

Clean Water Action Council

OF NORTHEAST WISCONSIN

CELEBRATING 32 YEARS OF WORKING TO PROTECT PUBLIC HEALTH AND THE ENVIRONMENT IN NORTHEAST WISCONSIN

FALL 2017

Are you working to protect the waters of Northeast Wisconsin?

Join the fight for clean water.



An introduction by CWAC President Dean Hoegger

More than any other issue citizens bring to us, the threat to clean and safe water is foremost. From agricultural issues such as the expansions of concentrated animal feeding operations (CAFOs) and manure runoff to the loss of fisheries due to industrial pollution, the complaints are ever increasing.

Unfortunately, the quality of Wisconsin's waters will continue to decline while the Department of Natural Resources is given inadequate resources needed to fulfill its public trust responsibility of protecting Wisconsin's water resources. The threat is so severe, that over 75 retired DNR officials signed a letter to the EPA in November, 2015 that outlined their concerns.

Key among them was:

- Water is now a commodity to be sold and traded in the marketplace

- Drastic cuts to science budgets
- Greater authority for final permit conditions is now in the hands of political appointees rather than DNR biologists, engineers, lawyers, and other DNR experts
- Environmental enforcement effort and results have declined significantly in the past five years. Inadequate permit review and enforcement unacceptably shifts the financial and technical burden of industry review to citizens

Clearly, it is time for voters to demand that the DNR is again given the resources and authority needed to protect our water resources. Until then, citizen water protection advocates are needed.

Read in this issue ways for you to join the fight for clean water and make Clean Water Action Council your partner in the effort to protect the waters of Northeast Wisconsin.

Take Action Today: Urge the DNR, Governor, and Legislature to Strengthen Manure Spreading Rules

By Dean Hoegger

CWAC and other environmental groups, and thousands of citizens have pressured the state for years to make manure spreading rules more protective for human health and safe water. Following a Safe Drinking Water Act Petition to the EPA in October of 2014, the DNR finally formed the NR151 Technical Advisory Committee in October of 2016 to study and make recommendations for rules that will provide better protection of our ground water.

Working with representatives from agricultural groups and the DNR, CWAC and other environmental organizations pushed for some of the rule changes the DNR is now proposing. We need your help to lobby for these changes.



<http://conservationvoters.org/manure-rules/>

Public comment will be accepted by the DNR until October 4, 2017 and will have the same weight and effect as oral statements made at the public hearing that was held on September 15. Written comments and any questions on the proposed rules should be submitted to:

Department of Natural Resources Attn: Mike Gilbertson P.O. Box 7921 101 S. Webster Street, Madison, WI 53707-7921 or emailed to DNRAAdministrativeRules@Wisconsin.gov

Please make a written comment supporting these changes to NR151 Administrative Rules:

- a prohibition on mechanical applications of manure on fields that have less than two feet of soil over bedrock or groundwater
- a prohibition on mechanical applications of manure on frozen or snow-covered ground on fields with less than five feet of soil over bedrock
- a requirement that manure applications leave a 250-foot setback from drinking water wells and increased setbacks from direct conduits to groundwater such as sink holes
- reduced application rates, applying manure at the right time, and pathogen treatment

In addition, please ask for these additional changes:

- strengthen the recommended prohibition of mechanical application of liquid manure on fields over bedrock or groundwater to a minimum of 3 feet (Studies have shown that a minimum of 3 feet is needed to significantly reduce pathogens entering the water table.)

- Ask the DNR to map and collect geologic and water quality data in southwest Wisconsin to prevent a crisis similar to what's happening in Kewaunee County.

Visit the DNR website for more information on NR 151 rule changes: <http://dnr.wi.gov/topic/nonpoint/nr151strategy.html>

NR151 Timeline

- **Fall 2017**-Public hearings on proposed rule
- **Fall 2017-Winter 2018** Natural Resources Board NRB meeting for adoption. Rule approved by governor
- **Winter 2018**-Legislative review/hearings
- **Summer 2018**-Rule signed by DNR Secretary, rule published

You can see from the timeline that there are numerous steps which will require additional lobbying efforts beginning with urging the governor to approve the changes and the legislature to stand up to lobbying efforts by big ag to water down the rules.

There is no question that something needs to change to deal with Wisconsin's groundwater contamination crisis. Let us make this first step a reality.

The Importance of Citizen Participation in Water Quality Monitoring

By Jenny Krueger, CWAC Intern

Have you wondered about the quality of the water in our local streams, rivers, and lakes? Due to an ever-increasing number of contaminants in surface waters, such as pesticides, herbicides, fertilizers, and pharmaceutical residues, monitoring water quality is very important. With Wisconsin having over 15,000 lakes and 84,000 miles of rivers and streams, water testing can be particularly daunting, yet necessary to ensure safety for plants, animals, and humans depending on safe water.

Surface water in Northeastern Wisconsin, in particular, is important due to its impact on the quality of water in

Green Bay and Lake Michigan. Currently, the ecosystem in Green Bay is extremely stressed. This is largely due to the condition of the watersheds surrounding the bay, especially due to phosphorus. Two-thirds of all the nutrients within Green Bay come from the Fox River and one-third of all the phosphorus in Lake Michigan comes from this area.

Although phosphorus is an important nutrient for plant growth, it is also a serious water pollutant in Wisconsin waters. The main source of phosphorus in this area is agricultural practices, which account for about 47% of all phosphorus in local watersheds. Even a slight rise in phosphorus can cause significant increases in aquatic plant and algae growth, which creates a rise in hypoxic areas, also known as dead zones, as algae and other organic matter decompose, removing oxygen from the water. In 2005 and 2011, thousands of dead and dying fish ended up along the shorelines of Green Bay due to suffocation from the lack of oxygen in the water. Both instances were caused from strong southern winds pushing the contaminants from the Fox River further into the bay.

The Wisconsin DNR is responsible for collecting basic water quality data in a variety of Wisconsin surface waters including rivers, streams, lakes, wetlands, etc. However, with the large amount of area to cover and the continued reduction in government funding received by the DNR, it is nearly impossible for the agency to test all of the areas needed. Fortunately, they have received support from local residents and organizations.

Since 2003, the University of Wisconsin-Oshkosh has led Wisconsin's Great Lakes beach monitoring program. Summer internships with the Environmental Research and Innovation Center (ERIC) out of UW-Oshkosh perform water quality tests on about 120 beaches along Lake Michigan and Lake Superior. Due to the high interest students have shown in the program, ERIC has been able to volunteer their expertise to assist the Great Lakes Restoration Initiative and the Environmental Protection Agency. The tests they are conducting include, digestate tests (the solid and liquid product of anaerobic digestion); bacteriological tests, such as E. coli and total coliforms; and arsenic, nitrate, and total phosphorus levels.

NEW Water, the Green Bay municipal sewage district, has 20 sites they are monitoring throughout the Green Bay. In each of these areas they are testing for water temperature, dissolved oxygen, and the nutrients that are in the water.

In addition to monitoring what is happening within the bay, NEW Water began a pilot project in Silver Creek

to better control what is entering the bay. By working with agricultural producers in the area, they are making improvements to the land which will reduce runoff and nutrient loading into both the creek and Green Bay. NEW Water is showing farmers that these practices will benefit their operations while also helping the waters of Green Bay. However, these practices will need to be done on a much larger scale to make a significant difference.

