



STEWARDSHIP NEWSLETTER

Spring/Summer 2024

crawfordstewardship.org

Trash management and water quality on karst

The good, the bad, and the just plain wrong

By Forest Jahnke



LiDAR imagery shows what appears to be a line of sinkholes just east of the landfill

CONTENTIOUS LANDFILL! EXPANSION IN VERNON CO

There's a big hullabaloo going on in Vernon County with raging debates around the county decision to expand the landfill. This landfill sits atop a very karstic layer of dolomite and has been accepting waste from surrounding areas. The Viroqua Township Board unanimously rejected the expansion, but to no avail. At just over thirty years old, it has hit the average age of landfill closure or failure. The county is short nearly a million dollars for its closure and remediation fund.

Once this waste is produced there is no ideal way to deal with it, making a strong case that we must all be more responsible with our own waste streams.

HYDROGEOLOGICAL DISINFORMATION MUST BE DEBUNKED!

One aspect of this debate that Crawford Stewardship Project finds particularly concerning is the mis-information being spread about our local hydrogeology. This must be soundly refuted before it is used to call into question the known facts about the extreme groundwater susceptibility of our area and the need for protective measures.

Three points asserted by SEH Engineering (an "engineering, architectural, environmental and planning company that helps government, industrial and commercial clients find answers to complex challenges") need to be addressed:

1) *A section of the Prairie du Chien dolomite is a "confining layer" that is protective of groundwater.*

While there are some parts of this dolomite that are less permeable and can even create "perched aquifers", this is an ancient carbonate bedrock that is known for karst features that can easily funnel water down to groundwater. In a karst landscape, water will always find its way downwards, sooner or later.

Trash continued on page 3

Agreements, not arguments!

By Joseph Childs

Noting a lack of important information and connection in these days of rapid change in agriculture, Crawford Stewardship Project has created a new resource for landowners and farmers to come to clear agreements about land use and manure spreading.

Rental agreements can be tricky. Oftentimes landowners and renters avoid the written agreement altogether and rely simply on a handshake deal. Not to say that this is a bad idea, but this can leave a lot of gray areas in an agreement. When an agreement is made for something as important as giving over control of your property to a renter, it is extremely important to be as specific and thorough as possible to avoid any miscommunication or confusion. The importance is amplified when the renter of the property is looking to spread liquid manure as part of their rental agreement.

To help the community understand the importance of a good written agreement, CSP has developed a sample manure spreading agreement template for landowners and renters alike. This agreement sets parameters for a manure spreader to adhere to in order

to get the most benefit from the manure being spread and to avoid any possible negative impacts on the local ecosystems.

Alongside this sample agreement, CSP has also included a resource guide. This guide walks both parties through the sample manure spreading agreement line by line to explain why each term and condition was included in the agreement. This ensures that even those with very little "contractual experience" can understand the agreement in plain english.



Both of these resources are available on our "resources" page under "Landowners and Homeowners" at crawfordstewardship.org and more information may be gained by reaching out to our Agriculture Coordinator, Joseph Childs, at 608-485-2048 or by email at jchilds@crawfordstewardship.org.

Our deepest gratitude goes out to all our incredible donors!

All this is only possible through your generous support.

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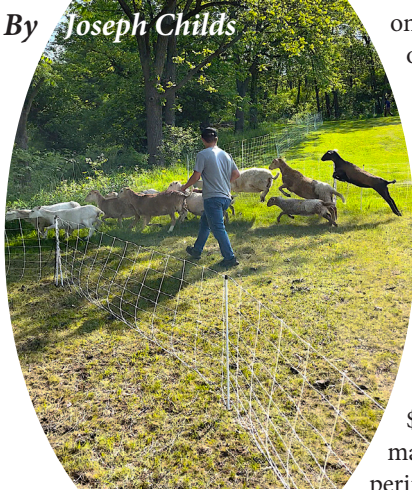
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Grazing education program gets new fence, thanks to community support!

Contact info for more donations:
Joseph Childs, 608-485-2048 or email
at jchilds@crawfordstewardship.org

By *Joseph Childs*



North Crawford student, Landen Blaha, is seen here moving sheep to new pasture during the 2023 grazing season.

North Crawford Community Pastures Program finished its first year at North Crawford (NC) High School in September of 2023. The program, started by Crawford Stewardship Project with the help of \$3,500 in grants from Wisconsin Rural Coalition and Food, Faith, and Farming Network, placed 12 pregnant ewes owned by CSP's Agricultural Coordinator Joseph Childs

on the school grounds in May of 2023 to offer a hands-on learning opportunity for interested staff and students of NC.

