



Rock River Reflections

A publication of the Rock River Coalition
in cooperation with the Rock River Stormwater Group

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Working Together for Healthier Streams

Streamside Notes by Nancy Sheehan, RRC Program Coordinator, Volunteer Stream Monitoring

The return of sandhill cranes, turkey vultures and redwing blackbirds are my harbingers of spring. Once again it is time to share a few musings as we begin to "think spring" and turn our attention back to our streams, rivers, lakes, and wetlands in the Rock River Basin. With each beginning of a new year, we hope for renewed energy to deal with seemingly intractable problems. Stemming the flow of polluted runoff to our waterways is just one of those problems. I want to share with you reasons why I am hopeful and look forward to our work together to protect stream health in 2018.

The primary source of water pollution in our streams is phosphorus. We seem to have an overabundance of phosphorus in our agricultural soil, in our lakes, and in the muck at the bottom of many streams. Ironically, in other parts of the world, phosphorus is scarce.

Regardless of these regional differences, phosphorus, like water, is a finite resource. Is it possible to reframe our discussion about phosphorus -- from disparaging it as a pollutant or "noxious substance" -- to talking about it as a precious resource integral to food security?

Phosphorus Sustainability Movement

More and more, people around the world are doing just this. A phosphorus sustainability movement is

gaining momentum. People are addressing phosphorus sustainability from both the supply-side and demand-side of the equation. Vermont-based Rich Earth Institute is exploring the possibility of harvesting urine to ease demand for phosphorus. (Yes, there is actually something called "peecycling".) Here in the Rock River Basin, Madison Metropolitan Sewerage District continues to produce fertilizer pellets rich in phosphorus as a byproduct of their wastewater treatment operations.

More stories on Healthy Streams in this newsletter:

- Having Fun Getting the Word Out!
- Volunteering for Healthy Water
- Healthy Soil-Healthy Water
- Healthy Wetlands-Healthy Water
- Adaptive Management Sample Analyses
- Stream Monitoring Training
- Volunteer Wins Award.

Many good things are happening in the Rock River Basin!

RRC Annual Meeting

Tuesday, May 8, 2018 at 5:00
Norm's Hideaway
W8639 Kuehn Road, Ft. Atkinson
Cost \$20 (includes tax and tip): Register by April 30

- 5:00 Mingle time: with members, friends, board of directors & guests - cash bar
This is a good time to talk about the Coalition and what we should be doing together to protect and improve our Rock River Basin.
- 5:30 Dinner: Two great options (beverages available for purchase)
Sirloin (6 oz) and three jumbo shrimp with baked potato and salad or
Portabella mushroom Alfredo sauce over spaghetti with salad
- 6:00 Annual Meeting and Board Member Election (during dinner)
- 6:30 Presentation: **Jefferson's Riverfront Revitalization** by Mayor Dale Oppermann, City Administrator Tim Freitag and Recreation Director Cindi Keller

"We're going outside" is the new slogan for the City of Jefferson as they focus on the benefits of being a river town. Jefferson's story is exciting. Because of their forward thinking, the floods of 2008 didn't destroy the town, but became an opportunity to focus the city back to the river. Many cities turned their backs to their waterways during the industrialization of the late 1800's. Rivers were smelly, disease-ridden places filled with untreated sewage and manure from the hundreds of horses that provided transportation. Waterways were used to just move things 'away'. With water quality improvements, cities like Jefferson are turning back and tuning in to the river by developing river walks, canoeing access, walking trails, parks, and businesses that take advantage of the river. Learn how the City of Jefferson has accomplished their success story.



All RRC members are encouraged to attend. Non-members are welcome.

Please register on-line by April 30 at: <https://rockrivercoalition.org/annual-meeting-2018/>. Fee can be paid on-line via PayPal or at the event.

See you there!

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Rock River Coalition President's Message

Help our group prosper by attending the upcoming annual meeting scheduled for May 8, 2018. We are required by our by-laws to hold an annual meeting to receive input from our members, elect board members and spread the word about our many accomplishments over the past year. We look forward to hearing an update from our partner organizations and catching up with our members, and of course share a meal along the shores of Lake Koshkonong. Along with the annual membership meeting, our board meets monthly to decide on budget issues, set priorities and establish policies. We get this done with two part-time staff—a stream monitoring program coordinator and an administrative assistant based in Jefferson.



I am looking forward to seeing many of you at the get-together. at our annual meeting.