The Clean Water Action Council has also volunteered to perform surface water sampling as part of the Water

Action Volunteers on the East River near Ledgeview Park in De Pere. We are part of a larger group of volunteers which include residents of the Lower Fox River Basin, the Fox Valley Technical College, and the Wisconsin DNR. The project focuses on the total phosphorus concentration from 14 tributaries in the Lower Fox Watershed. Once a month, from May through October, volunteers collect a variety of samples and measurements that are sent to the State Lab of Hygiene.

You can also contribute to water monitoring efforts that form the basis for water protection actions. Those actions could include working with the DNR and the legislature to change rules governing point and non-point pollution, testifying at hearings for such changes, or even participating in a civil suit.



Intern Anna Hoesley collecting a water sample from the East River.

Water Monitoring Opportunities for Volunteers.

- Water Action Volunteers - A statewide program, which includes northeast Wisconsin, for citizens who want to learn about and improve the quality of Wisconsin's streams and rivers. No prior sampling experience is needed in order to become a volunteer; however you are asked to complete a 5-6 hour training session, which usually takes place Saturday mornings during the spring. To become a member of the Water Action Volunteers, please contact Peggy Compton at 608-342-1633 or email at peggy.compton@ces.uwex.edu
- Citizen Lake Monitoring Network – A partnership of volunteers with the Wisconsin DNR to collect water data in order to educate citizens. They measure water quality and collect data on chemistry, temperature, and dissolved oxygen levels. To participate, contact Mary Gansberg at 920-662-5489 or email at mary.gansberg@wisconsin.gov

- The Lower Fox River Watershed Monitoring Program- A network of students and teachers from eleven local schools that monitor environmentally impaired streams along the Fox River. The program provides data regarding the pollution that enters the Fox River watershed which contributes to the dead zone in the waters of Green Bay. Contact the program director, Dr. Kevin Fermanich, at watershed@uwgb.edu to volunteer or learn how to sponsor and support a “stream team.”
- Kewaunee CARES, a group of citizens working to protect the water quality in Kewaunee County, conducts regular water sampling and testing year-long. Volunteers can receive training, or even just observe and take photos. Call or email Nancy Utesch at 920 388-0868 or lnutesch@yahoo.com
- Clean Water Action Council has one more East River sampling that volunteers can observe and take photos, and one or two samplings are also planned for a branch of the East Twin River. Volunteers should contact Dean Hoegger at 920-421-8881 or contact@cleanwateractioncouncil.org

Phosphorus Regulations Must Be Maintained

By Anna Hoesley, CWAC Intern

Phosphorus loading has been plaguing Lake Michigan for a number of years. In response, revisions to the Wisconsin’s Phosphorus Water Quality Standards for surface waters were adopted in December 2010 with NR 102. In 2013 NR 217 regulatory standards for point source phosphorus pollution went into effect and NR 151 rules for manure spreading, a significant source of phosphorus, are being revised.

Yet, on May 16, 2017, 31 Republican Wisconsin Legislators sent a letter to the US Congress requesting their assistance in reducing phosphorus standards on municipal wastewater treatment facilities, which are part of NR 217. The letter referred to the regulations as “arbitrary” and “unreasonable” and thus a “burden” on the State’s municipalities.

The legislators describe the municipalities as an easy target for phosphorus regulations. They claim the standards set by regulations take advantage of the municipalities and bombard them with scientifically unfounded standards, standards; which are impossible to reach given the current effectiveness of wastewater treatment facilities for municipalities. They further claim that the cost of



upgrading these facilities is an unnecessary burden to unload on the small municipalities scattered across Wisconsin.

Although the legislators describe a heavy burden for the municipalities, it comes nowhere close to the burdens we are facing with the current state of Wisconsin waters. A response letter written by a collection of environmental groups says the claim that the regulations are based on unfounded science is false. The letter cites multiple peer reviewed papers and well respected researchers who have worked together to create the regulations. What came out was and is a set of standards revered by other states. The analysis of various Wisconsin studies and studies from other states was so thorough that other states refer to it when setting their own phosphorus regulations and standards.

Though the legislators depict municipalities as targets, this image is far from the truth. Non-point sources have also received attention, including the efforts to revise NR 151 in 2017. In fact, point and non-point sources have been encouraged to work together to meet water quality standards listed in the bills. Programs have been created to facilitate the team work between the two, including adaptive management and water quality trading. There was no mention of these programs in the legislators’ letter.

Numerous studies indicate that even if phosphorus run-off and point-source effluent were to cease, it could take years for phosphorus levels to decrease. The longer we put off controlling our phosphorus pollution, the more serious the problem will become. Without strong regulations, phosphorus will continue creating algae blooms leading to fish kills, putrid smelling shorelines, and even dangerous blue-green algae. As a result, Wisconsin’s recreational and tourist economy could be seriously impacted.

The Fox River is responsible for 2/3 of the phosphorus running into the bay of Green Bay and 1/3 of the phosphorus in Lake Michigan. We must not let the point or non-point sources in the Fox River

watershed off the hook. Wisconsin and its citizens deserve rigorous efforts to solve phosphorus issues, not a weakening of the rules due to a lack of enthusiasm and grit.

It is unfortunate to see such resistance toward efforts to keep our water healthy. Clean water is essential for our society, environment, and economy to function. If we are successful in our efforts, there is no doubt that Wisconsin’s recreational and tourist economy will rise along with the overall promotion of our public and environmental health. We cannot afford to waste time. Wisconsinites deserve clean water today.

Protecting our Waters with Cropland Rental Agreements

By Andy Wallander

A great amount of working cropland today is rented land. Renting cropland can be a win-win situation for both the farmer and landowner, if done correctly. Rental agreements can assure that both parties' needs are adequately met and that any possible pollution liability issues are minimized.

Farmers need to rent cropland to obtain an adequate operating land base for the crops that they need. Landowners should want to make sure their cropland retains value through the years by minimizing soil erosion, building (not depleting) soil health, and not becoming a contamination source for either surface or groundwater. The USDA Natural Resources Conservation Service (NRCS) defines soil health as "the continued capacity of soil to function as a vital living ecosystem that sustains plants, animals, and humans."

Landowners should also want to minimize their liability from waste application mishaps such as spills, over-applications, and contaminated wells. Developing a formal cropland rental agreement, with a conservation focus, is one of the most sensible things a landowner can do if renting out cropland to someone.

A cropland rental agreement with conservation options is a written document, signed and agreed to by the landowner and renter, outlining the various practices to be used on the cropland, pertaining to nutrient and animal waste application, tillage methods and timing, general field operations, and soil conservation. Other agreed upon items can also be included in a cropland rental agreement with conservation options.

Local county ordinances, as well as state regulations and federal codes, may require the bare minimum soil erosion control, animal waste application, and general field operation practices that must be followed by farmers. However, if you, as the landowner, want to require additional actions in order to further protect your groundwater and other local land and water resources, it's always your choice. It's YOUR land.

Among the most important actions described in a cropland rental agreement with conservation options are those regarding waste applications to your land.

There are many sources of crop nutrients that can be applied to the land. Animal wastes, bio-solids, industrial wastes, and commercial fertilizers are some examples. Spills and over-application events can happen more frequently than you think. As a landowner renting out cropland, it is important to minimize any liability you may be exposed to through such a pollution event. These wastes are a great source of nutrients until they run off the surface or

percolate down through your soil. Then they are called contamination events. A cropland rental agreement with conservation options can spell out not only the specific type(s) of materials you allow applied to your cropland, but also the acceptable form, such as solid or liquid.



