.org.