Joe Zakovec
RRC President

Thank You Jane and Carl

Jane Carlson is saying good-bye to the RRC Board, but of course not to the Coalition. In her nine years with the Coalition she has been a calm and far-sighted leader. She was president for three years, which included two huge events: our 20th anniversary celebration and Testing the Waters a Paddle and Probe Adventure. During her leadership we joined Community Shares of Wisconsin and became well-positioned for a stronger and brighter future.

She brought an important point of view to the board - as a water engineer consultant. Thank you Jane. We will miss you, but know you will find many ways to keep involved.

Carl Korfmacher owner of Midwest Prairies is also leaving the board. His success in restoring beautiful and functional landscapes in the basin, has a double edge to it. The commitment of a growing and engaged business has meant he couldn't devote the time necessary for the Coalition. Carl, we thank you and wish you well.



Board Member Openings

We have three board openings. If you're passionate about one or more areas of our mission and interested in serving, please let one of us know! Our meetings are informal and prior board experience is not required.

We would love to have someone from the environmental consulting world, is a restoration expert, has fundraising experience, or is a volunteer monitor or student. But regardless of your background, if you love the Rock River and want to support citizen scientists, and want to look for cooperative solutions to water quality issues, than the Rock River Coalition Board is for you.

If interested contact RRC President Joe Zakovec at joe@rockrivercoalition.org.

Annual Madison Compost Bin and Rain Barrel Sale - Saturday May 12th

By Bryant Moroder

This is the year to join the tens of thousands of area households that have already participated in the annual Madison Compost Bin and Rain Barrel event. The annual event is open to both residents and non-residents of Madison.

When it comes to easy, cost-effective ways to lessen your impact on the planet, rain barrels and compost bins provide an eco one-two for your home! Harvesting rainwater for your plants saves money and reduces stormwater run-off into local waterways. And rather than sending more stuff to the landfill, compost bins will help you create nutrient rich soil by turning yard waste and food scraps into organic fuel for the garden.



Compost bins and 50 and 100-gallon rain barrels with diverters are available at discounted prices on Saturday May 12th at the Alliant Energy Center north parking lot from 10am – 2pm.

Supplies are limited, pre-ordering is strongly recommended. Pre-order online before May 1st with the promo code MAD18 and save an additional \$10 off.

For more information visit <http://www.cityofmadison.com/streets/compost/CompostBinSale.cfm> or order directly from www.rainreserve.com/madison



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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A letter-sized color version of this newsletter is available at www.rockrivercoalition.org.

If you'd prefer a pdf of the newsletter emailed to you contact info@rockrivercoalition.org.

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

TTY: 711 for Wisconsin Relay

If you need special accommodation for programs please contact the RRC at least two weeks in advance.

Healthy Lakes Conference:

Local Lakes, Local Issues, Local Solutions

Friday, June 8, 2018 10:00am -5:00pm

Keynote by Dr. Stephen Carpenter, UW Madison Center for Limnology

Seven Seas Restaurant on Lake Nagawicka, Hartland, WI

Hosted by the Tall Pines Land Conservancy

Contact beth@tallpinesconservancy.org or at 262-369-0500

For more information and to register: <http://tallpinesconservancy.org/events>



Join us for the third annual **Healthy Lakes Conference**

Local Lakes. Local Issues. Local Solutions.

Friday, June 8, 2018
Seven Seas Restaurant
on Lake Nagawicka

Registration 9 am - 10 am

Morning Session 10 am - 12 pm

Keynote Address - The threats to our lakes
Stephen Carpenter - Professor at UW Madison
Center for Limnology

Panel Discussion - What's being done?
Brad Steckhart and Perry Lindquist - AIS
Bill Ingersoll - Farmers for Lake Country
Mark Frye - City of Oconomowoc

Lunch - Provided

Afternoon Session 12:45 pm - 2:15 pm

Forming, Building & Sustaining a Lake Organization

Representatives from:
Beaver Lake
North Lake
Hunters Lake
Lake Nagawicka

Outdoor Education 2:30 pm - 4:00 pm

Pontoon Boat Tours of Lake Nagawicka
Aquatic Weed Harvesting Equipment Demo
Clean Boats/Clean Waters Instruction
Lake Monitoring Instruction
Education Kiosks

Lakeside Social Hour 4:00 pm - 5:00 pm

Cost of Registration: \$20. in advance / \$25 day of conference

Register at: cleanwaterassociation.com

Contact for questions:

262-369-0500

beth@tallpinesconservancy.org



Johnson Creek Update

By Pat Giese

The muskrats are busy, the Canada geese are scouting for nest sites and red-winged blackbirds are happily singing where Johnson Creek meets the Rock River. This year has been a slow melt and the waters have filled up to the top their banks.