Liquid manure being spread on a field.

The safest time of the year for waste applications is in the springtime, as close to planting time as possible. Will you feel comfortable having animal wastes applied to your land at other times of the year without adequate conservation precautions being taken? How about during times when your land is frozen, saturated or snow covered? Remember, it is YOUR land.

Maximum allowable application rates are stated in the NRCS Nutrient Management Standard 590, as well as Wisconsin Administrative Code chapter NR 243, if your renter is a large CAFO operation. Keep in mind, these application rates are "maximum allowable rates" and can be lessened to provide more surface and groundwater quality protection on YOUR land.

The required setback distances stated in 590 Standard and the NR 151 code are "minimum allowable setback distances". They can be increased to provide greater environmental protection for water quality. It's YOUR land and YOUR choice.

Other decisions about waste applications to your land can be made as well. Do you want applied wastes immediately injected into the soil? Incorporated within 24 hours? Incorporated by the end of the same calendar day of application, or within one hour of application? YOU choose.

You could also prohibit waste applications if rain is predicted by the National Weather Service within either 12, 24 or 48 hours of application, as well as prohibit waste applications if your land has shallow soil depths to the bedrock of either 24, 36, 48 or 60 inches. It's YOUR land. Get a signed cropland rental agreement with conservation options.

As follow-up resources, the Door County Pulse ran an informative article titled “*Renting Your Farmland – Do You Know the Rules?*” which can be read at <https://doorcountypulse.com/renting-your-farmland-do-you-know-the-rules/>

An excellent example of a cropland rental agreement with conservation options can be viewed on the Door County Soil and Water Conservation Department (SWCD) website at <http://map.co.door.wi.us/swcd/> The document is available in Word or PDF version.

Your local County Land and Water Conservation Department should be able to help you develop one of these agreements for your land.

The following two articles on no-till farming and cover crops may provide practices to include in a rental agreement.

References:

USDA NRCS Nutrient Management Standard 590 - [https://efotg.sc.egov.usda.gov/references/public/WI/590_Standard-\(2015-12\).pdf](https://efotg.sc.egov.usda.gov/references/public/WI/590_Standard-(2015-12).pdf)

Wis. Adm. Code NR 151 - https://docs.legis.wisconsin.gov/code/admin_code/nr/100/151

Wis. Adm. Code NR 243 - https://docs.legis.wisconsin.gov/code/admin_code/nr/200/243

Why Conservation Farmers Switch to No-Till Farming

By Andy Wallander



No-till farming photo courtesy of USDA.

Since the beginning of agriculture, tillage (i.e. plowing) of cropland has been an integral part of the crop production process. The Chinese invented the “plow” back in the sixth century B.C., and since that time many other technologies have come along for the preparation and cultivation of seedbeds.

Tillage is the mechanical manipulation of soil for any purpose; however, in agriculture it is usually restricted to the manipulation of soil conditions for crop production.

This year’s crops are grown on land that contains the plant residue of previous crops grown at the same site last year. Conventional tillage

techniques, such as the moldboard plow, have been used to bury this left over crop residue, often times referred to as “trash.” Crop fields free of this “trash” permitted precision placement of seed at planting time. It also allowed for easier cultivation of weeds throughout the growing season.

All tillage operations change the soil’s structure. The lifting, twisting and turning motions of the moldboard plow leaves the soil in a loose and over-aggregated condition. After the moldboard plow comes other various tillage implements that further crush, loosen and aggregate the soil structure resulting in a more evenly structured and compact soil. In this condition the crop field’s surface is at its most vulnerable to raindrop impact and surface runoff erosion.

Some tillage is necessary for crop production; however, the concept of complete tillage has declined in popularity. Minimum-till systems (those that leave at least 30% of the soil’s surface protected with crop residue cover) have come along that can employ fewer field operations and machinery to produce crops with just one trip across the field, thus leaving a greater amount of last year’s crop residue on the surface. Under normal conditions, no further tillage operations may be needed during the growing season. Minimum-till systems leave the soil surface in a state that is very favorable to water infiltration and less favorable to soil erosion.

Much effort, time and money have gone into the research and development of what is referred to as no-till cropping systems, which potentially, leave far greater than 30% of the soil’s surface protected with crop residue cover. In no-till systems a narrow slot is made into the untilled soil surface so that the seed can be placed at a level where soil moisture is adequate for seed germination. This drastically reduces surface runoff and soil erosion levels.

Soil erosion by surface runoff causes a host of environmental damage. The surface runoff water causing the erosion does not infiltrate into the soil to increase moisture levels and crop production. The soil that is eroded away is no longer of value to future crop production. The soil erosion process causes rills and gullies to form in the soil’s surface, further causing eroded subsoil, less

productive for crops, to be deposited on top of more productive soils downslope. For the farmer, gully erosion also causes crop fields to become cut up into smaller and smaller areas that now must be treated as separate fields. The eroded soil may be deposited in streams or lakes, increasing the risk of flooding, becoming navigational hazards, and killing fish and other aquatic life. Eroded soil, as sediment, also transports attached nutrients and pesticides to waterbodies downslope.

Sediment is a major pollutant in the United States, as well as right here in northeastern Wisconsin. Harbors and waterways are dredged to remove increasing levels of bottom sediment before becoming navigational hazards. Eroded sediment ending up in streams and lakes can have a negative effect on fish populations by burying eggs. Sediment is also an environmental stressor for other aquatic organisms. Unsettled sediment in the current causes turbidity levels to rise. Turbidity reduces the amount of sunlight penetrating through the water column, which results in fewer aquatic plants to provide oxygen and food for aquatic life. Sediment particles also act as carriers for adsorbed pesticide residues and phosphorus from the land to surface water and groundwater.

No-till cropping systems greatly reduce soil erosion and its negative environmental consequences. If you are renting your cropland, you may want to consider including no-till requirements.

References:

Soil Health and No-Till - <https://www.nrcs.usda.gov/wps/portal/nrcs/detail/pa/soils/health/?cid=nrcseprd940817>

Conservation Tillage Systems and Wildlife - https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs143_022212.pdf

Conservation Technology Information Center (CTIC) - <http://www.ctic.purdue.edu/CTIC%20HOME/>

Tillage Type Definitions - <http://www.ctic.purdue.edu/media/pdf/TillageDefinitions.pdf>

Cover Crops—A Better Way of Farming

By Charlie Frisk

Last fall, on the Clean Bay Backers 3rd Annual “Bringing Back the Bay Tour,” I had the privilege to visit the Brickstead Dairy Farm in southern Brown County. Brickstead Dairy Farm has been in operation by the Brick family since the mid-1800s and is now owned and managed by Dan Brick, a progressive young farmer who is a leader in practicing and promoting better conservation techniques on his farm.

Dan is utilizing cover crops and no-till agriculture on his 1,000 acre farm. To understand the use of cover crops one first has to understand the traditional way of farming. Usually when crops are harvested the ground is left largely bare except for a small amount of residue left over from the crop, and frequently the field is plowed or disked in the fall leaving even more exposed soil.