Fencing Proposal

In late 2023, Joseph approached the NC Building and Grounds Committee with a proposal for more permanent fencing for the program. The \$10,000 proposal included material cost for a woven wire perimeter fence, as well as interior fencing. This fence would allow for the sheep to have a permanent enclosure in which to rotationally graze in the woods to target invasives and problematic species such as multi-flora rose, honeysuckle, and other unwanted brush that have taken over the area. Included in this proposal was the bonus that a volunteer group of laborers including members of WI Farmers Union, Grassworks, CSP, and local community members would install the fence at no cost to the school.

Community Support

Ultimately the proposal, though praised by the Building and Grounds Committee, was not taken to the full board as there were many higher priority projects to address within the school. Though the project was not able to be funded by the school, High School Principal, Robert Sailer, spoke in support of the fence being installed if the material cost could be covered by other sources, even volunteering his own time and equipment to help get the job done!

Currently, the project has garnered material and cash donations from the following sources: Great River Graziers (\$1,000), Solar Town Farm and Home (\$500), Royal Bank of Gays Mills (\$500), and Peoples State Bank of Soldiers Grove (\$250). In addition to material and cash donations, the project has received grant funding from the following organizations: North Central Sustainable Agriculture Research and Education (\$3,000), Wiscon-

sin Farmers Union Foundation (\$3,000), and Food, Faith, and Farming Network (\$1,500).

Due to the generous organizations and businesses that are supporting this project, **the fence at NC has been completely funded and will be installed as part of a volunteer effort on April 27, 2024. Volunteers are asked to meet at NC School, 47050 County Rd X, Soldiers Grove, WI at 10 AM to begin working on the fence.** Some tools will be provided, but bringing your own tools may be helpful.

We are blown away with the amount of community support for this program. We are excited to play a part in educating the next generation of farmers and look forward to seeing this program expand to other area schools. Thank you to all of those that have helped promote, volunteer, and fund this project to create a better future for our young farmers, local community members, and environment.

Trash continued from page 1

2) *The local geology is not karst, but "pseudokarst".*

After checking with our State Geologist and other hydrogeologists with the WI Geological and Natural History Survey, all were equally confused by the description of our area as "pseudokarst".

3) *Surface deposits of clay in the area are likely due to glacial activity.*

The very defining aspect of the Driftless area is the fact that there are no deposits (drift) from the glaciers, because they missed this area in at least the last four glaciations.

These statements are the definition of "alternative facts" and "fake news", and we will not stand for it or the confusion it will cause.

NEED FOR STUDY!

What could get us past all this confusion? How about a serious hydrogeological study of the area! What could get us past all this confusion? How about a serious hydrogeological study of the area! This is

precisely what CSP has been advocating for nearly 20 years, but has had to settle for what limited community science we can muster to fill in the gaps, as this has not historically been a priority for either the state or local counties. That said, we are hopeful that we can help get something off the ground in the coming year or two and are actively engaging with our county Conservation Departments as well as the WI Geological & Natural History Survey. Hopefully we won't have to rely on geological maps from the Civil War era much longer.

NEW LIDAR SHOWS THE EARTH'S SURFACE EVEN BETTER!

This incredible technology has given us a detailed view of the surface of our gorgeously carved landscape. LiDAR (Light Detection and Ranging; think RaDAR, but with "light" instead of "radio" waves) imagery was first taken in this area in 2011. Now we have new data taken in 2022, but only publicly available in late 2023 for Crawford County. This gives us an even more precise view and opens up a world of possibilities. We can even use it on our own property!

You can find this for Crawford Co here (If not in Crawford, reach out to your County Conservationist for this amazing free resource):



Crawford Co Conservationist Dave Troester reports that, "Crawford Co has the intention of conducting another round of water testing this fall. I hope it can be part of a larger effort, but we will probably proceed even if it would only be Crawford Co." There is much interest and we are still hopeful that further testing will occur in Vernon and Richland counties as well, but cannot confirm this yet. Crawford County's testing is likely to be by random selection, with the county covering the full cost of testing. More information about our drinking water is music to our ears!

Let us disagree...agreeably!

The value and effectiveness of community conversations on hard issues

By Forest Jahnke

IT IS HIGH TIME WE ADDED ESSENTIAL LAYERS OF PROTECTION TO OUR MUNICIPAL ORDINANCES AND WE ENCOURAGE YOU TO CONTACT US AND STAY TUNED AS WE LAUNCH THIS GRASSROOTS CAMPAIGN.

WE ARE ALSO CALLING FOR RESPECT AND CIVILITY IN OUR ACTIONS, TO ENSURE WE CAN MOVE FORWARD AS A UNITED COMMUNITY.

There is more than enough that everyone agrees on: supporting safe drinking water, clean streams, clear air, public health, good food from family farms... However, we keep getting stuck in the mud in disagreements about how we get there, and have to take extreme care not to get caught in the political traps that divide us.

This does not mean we should avoid the hard issues. Crawford Stewardship Project is committed to keeping these issues in the public eye and facilitating community conversations.

