Clean Water Action Council

OF NORTHEAST WISCONSIN

Celebrating 29 years of working to protect public health and the environment in Northeast Wisconsin

FALL 2014

What's Happening to Our Waters?

A look at local water concerns in Wisconsin and the efforts to keep them safe.

"Water is the most critical resource issue of our lifetime and our children's lifetime. The health of our waters is the principal measure of how we live on the land."

~ Luna Leopold

An Introduction by CWAC President Dean Hoegger

Leopold's message resonated at a recent hearing of the Kewaunee County Land and Water Conservation Committee meeting, held to take public comment on the county's Public Health and Groundwater Protection Ordinance. One after another, citizens spoke about how the protection of their groundwater should take precedence over the profits of corporate interests. In this case, owners of the 16 concentrated animal feeding operations in the county. With more than a half-billion gallons of liquid manure spread over 80% of the county, it is no wonder that nearly 30% of the county's well water tests indicated the water was unsafe for drinking. It is no wonder there was a great sense of urgency in those voices advocating for the safety of their water to protect the health of their families.

The message is not unlike that of the many voices rallying around the protection and cleanup of the Fox River back in the 1980s, when the Clean Water Action Council was formed. At that time, CWAC leaders and other environmentalists were demanding enforcement of the Federal Clean Water Act (CWA), which governed the point source pollution coming from industries along the river. Again, corporate interests were profiting from what they were doing in their factories while doing significant and lasting damage to the Fox River and Green Bay ecosystem. While you will read in this issue about how more PCBs have been removed from the river, it must be remembered that their impact on the fishery has already lasted half a century, and will likely last a century more.

The CWA and its provisions for citizen enforcement resulted in a tremendous reduction of point source pollution, such as effluent from factories and sewage treatment plants. However, it did little to control agriculture's contribution to bodies of water such as Lake Winnebago, Green Bay, and Lake Michigan (called nonpoint source pollution). Today, most experts agree that 70% or more of the phosphorus coming to these waters is from agriculture. Yet these waters provide drinking water to millions of people. Locally, the City of Oshkosh obtains its water from Lake Winnebago. Marinette draws its water from Green Bay. Water for the cities of Green Bay and Manitowoc comes from Lake Michigan. As you read about what happened in Toledo, you will have to ask if the same could happen here.

You will also read in this issue that concerned citizens throughout northeast Wisconsin are educating their neighbors and engaging their elected and appointed officials in an effort to protect our most critical resource: water. We must protect it for today and for our children tomorrow.

"Anything else you're interested in is not going to happen if you can't breathe the air and drink the water. Don't sit this one out. Do something. ~ Carl Sagan

What the Waters Tell Us

By Gordon Stevenson

The Cuyahoga River caught on fire in Cleveland, Ohio, in 1969. Three years later, the Clean Water Act of 1972 was passed. Forty-five years after the Cuyahoga River burned, the citizens of Toledo could not drink the water from Lake Erie that they had depended on for decades. Toxins from a bloom of blue-green algae, driven by agricultural runoff, were the problem. We have three water quality crises ongoing right now in this state that are on par with the Ohio events: the Dead Zone in Green Bay, the nitrate-contaminated groundwater of the Central Sands, and the nitrate and pathogen-contaminated groundwater of Kewaunee County.

Like what happened in Lake Erie, phosphorus-enriched runoff primarily from agriculture has fueled blooms of algae in Green Bay. The algae dies, sinks to the bottom and consumes oxygen. There is now a hypoxic area, or Dead Zone, that extends 30 miles into the Bay. Almost nothing can live there because the oxygen has been consumed. The data collected strongly suggests that the Dead Zone is expanding and the fisheries are at risk. Notably, the Fox River Valley and other areas of northeastern Wisconsin is "CAFO Alley." Brown, Kewaunee, Manitowoc and Fond du Lac Counties have the highest densities of Concentrated Animal Feeding Operations (CAFO's) of anywhere in the state.

The groundwater in the Central Sands is already contaminated with nitrates as a result of excessive chemical fertilizers from corn, potatoes and other row crops. Seventeen-26% of the water supply wells in the Central Sands exceed the nitrate drinking water standard of 10 mg/l. In some localized areas of the Central Sands, the rate of nitrate well contamination is 60%. Ingestion of nitrates is a severe human health threat. Nitrates are associated with blue baby syndrome, several forms of cancer and diabetes. Ironically, since "CAFO Alley" has become so crowded, the Central Sands is the new destination for CAFO's. The concentration of nitrates in the groundwater of the Central Sands has increased every year since records have been kept. With the arrival of CAFO's, nitrate contamination will accelerate.