A cover crop is a planting done either shortly before harvesting or immediately after. Dan has used both techniques. In order to start the cover crop before harvesting he has hired an airplane to seed the field from the air. The advantage of seeding before harvesting is that the cover crop gets more growing time before winter sets in. The disadvantage is that seed simply scattered on the ground has poor germination success. Dan’s preferred method is to use a drill planter as soon as the crop is harvested. A drill planter drills the seed into the ground with minimal disturbance of the soil.

Cover crops consist of a mix of grasses, legumes, and root crops. Dan will use seed blends with up to a dozen different species. What are the advantages of a cover crop?

- A cover crop armors the soil for the wintertime. A cover crop effectively eliminates the problem of sheet soil erosion by not leaving any exposed soil.
- The soil will take up nutrients from the cover crop. Legumes and root crops such as radishes are particularly good for building up soil nutrients. The decay of the cover crop also adds nutrients to the soil.
- The cover crops help produce the glues that hold the soil together. Dan describes his soil after several years of cover crops as having “more of a cottage cheese look than a sugary look”.
- Cover crops greatly reduce manure runoff into surface waters. The crops also take up the nutrients from the manure thus improving soil fertility rather than allowing the manure to seep into the groundwater.
- Cover crops provide habitat and food for wildlife. Sunflowers are used in almost all cover crop mixes and they draw large numbers of birds during fall migration. Dan has seen an increase in bobolinks and meadowlarks in his fields since he began using cover crops. He has also noticed an increase in beneficial insect species. Dan describes his farm as a “1,000 acre deer food-plot”.

Dan’s farm is part of an ongoing study project being carried out by the U.S. Geological Survey. The U.S.G.S. took water samples from drain tiles on Dan’s fields that did not have cover crops for three consecutive years. Those water samples will provide baseline data for comparison

with fields using cover crops. Now water samples are being taken from the same fields with cover crops in place. Dan's expectations are that water quality will improve every year that the cover crops are used due to improved soil characteristics and uptake of the nutrients from the manure by the cover crop.



Dan Brick standing in a cover crop that was planted after harvesting wheat.

Why aren't all farmers using cover crops? Farmers are by their nature somewhat risk averse. Dan said that lots of farmers are watching his operation and talking about it. So far all of the results have been positive but many farmers are waiting to see how the cover crop-no till methods will work under a range of weather conditions. He expects to see more farmers following his lead in future years. Dan maintains that cover crops can be utilized effectively on farms of all sizes.

I have seen Dan's cover crops and I was impressed with their density and growth. I asked him why he gets such good results and he responded, "You have to treat your cover crop like any other cash crop, you wouldn't broadcast corn seed and expect a good corn crop." Dan uses a drill planter which drills the seed into the ground with minimal disruption of the soil to get excellent germination and a fast start for his cover crop.

Dan is the 5th generation on the Brick farmstead. His great-great grandfather came from Ireland in 1848 and began the farm when he purchased 120 acres through the Federal Homestead Act. Dan feels it is very important to maintain the farming heritage, "If it is not going to be farming it is going to be homes, and once it is homes the legacy is done."

Brickstead Dairy has received a number of awards for their conservation work. These awards include the "Fox-Wolf Watershed Alliance Award", the "Brown County Farm Bureau Award" and they were a finalist for the Aldo Leopold Conservation Award. Most recently they received the "NEW Watershed Champion for 2017" award from NEW Water.

If you would like to learn more about cover crops check out the Brickstead Dairy Website. Dan Brick is an eager promoter of cover crops; you can email him at dbrick@bricksteadairy.com to learn more about installing cover crops.

Requiring the use of cover crops could also be included in a rental agreement.

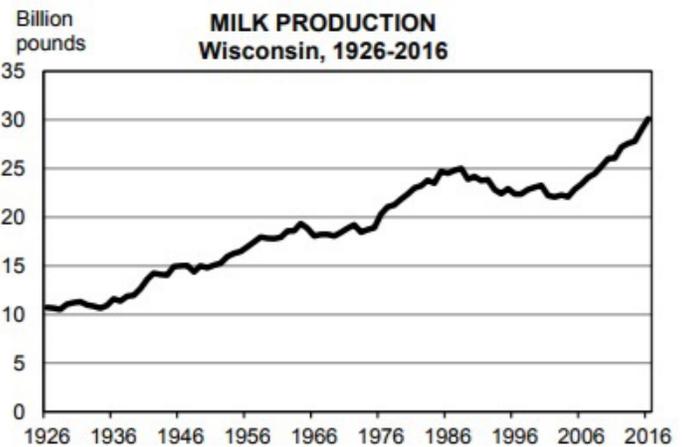
Are Tax Dollars to CAFOs Promoting Loss of Water Quality?

By Jim Wagner

Big businesses are quick to demand that we let the market dictate, rather than the government regulate, when it comes to their operations. That all goes out the door when supply vs. demand makes a shift that affects their profit margins.

In this case big business is the Concentrated Animal Feeding Operations (CAFO) for milk production, which has been able to capitalize on government subsidies that protect them from the dangers inherent in the pesky free market while also using federal environmental monies to fund their expansion.

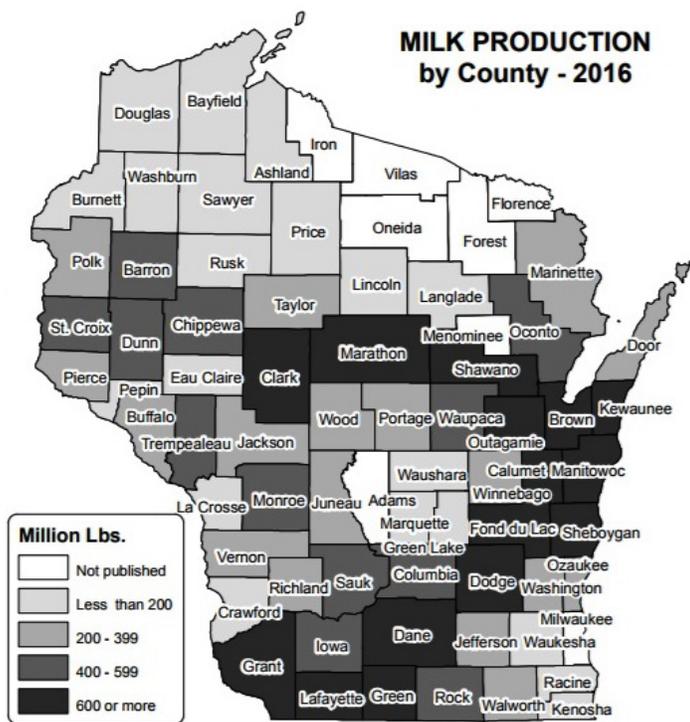
Milk production in Wisconsin has boomed in the past decade, 2006-2016, going from 23.4 to 30.1 billion pounds annually, second only to California in the nation last year (see chart below).



Courtesy of USDA

In that decade, the percentage of operations with 1,000-1,299 cows has increased from 14.6% to 15.9%, and the percentage of operations with 2,000 or more cows has risen from 23.5% to 34.7%. Meanwhile, dairy operations across the board in the 1 - 999 head range have seen declines. (Information courtesy of the USDA's National Agricultural Statistics Service, <https://quickstats.nass.usda.gov/results/A10A20F9-C0B5-390A-9471-8D19C9984FA9>).