We hope to be invited back to Johnson Creek Schools for Earth Day activities in April. Last year, the theme was "clean water" so we were thrilled to talk about stream monitoring and the creek clean-up with 5-10 year olds. That was fun.

Some of us are collaborating with the high school on the creation of the school's garden east of the new middle/high school. The ambitious plans include a new greenhouse for the FFA and other classes to use to grow their own plants. We are brainstorming ways to provide water to the site.

The Village of Johnson Creek has completed its "interceptor project" to expand the capacity of our waste water collection system. This project was done to not only expand capacity but to put off the need for a NEW wastewater treatment facility. The Village has also installed a gated fence to the compost site but this should not be a barrier to our annual creek clean-up next September.

Our greatest challenge is to grow membership in our small chapter. While we have ample volunteers who regularly show up for any of our projects, we would like to see more paid members in our Johnson Creek Watershed Alliance.

If you have not yet joined the Rock River Coalition, why not consider becoming a member in 2018? We would be grateful for your support.

Note from the RRC. We have three chapters: Johnson Creek Watershed Alliance, Friends of Badfish Creek Watershed and the Mauneha River Alliance.

When you list a chapter affiliation, 25% of your RRC membership is given directly to the chapter for their use.

You can also give a donation and specify a chapter to be the beneficiary. We are so pleased to have chapters, on the ground doing good things for our waters.

Warhawk Campus Salt Use

By Wes Enterline, UW-W Sustainability Coordinator and Daniel Balister, UW-Whitewater student



Snow removal on campus at the University of Wisconsin-Whitewater is no easy task. It requires a large staff, a variety of jobs and equipment, and literally tons of salt. Salt use is particularly significant because it has the potential to suck the life out of our precious waterways. Any kind of salt is a chloride, which is harmful to fish and plant life at high concentrations. This impacts local waterways when salt washes into them through melting snow into storm drains. It also can affect plant life and soils where salt is distributed onto land areas in high concentrations. This chloride can also percolate into the groundwater supply and pollute our drinking water. Chloride pollution can even affect pets and wildlife that encounter de-icing materials or try to ingest them.

This issue is taken very seriously on campus because of these environmental impacts as well as the economic cost of salt use during times of declining budgets, and its corrosive impact on infrastructure and vehicles.

To develop effective strategies to deal with snow and ice, much time and effort is spent preparing and planning for snow removal before the work even starts on removing the snow itself.

The main goal of the UW-W Facilities Planning and Management (FP&M) Grounds Crew snow and ice control operation is to maintain adequate traction for pedestrians and vehicles properly equipped for winter conditions.

Snow and ice storm control and removal efforts always attempt to make the campus accessible by 7:00 am. Accessible typically means "one pass" completed by motorized snow and ice removal equipment or hand shoveling in the following areas: roadways and service drives, walks, commuter lots, residence hall lots,

stairs in academic zones and curb cuts for wheelchair accessibility throughout campus.

When a forecast predicts a snow or ice event, it is the Grounds Crew's intent to spread salt brine solution over heavily used traffic areas on roads, walks, and parking lot lanes within 24 hours of the predicted precipitation event. Brine solution is an effective pre-treatment agent while granular salt is used on sidewalks, roads and parking lots to deal with ice build-up after plowing for storm events.

The magnitude of salt used on campus during a typical winter would probably surprise most people. Estimated salt used in brine or direct granular applications on campus roadways and sidewalks in the winter of 17-18' (up to February 26th, 2018) was 168,000 pounds and can be spread at rates up to 38 pounds per minute. This total does not include salt used on stairs, entrances, or other areas close to buildings where hand-removal of snow is completed by building staff. More data, dating back to 2005 shows us that anywhere from 66.31 - 386.94 tons of salt was used on campus in recent winter seasons.

To spread rock salt for ice build-up, the FP&M Grounds Crew snow and ice control operation uses five ToolCat machines with .5 cubic yard each to spread at least 2.5 tons of rock salt for each storm event.

Additionally, sand is also used on campus and is beneficial because it is not as damaging to the environment as salt. Sand is useful to increase traction, but does not have the same ice-melting properties as salt. According to the same data for roadways and

sidewalks, anywhere from 32.94 - 762.18 tons of sand were used on campus in recent winter seasons.

At UW-Whitewater, the FP&M Grounds Crew makes the salt brine solution in a large two-part mixing tank for pre-treatment applications prior to predicted storm events. According to salt brine usage statistics for 2017-18, the crew uses four main setups for dispensing salt brine on roadways, parking lot lanes and sidewalks. Added together, the pretreatment uses 1,775 gallons of brine.