Recent news from Kewaunee County is not good. Thirty percent of the water supply wells are contaminated with nitrates and pathogens, half of the wells in the Town of Lincoln that serve 334 households are contaminated with nitrates and serious disease-causing bacteria. In 2004, a child in Kewaunee County became gravely ill from E coli bacteria. CAFO manure had contaminated her family's well. Campylobacter, one of the pathogens detected in Kewaunee County wells, was responsible for the deaths of 7 people and illnesses of 2,300 more in Walkerton, Ontario, after livestock manure contaminated a public water supply well. Kewaunee County has a human population of 20,500 people and a cattle population of 42,000. Many of those cattle are housed on 15 CAFO's. In terms of organic pollution potential, the cattle of Kewaunee County is equivalent to 750,000 people. Milwaukee's human population is 600,000 people and they have a sewage treatment plant. Yet the waste from the cattle of Kewaunee County goes untreated.

While Wisconsin has a handful of largely voluntary programs that seek to control agricultural runoff to our water resources, those have not been effective. The permit program for CAFO's is the single state-administered environmental regulatory program that applies to agriculture. It is proving to be ineffective as well. There is another program called Livestock Siting that purports to protect the environment from livestock operations. Most any livestock operation can comply with Livestock Siting; the bar is low. Its real purpose is to allow CAFO operators to locate most anywhere they like without interference from local communities and citizens.

Wisconsin dairy farmers currently produce 25 billion pounds of milk annually. Global demand for dairy products is at an all-time high. The owners of dairy CAFO's proudly assert that they want to feed the world. That is code for the desire to cash in on an expanding market. The State of Wisconsin is more than happy to help. The "Dairy 30 by 20 Initiative to Grow Wisconsin Dairy" is a state grant program with a goal of increasing milk production to 30 billion pounds by the year 2020. Wisconsin's current cattle population already is equivalent to the organic pollution potential of the human populations of Tokyo and Mexico City, the two most populous cities on the planet. If Dairy 30 by 20 succeeds, a quarter million more dairy cows will be on Wisconsin's landscape. That equals Los Angeles. Apparently, the marketplace trumps everything else; even our health.

Dr. Luna Leopold, son of famed Wisconsin conservationist Aldo Leopold, was recognized during his lifetime as one of the nation's foremost authorities on water. He said, "The health of our waters is the principal measure of how we live on the land." A resolution to the agricultural water quality problem can begin when our state government, the livestock industry and all the rest of us recognize that the ability of Wisconsin's landscapes to yield agricultural products is finite. There is a unique agricultural carrying capacity for each agricultural landscape in this state. The agricultural carrying capacities for the watersheds that drain to Green Bay and the lands that sit on top of the groundwater of the Central Sands and Kewaunee County have been exceeded. The health of the water at those places is telling us how we have lived on the land. I hope we are listening.

Over my 30-year career in water quality protection, I cannot recall a time in Wisconsin when the water quality problems were so severe and so numerous. I cannot recall a time when state government has ignored the needs of its citizens so blatantly. I cannot recall a time when state government's response has been more complicit. We need

agriculture and we must have working landscapes. But let us not work a landscape so hard that all the fish die; let us not work a landscape so hard that rural residents can't drink the water; and let us not work a landscape so hard that parents fear for the lives of their children.

And let us not feed the world. The price is too high.

Gordon Stevenson is a 26-year veteran of the Wisconsin Department of Natural Resources. His last assignment was serving as the Chief of Runoff Management until his retirement in January of 2011. Gordon is also well versed in environmental ethics, having generated a number of papers on this topic and has spoken extensively on water quality issues. He currently serves on the Board of Directors for Midwest Environmental Advocates.

Contaminated Wells Spur Tougher Waste Spreading Ordinance in Kewaunee County

By Charlie Frisk

Author's Note: All italicized portions of the article come from an article by Kate Golden, a reporter for the Wisconsin Center for Investigative Journalism, (www.WisconsinWatch.org). Kate Golden's full article is published at http://wisconsinwatch.org/?p=36550

According to Kewaunee County Land and Water Conservation Director Andy Wallander, "In karst topography, even if a farmer follows the nutrient management standard to a "T" you can still have groundwater contamination." *Karst regions include parts of Brown, Calumet, Door, Manitowoc, and Kewaunee Counties. In Karst areas the bedrock is Silurian dolomite, a type of bedrock subject to deep cracks and fissures that allow waste water to move very rapidly to the aquifer. Thin soils over cracked Karst bedrock; that is the geologic recipe that makes groundwater in northeastern Wisconsin so vulnerable to contamination. Water on the surface seeps through the earth too fast to be filtered before it reaches the aquifer.*

"With the type of soil common in Kewaunee County, water could travel through 18 feet of soil in one to two days," said Maureen Muldoon, a University of Wisconsin-Oshkosh associate professor of hydrology. "That's just not enough time for soil to filter out contaminants," she said. The 2007 Karst Task Force Report, a study by scientists, farmers, and other stakeholders called for greater restrictions on land application and storage of waste to protect groundwater in this region. The report said spreading of waste on soils up to 5 feet posed an "extreme" risk of contamination, from 5 to 15 feet "high", and from 15 to 50 feet a "significant" risk.