The majority of that production comes from central and northeast Wisconsin (see chart), which includes Brown, Kewaunee, and Outagamie counties.



Courtesy of USDA

From an economics standpoint, the increased milk production is creating a glut in the market, dropping prices, which are good for consumers, but exacerbating and increasing the need for regulatory protection for producers. It doesn't help when milk processors – those who buy the milk from farmers and sell it either domestically or for export - decide to enter the production game, buying existing CAFO milk farms, expanding its operations, and squeezing out smaller family farms in the area. (<http://www.htrnews.com/story/opinion/2017/04/07/grassland-wisconsin-dairy-farmers-milk-processor-holman/100127242/>)

How are they able to get away with doing that? Subsidies, regulations, and tax credits that promote getting bigger and, supposedly, more efficient.

Margin Protection Program for Dairy (MPP-Dairy). A new program under the Agricultural Act of 2014, it offers dairy operations insurance based on the average national dairy production margin. If milk prices drop relative to the amount of average feed cost, the operation is protected from huge losses. (<https://www.ers.usda.gov/topics/animal-products/dairy/policy.aspx>)

Dairy Product Donation Program (DPDP). Another new program under the Agricultural Act, it requires the government to buy up dairy products if milk prices drop at the prevailing market price. The silver lining is the dairy products are given to low-income populations through food banks and other feeding programs.

Environmental Quality Incentives Program (EQIP). Initially designed as an incentive to get farmers to preserve the environment through wetlands preservation, grassland management, and erosion control, the program is a cash cow for CAFOs to use the money for the expansion of their

operations. Originally, the EQIP was capped at annual payments of \$10,000 but subsequent legislation makes it possible for a CAFO to reap \$450,000 per year. What's more, the legislation prohibits the USDA from disclosing, through Freedom of Information Act (FOIA) requests, what the money is being used to fund (CAFOs-The Tragedy of Industrial Animal Factories is available to review at the CWAC office).

Dairy & Livestock Tax Credit. The 2011 Wisconsin Act 15 allows dairy operations to claim tax credits of 10% for any modernization/expansion costs during the year, up to \$75,000. (<http://docs.legis.wisconsin.gov/2011/related/acts/15.pdf>)

While the subsidies apply to Wisconsin dairy farmers, CAFOs have been taking full advantage of the financial breaks to increase their operations, at the cost of local family farms that average 100 head of cows. As CAFOs increase in size, they decrease the ability of smaller farms to compete when it strictly becomes a numbers game when it comes to volume. Is a milk processor going to favor dealing with one or two CAFOs rather than 100 individual farms (or even none, if they are also a producer?) when it comes to efficiency?

The news stories show time and time again that the increase in size leads to larger, and even more destructive, environmental spills from manure pits, and hauling and spreading. Besides accidental discharges, reports of intentional dumping into waterways have surfaced. With millions of gallons of liquid manure to dispose of it is no wonder these problems persist.

The Action in CWAC

By Dean Hoegger

Thank you to the many members who paid their 2017 membership dues. If you have not renewed, please help us fund our operations for the remainder of the year.

Membership dues are based on a calendar year. Please see your newsletter label or email notice which indicates the last year that you donated.

Read below about actions we have taken in the last three months.

Be sure to contact us if an environmental issue arises in your community. CWAC is here to support citizen action. The following are our most significant activities since March.

Legal Actions

As a citizen organization, an important function of CWAC is to take legal actions on behalf of our members to protect human health and the environment. Because individual members may be reluctant to file a legal action, the CWAC

board of directors believes this is an important part of our mission as an organization. Here are some current legal actions and our efforts to improve environmental laws.

Help us oppose DBA's lawsuit threatening the DNR's authority to regulate CAFOs.

The Wisconsin Dairy Business Association has filed a lawsuit which challenges the DNR's authority to regulate concentrated animal feeding operations (CAFOs). This case is about getting rid of CAFO water discharge permits. Many Wisconsin environmental organizations, former DNR officials, and citizens impacted by CAFOs would say that regulations for these industrial farms lack proper enforcement.

Our response to the lawsuit will be to file a brief with the court. Please consider a donation to help pay for our legal fees.

CWAC promotes citizen comment on NR151 revisions.

Although not a typical legal action, influencing the rule changes will have legal implications in the form of administrative rules. CWAC has pushed for stricter manure spreading rules which can be found on page 2.

We cohosted a tele town meeting on September 6, providing more information about the revisions and how to help get them passed to citizens from all across the state. We also sent notification letters and/or emails to all members about testifying at the hearing that was held on September 15. Please send a comment letter or email to the DNR. See page 2 for details.

CWAC monitors actions by the state legislature.

Again, not a typical legal action, yet monitoring for harmful bills and actions, and supporting those that provide greater protection, is necessary to insure that laws are not passed without public participation.

Recently, we urged you to let your legislators know that you do not want a repeal of Wisconsin's "Prove It First" mining law. The bill authored by state Senator Tom Tiffany and Representative Rob Hutton (SB 395) will soon be before the Senate Committee on Sporting Heritage, Mining and Forestry and would roll back parts of Wisconsin's long-standing sulfide mining law.

Midwest Environmental Advocate attorney Jimmy Parra explains how the bill:

- repeals Wisconsin's "prove-it-first" requirement that mining companies show their method of mining,
- exempts parts of the mining process from important environmental protections,
- removes protections for public and private water supplies from over pumping and depletion, and
- eliminates financial obligations for the mine that were designed to ensure there would be money to address any long term problems at a mining site.

The people of Wisconsin worked hard to put the "prove-it-first" into law with bipartisan support and we oppose this move to roll back long-standing progress. Tell your legislators you do as well.

[Read more details about SB 395 on MEA's website: http://midwestadvocates.org/news-events/news/keep-wisconsins-prove-it-first-mining-law/](http://midwestadvocates.org/news-events/news/keep-wisconsins-prove-it-first-mining-law/)



The Flambeau Mine (a Kennecott/Rio Tinto project) operated on the banks of the Flambeau River near Ladysmith, Wisconsin in the mid-1990s. This photo was taken in 1994 when the river flooded during heavy rains and came within 20 horizontal feet and 4 vertical feet of spilling into the mine pit.

(Photo by Bob Olsgard of Sarona, WI, September 17, 1994)

<https://flambeaumineexposed.wordpress.com/>

CWAC serves on Congressman Gallagher's Save the Bay committee for the Lower Fox River.

CWAC continues to serve on the committee's education and outreach subcommittee. Contact us if you would like copies of the meeting minutes, agendas, and reports.

Update on Safe Drinking Water Act Petition for Emergency Action, filed with EPA October, 2014.

Petitioners include CWAC, Midwest Environmental Defense Center, Environmental Integrity Project, Midwest Environmental Advocates, Clean Wisconsin, and Kewaunee CARES.

Finally after 30 months, Kewaunee Co. authorities were notified this spring that it will be part of the statewide program for providing safe drinking water on a limited basis. However the program has not been well publicized and slow to implement.

EPA representatives have not shown an interest to continue meeting to discuss further actions. They have indicated an uncertain ability to provide further assistance under the current administration.

The petition and supporting documents can be found at:

www.cleanwisconsin.org/kewaunee-safe-drinking-water

Citizen Petition for Corrective Action, filed October 2015.