The switch from rock salt to brine in pre-treatment applications has economic implications. Previously, rock salt was used as a pre-treatment and 2.5 tons of salt was needed to cover all roads, parking lot lanes, and sidewalks. On the other hand, to formulate the 1,775 gallons of brine about 1.5 tons of salt is needed. Based on current prices of \$64/ton, this saves the university the cost of one ton per storm event. If there is a storm event occurring bi-weekly from December-February alone, this saves the campus nearly \$400 in salt costs. There is some additional labor involved with formulating the brine,

Just one teaspoon of salt pollutes five gallons of water forever and just one pound of salt contains about 80 teaspoons.

but often the pre-treatment can help save labor costs in other areas. Brine solutions can help avoid ice build-up and make snow removal operations more efficient.

It is clear that the future of winter maintenance involves proactive liquid-only strategies instead of granular salt. Liquid solutions can melt snow and ice faster than granular salt due to its more even distribution patterns and is more effective at lower temperatures.

Liquid solutions can be extremely cost effective since it takes less product and reduce overall application time if done correctly. It also helps crews stay on target by eliminating bounce, scatter, and tracking problems associated with granular products. Finally and most importantly, liquids lessen environmental impact. The lower salt concentrations of liquid de-icers are less damaging to our lakes, rivers, and groundwater. They also have less likelihood of runoff into our local storm drains, which lead directly to Whitewater Creek on our campus. The particle size is also not as impactful to pets and wildlife.

Besides the economic and practical benefits of liquids and other

best practices for granular salt applications, there is one simple reason why minimizing salt use matters: salt usage drastically impacts our environment, especially our waterways.

Just one teaspoon of salt pollutes five gallons of water forever and just one pound of salt contains about 80 teaspoons.

This is why the work done by the FP&M Grounds Crew to minimize salt usage in the winter is so important and crew leaders are optimistic about future snow removal tactics using even less salt. They have upgraded calibration on their ToolCat machines to minimize unnecessary salt usage for sidewalks of various widths by controlling "bounce and scatter," which also reduces the impact on the vegetation along the edge of sidewalks. Additionally, Bobcat does make gear that they can use to reduce amounts of salt dumping. Granular salt can also be wetted as it comes off the truck to help it stick to pavement areas better. More advanced methods include switching to GPS electronic controls that adjusts distribution rates of liquid or granular salt to vehicle speed and maintaining pressurized brine pumping systems on all of the equipment will help more even distribution of brine solution and avoid the challenges introduced by manual, gravity-fed systems.

Municipal crews like UW-Whitewater FP&M Grounds Crew have been adopting best practices to meet snow and ice removal needs and increasing expectations by residents.

While these removal techniques have yielded drastic improvements in the safety and accessibility of roads and sidewalks in winter, the overall expectation has also risen accordingly. Increasing expectations and improper preparation for traveling in winter weather often forces crews to increase their salt usage to meet these demands.

Even with these best practices, salt use can be further reduced by homeowners understanding the proper application rate for their own hand-removal efforts and by preparing for traversing the winter landscape with adequate footwear or vehicle tires.

Salt is a useful tool to create a safe winter landscape for travel, but should be used sparingly and with its harmful impacts on the environment and our local watershed in mind.

Streamside Notes Continued

By Nancy Sheehan, Program Coordinator, Volunteer Stream Monitoring

Yahara WINS

In the Rock Basin, we are fortunate to have two initiatives Yahara WINS and the Oconomowoc Watershed Protection Program both of which are creating frameworks to promote sustainable phosphorus management.

During 2016, work by Yahara WINS and its partners kept more than 29,000 pounds of phosphorus from area surface waters. The reduction came as Yahara WINS transitioned from a four-year adaptive management pilot effort to a full-scale project that will extend over 20 years. Twenty years may seem like a long time, but I am confident that volunteers with the Rock River Coalition will continue to monitor stream health so that scientists and decision makers have the data they need to assess progress toward

our shared goal of phosphorus sustainability.

In 2018, RRC will continue to work with Yahara WINS partners in the Yahara Watershed. Volunteer teams will be monitoring 53 stream stations of which 37 will be nutrient sampling stations.

Since 2013, volunteers have collected and delivered close to 300 samples to the Madison Metropolitan Sewerage District for analysis.

Take a look at our citizen stream monitoring page for this project to find links to data result visualizations. We encourage you to go on-line to explore these data visualization dashboards as the example below does not do justice to what you can discover.