In an effort to prevent more taps from running brown, Kewaunee County officials are considering an ordinance that would ban waste spreading in winter and early spring on fields with shallow soil. The proposal bans spreading of any waste; including manure, animal remains, human waste, and other industrial byproducts on areas with less than 20 feet of soil on top of bedrock between Jan. 1 and April 15, when contamination is most likely. According to Davina Bonness, Kewaunee County Land and Water Conservation Department Water Quality Specialist, that time period was selected because that is when the bulk of the groundwater recharge occurs, due to snow melt, ground thawing and typically heavy spring rains. "The recharge period is when the bulk of contamination events occur," stated Bonness.

Andy Wallander stated, "people think this ordinance is just about animal manure, but in reality it will cover all types of waste; septage, (the waste from residual holding tanks and septic systems), sewage sludge, bio-solids, industrial wastewater, animal waste, or any combination of those wastes." One of the largest concentrations of contaminated wells in Brown County occurred not from manure spreading, but from the spreading of rendering plant wastes. Rendering plants process dead animals and dead animal parts left over from packing plants.

About 500 million gallons of liquid manure are spread on Kewaunee Co. fields each year. Thirty percent of the private wells countywide have tested as unsafe from bacteria or nitrates and potentially toxic salmonella has been found in some homeowners wells. Obviously this is a county that is experiencing problems with waste spreading and has the potential for even greater problems in the future if changes are not made in spreading regulations. But that does not mean the proposed ordinance is going to be a slam-dunk. "I wrote this with the full intent that the Dairy Business Association is going to come back and challenge it," stated Andy Wallander. Wallander's prediction may come true. John Holevogt, a lobbyist for the Dairy Business Association, questioned whether the law is based on sound science and whether Kewaunee Co. has the authority to do "everything that the ordinance contains." The Dairy Business Association could also challenge the ordinance on the grounds that it is tougher than state standards, which would subject the ordinance to court challenges. Town of Red River dairy farmer Chuck Kinnard said he agreed with the need for better groundwater protections but worried the ordinance would be too costly for small farmers. "We don't have the financial resources that the large farmers have," Kinnard said. "An ordinance is a mandate, and if there's a mandate there should be funding."

Dr. William Iwen speaks at the public hearing.

The proposal has a long and rocky road to travel before it would become reality. A public hearing on the proposed Public Health and Groundwater Protection Ordinance was held Sept. 9. Clean Water Action Council sent Director, Dean Hoegger to comment

at the hearing on behalf of Kewaunee County members. More than 125 people attended the hearing and all those making an oral comment were in favor of the ordinance.

The ordinance will be voted on at the Kewaunee County Board of Supervisor's September 23rd meeting and if it passes it will be put to a referendum in each township in the county. Wallander stated, "We could actually have a situation where the referendum would pass in some townships and not others, so that different townships would have differing regulations."

Northeast Wisconsin groundwater is subject today to pressures not even considered when the legal protections the state operates under were originally drafted. Large industrial type dairies producing huge amounts of liquid manure, waste from large urban areas such as Green Bay, and a growing rural population of non-farmers are all resulting in increasing problems and conflicts in the Karst regions of Northeast Wisconsin. Possibly Kewaunee County's proposed ordinance will lead the way toward dealing with some of these problems, or just as likely it could crash and burn in the political battles sure to come in the near future.

Ohio's Blue Green Algae Problem Could Become Ours

By Charlie Frisk

This summer the city of Toledo, Ohio, had to turn off its drinking water supply due to cyanobacteria contamination of its water source, Lake Erie. Could the same thing happen here in Wisconsin? Wisconsin has many waters that are impaired by cyanobacteria, but none that have produced the problems seen in Toledo.

What are cyanobacteria and what causes blooms of cyanobacteria? Cyanobacteria are photosynthetic bacteria. The first photosynthetic organisms on Earth were probably very similar to modern cyanobacteria. Cyanobacteria have been in existence on earth for more than 3 billion years. The press and the general public usually refer to cyanobacteria as blue-green algae, but they are bacteria not algae.