The 16 petitioners, including CWAC Board members Dean Hoegger and Jim Wagner, and members Bill Iwen, Nancy Utesch, Lynn Utesch, and Elaine Swanson, are represented by Midwest Environmental Advocates.

The EPA has not updated their website since August 2016 which still shows of 75 deficiencies, only six deficiencies are noted resolved and 13 are noted as requiring rule or statutory changes. To see the current status of EPA's review, go to: <https://www.epa.gov/sites/production/files/2016-07/documents/wi-lar-status-20160728.pdf>

See petition documents and letters of support at: <https://www.epa.gov/wi/npdes-petition-program-withdrawal-wisconsin>

Update on coal dust action.

A second test to determine the rate of coal dust deposition was conducted in August thanks to funding from state representative Eric Genrich and member Brian Madigan. C. Reiss Owner Jed Kroh did not respond to our requests for a meeting and information about the type of coal being stored. DNR reports from 2014 showed petroleum coke was stored at the site. The EPA reports that animal testing to exposure of dust from petroleum coke could lead to irreversible lung damage.

See the complete article, "The Dirt on Coal" by intern Heather Lutzow on page 12.

Contact us if you have concerns about coal dust pollution in your neighborhood.

Promoting ordinances to ban manure spraying.

CWAC continues to offer presentations to residents and town officials. We have been working with a resident of the Town of Liberty Grove and providing information to town board members. Thus far, at least 16 northeast Wisconsin towns and cities have passed a ban. For more information on the issue, go to our website for Priority Issue: Ban Manure Spraying for more information. <http://www.cleanwateractioncouncil.org/issues/spray-irrigation/>

If your town has not passed a ban, contact us for assistance.

Join the Clean Water Act Enforcement Network.

CWAC is sponsoring this group and providing training on how to monitor pollution permits. Group members monitor for pollution permit violations online and through onsite observations. Midwest Environmental Advocates and private attorney Barry Blonien are providing legal support for the group. Research work can be completed at home, shared with the group online, and then reviewed during a monthly meeting in person or by telephone. Contact us if you would like to work on this enforcement effort to protect the waters of northeast Wisconsin.

CWAC's Educational Efforts in the Community

Contact us to schedule a presentation for your group on a variety of environmental issues including The Hazards of Manure Spraying, Protect the Waters of the Northeast Wisconsin, The Hazards of Burn Barrels, Communities on the Road to Zero Waste and more. The presentations can be tailored to your group's age and available time. Also, contact us if you would like us promote or co-sponsor your event or presentation.

Back 40 Mine Opposition

CWAC has spread awareness of citizen opposition to the mine planned for an area on the Michigan side of the Menominee River west of Menominee and around sacred tribal lands of the Menominee Indians. We assisted citizens to successfully urge the Door County Board to pass a resolution opposing the mine. Brown and Marinette Counties and Menominee County in Michigan have also passed resolutions.

Email us for information on how you can help deny social license for the mine.

Exhibits

CWAC interns Heather Lutzow and Daniel Shepard exhibited at the Saturday Green Bay Farmers Market on July 22 where they were well received and we gained two new members. Intern Anna Hoesley and executive director Dean Hoegger exhibited at the Lake Michigan Stakeholders meeting in Manitowoc and attended the conference. Several members and board members hosted our booth for three days at the Artstreet fine arts and cultural festival in Green Bay where they shared our newsletters and citizen action page.



Intern Heather Lutzow at the farmers market.

Presentations

CWAC vice president Charlie Frisk presented "Citizen Action to Protect the Waters of Wisconsin". President Dean Hoegger was a cohost for the NR151 tele town informational meeting.

**Help support our Health Forums:
Protecting Your Family from Toxins in
the Home and Environment**

**Many of our forums can be hosted for
\$150 or less. Please consider sponsoring
a forum.**

Website Updates

Articles and resources on our website continue to be updated and the Summer Newsletter was added.

Outreach through Newspaper and Radio

CWAC Vice President Charlie Frisk frequently has letters to the editor appear in publications around the state. He is willing to write an article for you. Just send us an email request.

Weekly CWAC Updates

Each Tuesday we email the CWAC Weekly Update of actions, alerts, events, and the latest information on topics of concern. Send your postings by Monday evening. If you are a member with an email address and you are not getting the CWAC Weekly Update, check your spam folder before emailing us to request to be put on the mailing list. Emails are sent via Bcc to protect your privacy.

CWAC represented at screening of “From the Ashes” documentary.

On 6/21/17 the Climate Change Coalition of Door County sponsored a screening of “From the Ashes,” a documentary about the coal industry. One of our interns, Heather Lutzow, represented CWAC, and was one of four people on the reaction panel after the film to have a discussion about their thoughts on it. Heather has lived across the river from the coal piles along the Fox River for close to 20 years, and after doing some recent research on the health effects of coal dust has begun to question whether or not it is really a coincidence that both her and her mother developed asthma sometime after moving into the home.

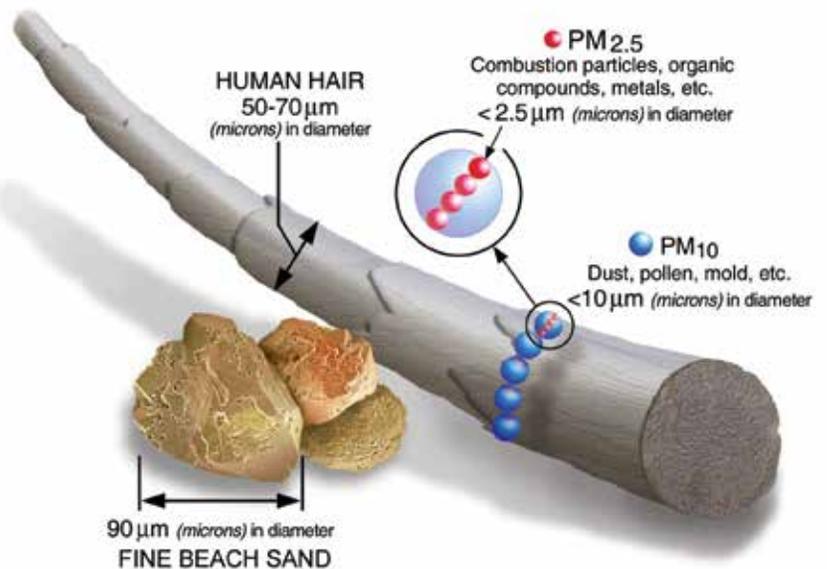
For more information about the film visit: <https://www.fromtheashesfilm.com/>
Attend a screening of the film on October 3, 6:30 p.m., at the Christie Theater, UW-Green Bay.

The “Dirt” on Coal

By Heather Lutzow, Intern

If you ask Green Bay residents living across the Fox River from the coal piles if they believe coal dust travels across the river and to their homes, most of them will tell you yes. I also happen to be one of those residents. During the warmer months of the year, spraying our lighter-colored siding down with a hose is a regular occurrence, as a black dust seems to always build up on it.

In August of 2016, Clean Water Action Council collected samples from the siding of a home in the Astor Park neighborhood. The samples tested positive for the presence of coal dust. The results of the test were not too surprising, but still left some unanswered questions.



Size comparisons for particulate matter particles.

<https://www.epa.gov/pm-pollution/particulate-matter-pm-basics#exposure>

Since there was no known timeframe of how long the dust took to accumulate, it was decided a follow-up test needed to be done to give a better idea of how long it might take for the dust to travel and start accumulating on the outside surface of a home.