Expanding Nutrient Sampling Efforts in Walworth County

RRC is also excited to announce another partnership that will allow us to increase sampling across the Basin. Neal Kolb, Walworth County Metropolitan Sewerage District (WalCoMet), has agreed to analyze water samples from a stream monitoring station located in nearby Delavan.

Even after two years of monitoring an unnamed tributary to Turtle Creek, volunteer, Larry Meyer, is excited to collect samples and deliver these samples to WalCoMet lab for analysis. Thanks go out to the WalCoMet team for providing this in-kind contribution to improving the health of our waters in Walworth County.

The WDNR will once again provide grants to individual volunteer teams to collect phosphorus samples throughout the Rock River Basin. RRC plans to submit applications for phosphorus funding for seven sites. Even with our focus on nutrient sampling, the RRC continues to support baseline water quality monitoring because we know there is more to stream health than just phosphorus. Volunteers will continue to assess stream health by measuring dissolved oxygen, stream temperature, water clarity, flow and biological health.



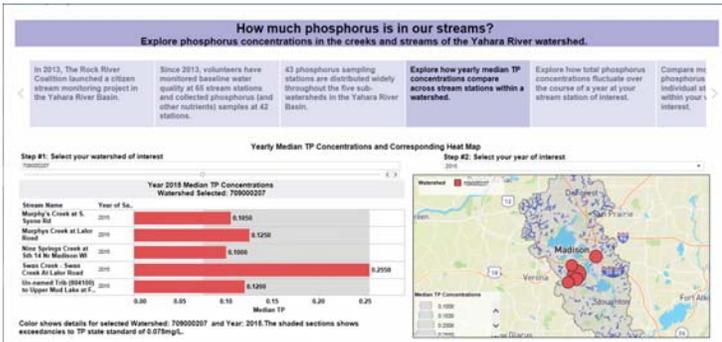
Exploring New Technology

With a grant from Yahara WINS, five volunteer stream monitoring teams are testing new Bluetooth compatible thermistors. Our challenge now is to devise a system which would allow us to lift the thermistor out of the water monthly to retrieve the data.

Unfortunately, we have learned that the Bluetooth connect is lost at depths below two inches. With the rebar system we are currently using, it is hard to pull the rebar out and then pound it back in again every month.

Stay tuned for creative innovations.

Volunteers work late on a Wednesday night to learn how to use the Onset Bluetooth compatible thermistors: Lynne Deppeler Hess, Deb Deppeler, Elizabeth Meils, Ralph Erickson, Will Taylor, Ryan McGuire



Having Fun Getting the Word Out!

By Katie Udell, Stream Monitor, Janesville

I grew up near a pond, and recall spending hours there fishing, exploring the shoreline and woods, and looking for tadpoles and critters in the water. As a parent, my goal is to provide a similar experience for my daughter, and also learn more about my community's streams.

Today, I monitor stream health at Spring Brook in Janesville with my husband Andy and 6-year old daughter Natalie as part of the Rock River Coalition's effort to protect clean water throughout the Rock River Basin. This year will be our third year of stream monitoring.

In 2009, the City of Janesville created the Sustainable Janesville Committee to advise administrators and council members in the City of Janesville on issues of environmental sustainability. This committee organizes an annual "Janesville's Sustainable Living Fair." This year was the second year that I volunteered at a booth to share information about the RRC stream monitoring program. Joining me at this booth was Anne Miller, Rock County Conservation Specialist. Anne brought aquatic insects from a local stream near Janesville called Otter Creek. Youth and those young at heart loved to watch these insects as they darted around rocks in our display bins. Anne also shared an amazing collection of mussels from the Rock River tributary. Who knew we have 50 native species of freshwater mussels in Wisconsin. I brought the monitoring equipment, my daughter's waders (I was hoping some kids would want to try them out, but no takers!), a watershed map of the Janesville area, and pictures from the past two years of the area where my family and I do stream monitoring. I also provided a display that highlighted "why my family and I became volunteer stream monitors." I reminded fair goers that they too can make a difference and have fun too with this monthly commitment from May to October for only about 45 minutes. Becoming a volunteer stream monitor is a great way to interact with nature!

I enjoy talking with people about how stream monitoring is done, discussing how our actions on land can impact stream health, and discussing impacts of recent flooding on "our" stream which my family and I have been monitoring for two years. A number of participants signed up to learn more about RRC spring stream monitoring training workshops. Our booth became a gathering place where people came to share their stories from their childhood (and adult!) experiences with streams and rivers in the community.

If your community has similar events, I encourage you to share your experiences with your community! As a stream monitor, you have valuable insight into the health of the streams in your community. You know what makes these streams unique. I hope you can share your experiences with others – you may spark further interest!