The DNR only seriously accounts for land base and manure volumes, somewhat loosely considers water quality, but neglects to regulate impacts to air quality, property values, local roads, groundwater quantity, and a host of other important issues. Thus we are actively campaigning to support local townships in the passage of Concentrated Animal Feeding Operation (CAFO) "operations ordinances", which would address all these issues and more, and at no cost to the local municipality.

vigorous opposition and legal work spearheaded by our allies at Midwest Environmental Advocates. That said, we cannot expect much from the DNR other than continuing to permit CAFOs wherever they are applied for with minimal (if any) additional conditions to protect water, air, health and safety.

But don't lose hope! We have many tools in our local toolbox that are often overlooked. Through Comprehensive Plans (which are due to be updated this year by all our municipalities) and local ordinances, we

lation are not passed down to the municipality or neighbors.

Potentially polluting industries can, and we believe should, be held accountable for their messes. If factory farms and other industrial operations are really as efficient and profitable as they claim, they can afford to take full responsibility for their impacts.

All this and more are moving forward. All it takes is local involvement and CSP is here to give you all the tools you need to support an ordinance like this in your township.

IN THE WORDS SPOKEN AT EVERY LOCAL GREAT RIVER GRAZERS PASTURE WALK BY VANCE HAUGAN:
"LET US DISAGREE AGREEABLY!"

After having lost yet another 30% of our dairy farmers from 2017 to 2022 in Wisconsin, while the number of cows has remained steady, we respectfully disagree with the direction agriculture is headed. More consolidation and industrialization worsens the hollowing out of our rural communities and adds to the risks of contamination and food supply chain disruption.

Wisconsin's one-size-fits-all rules are not sufficient to protect the sensitive and special hydrogeology of our region. We support municipalities in asserting their authority to put in place ordinances that would cover a host of important considerations not taken into account by the WI Department of Natural Resources (DNR) and the state legislature.



Jon Bingol of the Mississippi River Regional Planning Commission speaks at "Planning for Stewardship" in Seneca this February, giving invaluable advice on the Township Comprehensive Planning process. They are here to help!

This is made all the more important in the context of the recent attempts to remove even basic permitting authority from the DNR. Wisconsin Manufacturers and Commerce and their big-ag policy lobbyists (WI Dairy Alliance and Venture Dairy Cooperative) have failed in this attempt thanks to

can set much higher standards for how CAFOs must operate. Our rural townships have few resources, but each has the authority and responsibility to protect public health, safety, and welfare. Through our current push for "operations ordinances", we can ensure that the costs of monitoring and regu-

We are not saying it will be an easy or comfortable conversation, but it is a conversation that needs to be had. If you start to show up at your town or village Board meetings and build a relationship with your local officials, it is amazing what can be accomplished.

Want to protect health, safety, and welfare from CAFOs or other industrial operations in your township?

Want to protect the source water for your village wells?

Are you willing to show up and disagree agreeably? Let us know!

Contact us today!

Forest Jahnke
fjahnke@crawfordstewardship.org
(608) 632-2183

Join our vibrant water quality monitors team who are having great fun while taking action and creating meaningful data!

Rainfall, runoff, drought, pollution, and more...

By *Omaru Heras*

When having a look at Crawford Stewardship Project's Water Quality Monitoring (WQM) Program 2009-2023 report for sites of specific concern, one might start wondering about the significant spikes of potential pathogens and total phosphorus (TP) numbers shown in the graphs of results in 2018 and 2019 (See pic. 1). One consideration is the relationship between rainfall and runoff with microbial and nutrient levels. Constant and heavy precipitation can create large pulses of water that move quickly over and through our karstic land, carrying nutrients and pathogens from manure sources, agricultural fields, lawns, septic systems, etc., into surrounding water bodies and groundwater.

The total annual precipitation in 2018 and 2019 resulted in an overwhelming 50 inches per year. The yearly average has been down to roughly 33 inches since 2020 (See pic. 2).

Fig. 1. 2009 - 2023 AVERAGE LEVELS OF *E. coli* cfu/100mL @ 6 SITES OF CONCERN (ZONES 1, 2 & 3)