On June 6, 2017, the front of my home was sprayed and wiped down to remove the black dust that had been building up on it over the winter months (There was a lot!). On August 8, 2017, a sample was taken from the front of the home. I was pleasantly surprised at how clean it still appeared to be after 63 days.

However, after getting the results back from EMSL Analytical, the samples again tested positive for coal dust - but at a level less than the 2016 sample. I had also noticed during this time that one of the larger coal piles was covered over with tarp. Unfortunately, not all of the piles were covered.

I had read somewhere that not all coal is created equal, so I decided to look into the details of what types of coal are stored at this site along the Fox River. The C. Reiss stormwater pollution prevention plan states that one of the materials handled there is petroleum coke. Often referred to as “pet coke,” it is a product of oil refining and is one of the more harmful types of coal.

C. Reiss officials, including the owner Jud Kroh, did not respond to requests from CWAC to confirm the presence of petroleum coke, or for a meeting regarding citizen concerns.

A study posted on the EPA's website found that after 2 years of repeated exposure to petroleum coke, irreversible respiratory effects were found in both rats and primates at all concentrations tested. This included chronic pulmonary inflammation, dose-related increased lung weights, and discoloration of the lungs.

A WI DNR Air Quality representative was able to answer some of the questions I had regarding the coal piles along the river. He told me that the C. Reiss coal facility does not need an operation permit for the particulate matter given off into the air because the emission rate is too low. When I asked how we would know if it is too low if they do not have any air quality monitoring equipment set up at the site, he told me the emissions are calculated by taking coal throughput (the amount of material passing through a system or process) plus emission factors set by the EPA to arrive at a total emissions number.

It is basically just a mathematical equation, which may or may not be accurate since there is no equipment which actually monitors the emissions. I was also told that since coal is only stored at the site and not burned, this is a mechanical, or low-temperature operation, so the very small particulate matter (PM2.5), which gets lodged in the lungs and stays there, would be considered insignificant.

This, of course, does not take into account incidents like the one last fall when one of the coal piles combusted and burned for at least four days. Since it could not be extinguished using water, they had to just keep moving the pile around until it went out.

The emissions from burned coal is well known to have adverse health effects on people. This is a reason why WPS had to start shutting down its coal-fired generator units. In 2006, they were found to be in exceedance of their legal air pollution limits. Two units were shut down in 2007 and two more were closed in 2015. There are still two coal-fired units in operation at Green Bay's Pulliam Plant. There is no confirmed date on how much longer these two will operate.

A Development Director from the City of Green Bay says that the city

believes there is a "higher and better use for the property other than coal storage." He said at the very least, a more active manufacturer or shipper, but best case would be to turn it into a development with public space that takes advantage of the waterfront and downtown.

However, a study was done that found it could cost between \$20 - \$50 million to properly move the coal piles. He went on to explain that the city does not have this kind of money without having a guaranteed development to take its place. He mentioned that if and when the last two WPS coal-fired units are shut down, this could potentially produce enough space for the piles to be moved to.

But for now, it is a waiting game.



Tires Burned by Local Industries Affect Our Air and Water

By Daniel Shepard, intern

Expera's Kaukauna paper mill and Xcel's Bay Front Generating Station in Ashland are reported to be burning used tires in their facilities. Tire derived fuel (TDF) is an energy source obtained from combusting old and degraded tires.

So why are tires being used to fuel the flames of industry? Tires are most often burned because they pack a high power punch with more BTUs of energy than many other fuels. This increases the combustion temperature in boilers which proponents say can actually lead to a cleaner burn with fewer particulates emitted. However, opponents indicate that some studies show higher levels of dioxin emission compared to western coal. Tires are typically shredded and then consumed by cement kilns, pulp and paper mills, and power plants.

The Xcel plant in Ashland has a capacity of about 56 megawatts and burns mostly waste material largely comprised of wood, railroad ties, and bark. In addition to this burn mix, which is consumed at a rate of about 20-25 tons per hour, about 1/3 of a ton of TDF is also incorporated. According to one official at Expera, tires make up around 4% of their burn mix but they're permitted to burn a coal mixture containing up to 8% TDF.

In the US alone, there are around 300 million tires that are disposed of annually. What happens to all of those tires? Some are stored in open lots, left to weather and degrade, while others are processed and repurposed into new

rubber based products. According to one report, about 80% of tires are reused or recycled in some way, and about 130 million of these tires are burned as TDF, which makes TDF the largest consumer of old tires. The advantages of TDF are heralded by proponents as numerous and greatly beneficial, but many advocate against their use because of their potential to pollute and the diversion of attention away from true recycling techniques.

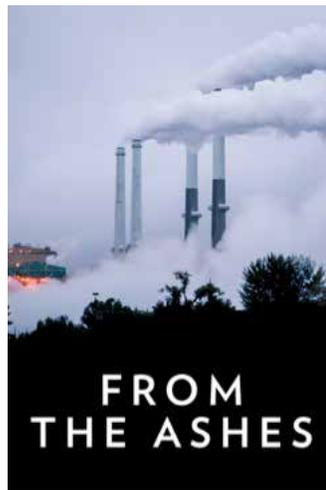
Liberty Tire Recycling is one of the largest tire recycling facilities in the nation and processes about 140 million tires each year, some of which are turned into TDF to be burned in Ashland. Green Bay's very own Bay Enviro Tire, which claims to recycle 100% of their tires, supplies Expera with shredded tires for their paper industry.

As mentioned before, other energy groups are not so optimistic. According to the Energy Justice Network, "The fumes emitted [from TDF] are packed with the many toxic chemicals that tires contain (including volatile organic compounds such as benzene, metals such as lead, polycyclic aromatic hydrocarbons such as benzo(a)pyrene, and synthetic rubber components such as butadiene and styrene). Additionally, the chlorine content in tires leads to the creation of dioxins and furans (which are extremely toxic chemicals) when tires are burned."

Tires are also vulcanized with sulfur which creates sulfur dioxide when burned. When mixed with oxygen and water in the atmosphere this turns into acid rain which can have many damaging effects. As National Geographic reports, "when acid rain falls to Earth, it damages plants by changing soil composition; degrades water quality in rivers, lakes and streams; damages crops; and can cause buildings and monuments to decay."

Furthermore, classifying TDF as recycling is a disservice to communities and local residence. As the Global Alliance for Incinerator Alternatives (GAIA) argues, burning waste materials such as TDF in order to generate electricity "creates a demand for 'waste' and discourages much needed efforts to conserve resources, reduce packaging and waste, and encourage recycling and composting." When companies claim they recycle products but actually practice incineration, they're misleading the public as to their actual practices. Burning tires is not recycling them because after they are incinerated the material has completely left the waste stream, never to be used again.

The Clean Water Action Council stands against the use of TDF and calls for the implementation of more rigorous pollution testing and additional research. More stringent emissions restrictions might also be in order.



"Coal plant pollution kills 7,500 Americans a year and causes many more serious illnesses. *From the Ashes* shows the risks we face as a nation if we continue to rely on coal. It examines how Americans in local communities, including in coal country, are helping to lead the transition toward cleaner air and stronger economies."

-Michael Bloomberg

Join us for a screening of this documentary about the coal industry.
Sponsored by Clean Water Action Council of NE WI

A short discussion and pizza will follow right after the 1 hr. 20 min film.