Annual Lyme Disease Infection Rates Higher than Breast Cancer

By Jean Schneider, Clinical Herbalist <https://www.nativamedica.com/>

I have spent a lifetime playing in the woods and prairies. Ticks were a common thing throughout my life, pulling them off as they were found. No big deal. That all changed when I contracted Lyme Disease (*Borrelia burgdorferi*) and several other tick-borne infections from presumed tick bites I never found on my body.

After multiple negative Lyme tests and visits with five different UW doctors, I was prescribed drugs that made my infections worse. Finally, I found a Lyme specialist that gave me better testing, where I had a highly positive test and I began proper treatment with a combination of drugs and herbs.

Diagnosis of Lyme Disease is difficult as the common test methods (ELISA, Western Blot) used by doctors are unreliable, producing false negatives. If you are fortunate enough to have a bull's eye rash or a positive blood test, consider yourself lucky. Most people will not notice a rash and will have false negative tests. Like me, this will prevent you from getting treatment from your doctor.

Ticks live in grassy areas, they climb up grass blades to wait for you to walk by and pick them up. During water sampling activities, volunteers are exposed to these areas. To protect yourself by wearing long sleeve shirts and long pants, tuck your pant legs into your socks, tuck your shirt into your pants. I use Wondercide Flea and Tick spray, an all-natural, non-toxic product safe for pets, kids, and adults. It is more effective than DEET in killing ticks (Wondercide has 100% tick mortality within 2 minutes).

Spray your clothes with it before you go out, and if you are paranoid like me, spray yourself again before you get in the car to come home. Once home, put all your clothes in the washing machine and shower immediately. This procedure will help keep ticks on your clothes instead of your skin. Once on your skin, ticks go to moist dark areas like your groin and armpits which are very difficult areas to check yourself.



Adult and nymph deer (black-legged) tick. Photo from University of Maine Cooperative Extension.

During water sampling activities, volunteers are exposed to areas where ticks live.

Some statistics about Lyme Disease from the ILADS (International Lyme and Associated Diseases Society) website:

300,000 new cases of Lyme Disease reported annually (these are the positive blood tests and bulls eye rashes. Many cases like mine are not reported, so the number of new cases annually is likely much higher, for comparison new cases of breast cancer annually are 260,000)

There are no accurate tests for Lyme Disease - the FDA approved Western Blot kits used by most medical institutions do not report all the bands associated with Lyme (*Borrelia*).

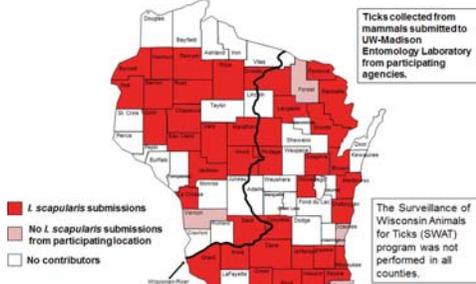
- Less than 50% of people recall a tick bite or rash
- Up to 50% of ticks in Lyme endemic areas are infected (Wisconsin is endemic)
- 40% of Lyme patients end up with long term health problems
- 40% relapse rate of Lyme Disease if treated with short courses of antibiotics (30 days or less), or if treatment is delayed

Lyme Disease is called the Great Imitator and should be considered as a cause when diagnosing rheumatologic and neurologic conditions as well as Chronic Fatigue Syndrome, Fibromyalgia, and others.

This article is a simplified part of the free presentation I offer to community groups on Lyme Disease, including information on symptoms and other common tick-borne infections.

Jean can be contacted at: *Nativa Medica, LLC* (608) 513-0016 nativamedica@gmail.com

Ixodes scapularis Collected from Mammals Wisconsin, 2011-2014 (n=2,414 *I. scapularis* ticks)



Deer ticks are widely distributed in Wisconsin. Here is a map showing counties where they have been collected through an animal surveillance project. Most of the white counties are also positive for deer ticks through other surveillance methods. This means that anywhere in the state where there are woods, deer and mice, the deer tick can now be found.

<http://labs.russell.wisc.edu/wisconsin-ticks/>

Tick Identification Card

Blacklegged (Deer) Tick *(Ixodes scapularis)*

Known to transmit Lyme disease



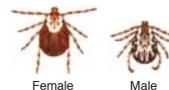
Lone Star Tick *(Amblyomma americanum)*

Not known to transmit Lyme disease



American Dog (Wood) Tick *(Dermacentor variabilis)*

Not known to transmit Lyme disease



Actual Size (adult ticks)



Editor's note: While the Wood Tick and Lone Star tick aren't known to carry Lyme Disease they can be vectors for other disease.

learn more about ticks in Wisconsin at <http://labs.russell.wisc.edu/wisconsin-ticks>. They are especially interested in learning the distribution of Lone Star ticks, a southern tick that is being found in many locations in Southern Wisconsin and as far north as Price County.