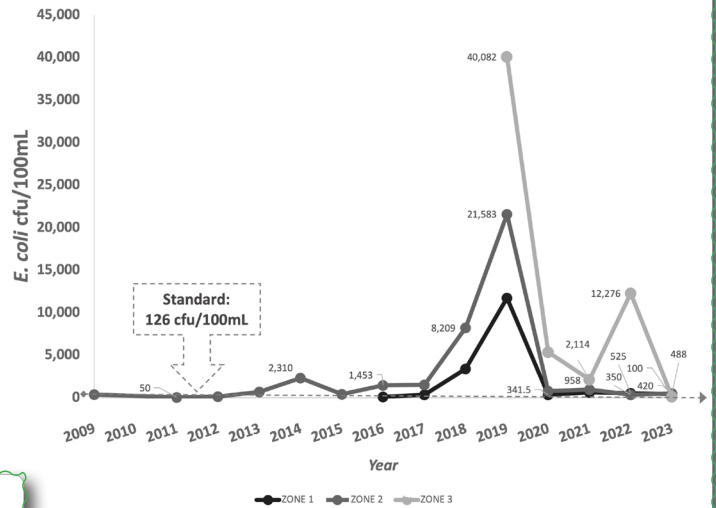
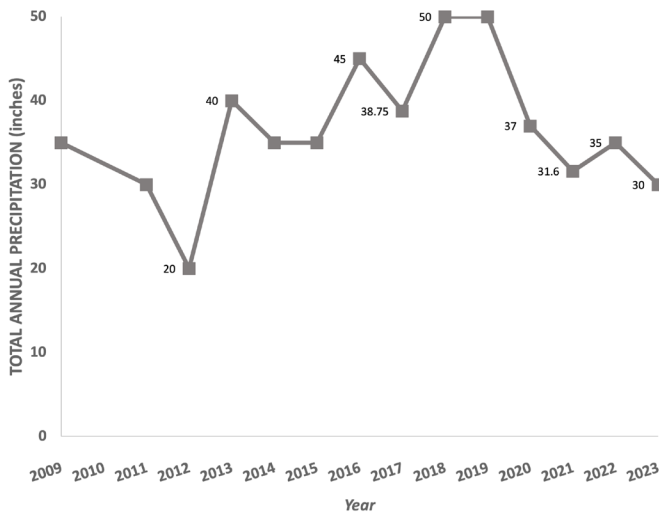


Fig. 2. 2009 - 2023 TOTAL ANNUAL PRECIPITATION (in) - ZONES 1, 2 & 3



All this explains why CSP is trying to expose the impact of present and future industrial Concentrated Animal Feeding Operation (CAFO) practices, among other factors that are threatening the sacred waters to an irreversible point. This is not about being against farming, but to reinforce better ways to maintain a proper water quality for all beings.

If you have not done so already, please review CSP's WQM 2009-2023 Potential Pathogens and Total Phosphorus Full Report at crawfordstewardship.org/surfacewater.

Please, register for the WQM-Level 1 trainings on April 25th and/or 27th, 2024, by contacting Omaru Heras at oheras@crawfordstewardship.org.

Get out in nature and have fun with CSP's monitors team!...

Several of the CSP's WQM Program intermittent streams and springs located in Marietta Township have stayed dry most of the monitoring season due to the drought. While the running sites of concern contamination levels have decreased as a whole, the numbers still go above the safety standards for recreational waters in most cases.

Despite the drought, in 2023, two sites reached record levels of Staphylococcus aureus, fungi, and hog fecal material. Note that S. aureus is a serious pathogen and can potentially mutate into MRSA (Methicillin Resistant S. aureus) which is exceptionally dangerous due to the difficulty in treating it.

Thanks to the drought conditions, CSP is able to verify the presence of continuous TP and pathogens input directly affecting streams and springs, on top of the precipitation and runoff influence. The monitored sites are Wisconsin or Kickapoo River tributaries.



Join us for another exciting event season!



There will be many opportunities to get involved with our educational and advocacy campaigns again this year, and we hope to see many of you there! If you're really passionate and wish to donate a bit of your time, we can always use volunteers for help with our events, which we put on free to the public for all ages and abilities.

- April 25th, 4-6pm, and April 27th, 3-5pm: Water Quality Monitoring Trainings

We're offering two virtual trainings this year, followed by scheduling an on-site training with those ready and willing to take on a season of monitoring sites of concern. Get trained, then get out and get your boots wet in impactful community science! Contact Omaru Heras at oheras@crawfordstewardship.org or visit crawfordstewardship.org for more information and registration.

- August 3, 1pm: Karst Exploration

Join us for another fascinating tour of geological history and hydrological complexity, as we learn from our new State Geologist, Sue Swanson, and explore local karst features. Sue specializes in springs, and we'll be visiting a few, so come ready with your questions about these magical interconnections of ground- and surface-water. Co-sponsored by and hosted at the Soldiers Grove Library.



There are many more events and collaborations in the works! Work days on our community pastures, groundwater simulators with local Farmers Union chapters, and a slew of other events provide opportunities for all to learn, engage, and take action to protect and support what we love.

Follow our online Community Calendar (click [HERE](#)), our monthly e-News and Actions, check our website and follow us on social media to stay tuned! If you are considering volunteering (set-up, break-down, promotion, or to bake a pan of brownies), please do reach out to us at contact@crawfordstewardship.org.



Designed by Omaru Heras

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