Tuesday, October 3, 6:00 p.m.
Christie Theater, UWGB



Co-sponsored by the Round River Alliance student organization

Children and Environmental Health:

What you need to know to protect your children.

With Pediatrician Elizabeth Neary



Dr. Neary will discuss risks to children from radon, air and drinking water contaminants, exposure to chemicals and endocrine disruptors from plastics and how to minimize the risks.

Elizabeth J. Neary, MD, MS is a Clinical Adjunct Assistant Professor, Dept. of Pediatrics, UW School of Medicine and Public Health and a member of the steering committee of the Wisconsin Environmental Health Network, working to inform healthcare professionals, the public, and policy makers about the effects of environmental toxins on public health.

Saturday, October 21, 9:30-11:00 a.m.
Brown Co. Library Central Auditorium



Child care is available at the library by reservation.

Phone or text 920-421-8885



Vianna Alfaro is a double major in Environmental Policy and Planning and Business Administration with an emphasis in Supply Chain Management at UW-Green Bay. She loves to travel and paint in her free time. Once she

graduates she hopes to gain supply chain management experience before attending graduate school. Her goal is to incorporate environmental sustainability practices into supply chains.



Dylan Gilbertson is a junior at UW-Green Bay studying Environmental Sciences. His interests include fishing, hiking, sports, and camping. He is a member of the Public and Environmental Affairs Council on campus and plans to graduate with a Bachelor's Degree after Fall 2018. Dylan plans on working with the Department of Natural

Resources and eventually attending graduate school.



Leah Schrank is a Sophomore at the University of Wisconsin-Green Bay and she is studying Environmental Science and Geoscience. After graduation in May of 2020 she would like to attend graduate school to continue her studies in freshwater sciences. After graduate school she hopes to be assisting in the protection

and conservation of the Great Lakes and other freshwater sources. Her interests also include kayaking, hiking, and camping.

Monday, October 2, 5:30 p.m. – 6:30 p.m.

Family Nature Nights: Soil Stories

Green Bay Botanical Garden

Learn about the plants and animals at the Garden! Wear your walking shoes and let us guide you through a family adventure.

Free for GBBG Member Family; \$5/Non-Member Family

<https://17699.blackbaudhosting.com/17699/Family-Nature-Nights-Soil-Stories>

Tuesday, October 3, 6:00 p.m.

Film: From the Ashes

Christie Theater, UWGB

Join us for a screening of this documentary about the coal industry.

Sponsored by Clean Water Action Council, The Round River Alliance, and Climate Change Coalition of Door County.

A short discussion and pizza will follow right after the 1 hr. 20 min film.

Tuesday – Saturday, October 3-7

World Dairy Expo

Alliant Energy Center, Madison, WI

World Dairy Expo is where the dairy industry meets.

No other dairy event in the world compares. Designed for dairy producers and industry partners World Dairy Expo is a showcase for elite dairy cattle, cutting edge research and modern technologies. Admission is \$12 daily or \$35 for the season.

<https://worlddairyexpo.com/>

Thursday, October 5, 5:00 p.m. – 7:00 p.m.

Grazing Cover Crops

Jason & Jocelyn Cavadini Farm, Marshfield, WI

Jason has extensive knowledge with cover crops and seeded a cocktail of cover crops into the out wintering pasture with intentions of improving soil health and extending his grazing season into the winter. Come to see how cover crops can fit into grazing systems and how cattle handling facilities can be designed at a low cost.

For more information, contact Bill Kolodziej, 715-261-6038 or William.kolodziej@co.marathon.wi.us

MARK YOUR CALENDAR!

Thursday, October 5, 6:00 p.m. – 7:30 p.m.

Composting 101

Green Bay Botanical Garden

Discover how to effectively manage yard trimmings, food waste, and other organic materials generated at home and turn them into beneficial compost for your garden.

\$5/GBBG Member & Non-Member

<https://17699.blackbaudhosting.com/17699/Composting-101>

Thursday, October 19, 6:00 p.m. – 7:30 p.m.

Buckthorn Removal

Green Bay Botanical Gardens

Learn how to recognize and effectively manage invasive buckthorn (and other invasive plants). We will venture into the Garden and demonstrate removal first-hand.

\$5/GBBG Member & Non-Member

<https://17699.blackbaudhosting.com/17699/Buckthorn-Removal>

Tuesday, November 7th – 10th

State of Lake Michigan Conference

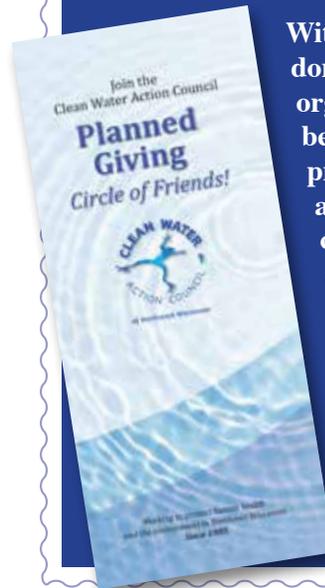
Hyatt Regency, Green Bay, WI

The first of an annual series on the State of Lake conferences that is aimed to connect the science and policy communities. This conference will focus on issues relating to Lake Michigan by bringing together specific research and policy developments on Lake Michigan to facilitate discussion and provide interaction among attendees. Workshops and field trips are also planned to broaden discussions.

Register online at: <http://iaglr.org/sol/solm17>



Join Our Planned Giving Circle of Friends



Without planned giving donations or legacies, our organization would not be able to do the work of protecting human health and the environment at its current level. Please consider supporting our endowment fund at the Greater Green Bay Community Foundation with a gift in your will or bequest.

Contact us for a
Planned Giving Brochure.

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Find us on Facebook for updates on hearings and current or upcoming events.



of Northeast Wisconsin

Join or Renew Your Membership to Clean Water Action Council for 2017!

Renewal New Member Date _____

() \$20 Individual () \$30 Family (**this amount would really help**)

() \$50 Sustaining () \$100 Donor () \$500 Benefactor

() Non-member donation of \$ _____ for _____

() Other \$ _____

() Please send me information about making a planned gift to CWAC

Name(s) _____

Address _____

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Phone _____

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PLEASE VOLUNTEER! (BE SURE TO PROVIDE PHONE NUMBER ABOVE)

the newsletter events work at office mailings

joining or leading one of the committees other

Send check or money order to: **Clean Water Action Council**
P.O. Box 9144
Green Bay, WI 54308

*CWAC is a registered non-profit organization.
Your contributions may be tax-deductible. **Thank you!***

COMMITTEE CHAIRS

Events: Open

Non-Point Pollution: Charles Frisk

Public Health: Dean Hoegger

Membership, Finance and Fund-raising: John Hermanson

Phone numbers are listed under Board Members

The newsletter, "Clean Water Action Council of N.E. WI" is published quarterly by the Clean Water Action Council of Northeast Wisconsin, Inc., P.O. Box 9144, Green Bay, WI 54308, a registered non-profit charitable, educational organization.

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Dean Hoegger, Editor
Erik Fischer, Graphic Designer



**Clean Water Action Council
of Northeast Wisconsin**

P. O. Box 9144
Green Bay, WI 54308

of Northeast Wisconsin



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For previous newsletters, go to: www.cleanwateractioncouncil.org