Another good source to learn about Lyme Disease is <http://www.ilads.org/lyme/about-lyme.php>

Tick images © Heberardo Venegas M. & Darby S. Murphy

Adaptive Management Sample Analyses at Madison Metropolitan Sewerage District

By Catherine Harris

THE NUMBERS ARE IN!

Thanks to the hard work and dedication of Rock River Coalition stream monitors, two hundred and sixty-nine (269) samples were brought to Madison Metropolitan Sewerage District's laboratory for analysis as part of the Adaptive Management Volunteer Stream Sampling Program in 2017.

Once you drop off your sample in the lab's walk-in cooler at MMSD's Nine Springs Wastewater Treatment Plant, MMSD's lab technicians (chemists) are hard at work to process the samples to derive useful water quality data.

Measuring water quality with seven common parameters (total suspended solids, ammonia, nitrate and nitrite, ortho phosphorus, total Kjeldahl nitrogen and total phosphorus) helps set a baseline for determining future progress in the Adaptive Management Program. Tracking how these variables change over time for each of the sampling locations gives some clues as to how practices on the land impact water quality.

All seven of the chemists who work in MMSD's lab play a role in processing, preparing, analyzing and documenting the Adaptive Management sample results. The chemists are cross trained to be able to perform tasks in multiple different parameters and are usually running many tests daily. The analyses performed on the samples you collect range in cost from about \$13-\$17 per analysis, and can take anywhere from a few minutes to 12+ hours.

Lab manager, Carol Mielke says it's difficult to estimate the total time spent exclusively on processing and analyzing adaptive management samples, because the plant is running so many of those samples in large batches with a continuous stream of incoming samples from both internal (treatment plant) and external sources. In addition to Adaptive Management sample testing, the MMSD lab is running analyses on industrial pretreatment samples, hauled wastes, daily wastewater treatment plant processes and research projects.

MMSD administrators interpret the results from these various analyses to ensure fair user charges, answer waste acceptance questions, monitor permit compliance, confirm environmental quality and monitor recovered resource production. In 2016 alone, the lab cumulatively performed over 67,000 analyses!

Please do not hesitate to ask any of the friendly faces in the MMSD Lab questions you may have while you are in, or send an email to CarolM@madsewer.org.

Looking forward to seeing the stream monitors again in 2018!

FOR MORE INFORMATION CONTACT:

CarolM@madsewer.org



MMSD Chemists - Back row, left to right; Jenny Faust, Mark Anderson, Carol Mielke, front row left to right; Josh LeMoine, Jess McCammon, Kristine Mazuca (not pictured: Bill Hughes, Zach Ehmer)



Don't forget to renew your RRC membership.

Memberships and donations are critical to providing this newsletter and for our stream monitoring program. Thank You.



We thank the Redfin Realty Company of Jefferson for their donation to the Rock River Coalition. Learn more about them at: <https://www.redfin.com/city/9619/WI/Jefferson>

Become a RRC Member

In addition to supporting RRC work, members receive newsletters, notices of conferences, and special events. To become a member, complete the following:

Name _____

Title _____

Affiliation _____

Address _____

City _____ State _____

Zip _____ Phone (____) _____

E-mail _____

I am a member of _____ Chapter.

Memberships Fees

Individual	\$ 25
Family	\$ 35
Student/Senior Citizen	\$ 15
Classroom	\$ 25
Affiliates*	\$ 50
Municipal**	\$125
Corporate	\$ 200

*Includes small businesses, organizations, lake districts, small municipalities and individual municipal departments
 **Covers entire municipality including all departments, administrative staff and elected officials

Any donation or membership of \$150 or more will be recognized and linked to your website from our website: www.rockrivercoalition.org

Donors of \$500 or greater will receive an ad in this newsletter. Check out our website for more information.

Tax Deductible Donations

Amount	Purpose
	General Support
	Citizen Monitoring
	Other:

Donations are greatly appreciated and can be targeted towards specific projects.

Please mail this completed form with check to:

Rock River Coalition
 864 Collins Rd
 Jefferson, WI 53549

or register and pay online with PayPal at:
www.rockrivercoalition.org/membership.asp



RRC Volunteer to be Recognized

Jaime Weigel, 7th grade Science and Social Studies, Whitewater Middle School will be honored as Wisconsin Teacher of the Year by the Water Action Volunteer Program at the Lakes Partnership Conference in Stevens Point this April.

Jaime has been taking her students out for the past several years in a partnership between Whitewater Middle School, the Kettle Moraine Land Trust and the Rock River Coalition. The student's stream monitoring equipment has been provided by Dane County Natural Resources Education Center-Dane County UW-Extension.

We look forward to congratulating Jaime and look forward to working with her into the future.



RRC Biennial Confluence: Saturday, November 10, 2018

Rock River Coalition members and stream and lake monitors should mark their calendars and attend our biennial conference on Saturday, November 10th. Rebecca Power, the North Central Region Water Network has agreed to be our keynote speaker for our biennial conference to be held in Whitewater. Rebecca has spoken and written extensively about the connection between soil health and water health for over 14 years.

Spring Volunteer Stream Monitoring Training Workshops

Several stream monitoring trainings are scheduled for the spring. Please help to publicize these volunteer trainings. More volunteers mean more streams can be included in our citizen monitoring program.

Saturday, May 5, 2018 -- Waunakee Village Center, Waunakee, WI

Saturday, May 19, 2018 -- Turtle Creek Parkway Facility, Clinton, WI

Saturday, June 2, 2018 -- Marsh Haven Nature Center, Waupun, WI

(Please note: this workshop will include instructions for both stream monitoring and mussel monitoring programs.)

For more information contact Nancy at nancy@rockrivercoalition.org.

Healthy Soil-Healthy Water

Extension staff, farmers and many others are highlighting the importance of keeping the soil in place to promote soil health, thereby reducing runoff from agricultural fields – a major contributor of phosphorus in our streams and lakes. In the Rock River basin, Yahara Pride and the newly formed Dodge County Farmers for Healthy Soil-Healthy Water are embracing the concept of soil health. Regional efforts continue also. The North Central Region Water Network has established a North Central Soil Health Work Group with representatives from land grant universities across a 12-state region within the Mississippi River Basin. This work group will participate in a soil health conference to improve their knowledge in soil health and develop a common body of knowledge and accepted science that will be used in developing the regional framework to address soil health education.



Healthy Wetlands-Healthy Water

There are many grassroots efforts embracing Healthy Wetlands-Healthy Waters.

For example, while research will continue into 2018 to determine how best to protect the Waubesa wetlands, citizens have filed 50-pages of paper work to nominate the Waubesa wetlands for international recognition under the Ramsar Convention.

Read more about the "gem" of nature, located in the Yahara River Watershed, in an eBook by Dr. Joy Zedler, *Waubesa Wetlands: New Look at an Old Gem*.

This eBook features efforts by the Rock River Coalition volunteer stream monitors.

Organizations such as The Sustainable Phosphorus Alliance and Phosphorus Futures are providing the space for scientists and decision makers to develop an integrated and systematic approach to identifying potential sustainable phosphorus measures.

Upcoming Events

Clean Rivers, Clean Lake Conference: Innovating for Shared Prosperity

April 26, 2018 - 8am to 5pm

Sister Joel Read Center, Alverno College, Milwaukee

We're Going Outside Celebration

June 1-2, City of Jefferson, Rotary Waterfront Park: live music, raptor presentation, fitness activities, food & more.

For more information call 920-674-7720.

Healthy Lakes Conference: Local Lakes, Local Issues, Local Solutions

Friday, June 8, 2018 10:00-5:00

Seven Seas Restaurant on Lake Nagawicka
See Page 3 for more information.

Friends of Glacial Heritage Events

Sept 8 Rock River Sweep

(main event), <https://www.rockriversweep.org>

Sept 15 Rock River Sweep

(Jefferson County version)

If you're interested in helping clear water trails this summer, contact Eric Compas at ericcompas@gmail.com



The Big Share was a success for the Rock River Coalition, because of your support we are able to field five new teams. More than one thousand dollars was donated during this one day event.

Thank you to Community Shares of Wisconsin for all their efforts to produce this amazing giving day.

Yahara WINS

The City of Fitchburg graciously hosted our annual March meeting of volunteer stream monitors working in the Yahara River watershed. Speakers included Emily Jones, Pollution Control Specialist, MMSD; Todd Stuntebeck, Physical Scientist, Water Quality Assessments and Monitoring, USGS; Susan Sandford, Strategic Engagement Coordinator, Dane Co. LWRD; Ilana Haimes, WAV Coordinator, WDNR; Neal Gruber, consultant; Nancy Sheehan, Program Coordinator, RRC.

Agenda and power point presentations will be available on our website soon.