Bacteria are much smaller and much less complex than true algae. Cyanobacteria, like all bacteria, are prokaryotes, meaning they lack a nucleus as well as all other organelles. True algae are eukaryotes, complex celled organisms, with a nucleus and many other organelles and are more like us from a cellular standpoint than they are like cyanobacteria. However, as much as it bothers me to do so, I will refer to cyanobacteria as blue-green algae in the rest of this article because that seems to be the more commonly-used name.

To explain why blue-green algae blooms are much more extensive today Erin Wilcox, Water Resources Specialist of NEW water, said, "We've given them absolutely everything they need to take over." In low-fertility systems the good algae can outcompete with the blue greens, but in high-fertility systems the blue-greens dominate. The major nutrient contributing to blue-green growth is phosphorus. Blue-green algae also require nitrogen and a number of other nutrients to grow, but phosphorus is considered to be the limiting factor on blue green populations because it is the nutrient that typically is in least supply. Increase the phosphorus levels and the system will show a corresponding increase in blue green algae levels.

Where does phosphorus come from? In the Fox River system and Green Bay 46% of the phosphorus comes from agricultural runoff, 20% from industrial waste, 16% from municipal waste water treatment plants, and 12% from municipal storm water drains.

Another factor contributing to the increase in blue-green algae is the introduction of quagga and zebra mussels. The mussels selectively feed on the good algae (also known as phytoplankton, meaning that they produce their own food) and not the blue-green algae. Blue green algae have a thick cell wall making them difficult for the mussels to digest - they produce toxins that are harmful to the mussels - and they simply seem to be unpalatable to pretty much everything that eats true algae. So the true algae get gobbled up and the blue-greens just reproduce unimpaired by the grazers in the ecosystem.

What difference does it make if the true algae are replaced by blue-green algae? In a healthy lake system there is a typical algae cycle. Diatoms come first in the spring, followed by green algae in the early to mid-summer, and then blue-green algae in the late summer. During the fall when the lake turns over, and the water re-mixes, diatoms will appear again. In unhealthy, highly fertile systems, blue-green algae dominates throughout the entire growing season. This disrupts the entire food chain. In the healthy system the good algae, are eaten by the zooplankton, (the tiny consumers of the phytoplankton). The zooplankton are then eaten by the small insects, mussels, crustaceans, and small fish, which are then eaten by larger fish and birds, and reptiles and amphibians, and so on up the line. In a system dominated by blue-green algae the food chain stops right there because pretty much nothing eats the blue-green algae, so a diverse, highly productive ecosystem is replaced by a monoculture of blue-green algae.

If nothing is eating the blue-green algae, what happens to it? Eventually it dies and sinks to the bottom. When it decomposes it uses up oxygen. This is one of the major contributing factors to the increasingly large dead zones in Green Bay. The dead zones are regions that are anoxic, meaning they have no oxygen and only organisms such as anaerobic bacteria can survive there. Excess levels of blue-green algae also contribute to fish kills during the winter by using up most or all of the oxygen in a lake.

The toxins created by blue-green algae also create problems for the human population using the lakes. Toxins created by blue-greens in Lake Erie are the reason why Toledo had to find an alternative water source.

Many people have an allergic reaction to the toxins. The symptoms will be similar to hay fever, such as itchy eyes, puffy face, and runny nose. In more severe cases the toxins function as a neurotoxin, damaging the nervous system and can cause nausea and liver damage. Some people that are particularly sensitive can experience symptoms just by breathing the air coming off the lakes. Many dogs that like to swim have died from the toxic effects. Dogs are particularly susceptible because they spend longer times in the water, absorb the toxins through their skin, and drink the lake water.

Blue-green algae also have a major impact on the aesthetic value of the lakes. The blue-greens decrease water clarity; in major blooms they will totally eliminate any water clarity. At times the surfaces of Lake Winnebago and Green Bay look like they have experienced a massive blue-green paint spill. When the blue-greens die and wash up on shore they create a stench that people find intolerable.

Could a Toledo situation happen in Wisconsin? The cities of Green Bay and Milwaukee get their water from Lake Michigan. Lake Michigan is a huge, relatively cold and infertile system that has been little impacted by blue-green algae. The primary candidates for a Toledo type disaster would be the cities of Oshkosh, Neenah, Menasha, and Appleton that draw their municipal water from Lake Winnebago. Lake Winnebago is a warm, shallow, highly fertile system and receives high levels of nutrients from surrounding farms, several major cities, and a large number of paper mills. Lake Winnebago has major cyanobacteria blooms every summer but so far the toxin levels have been below the level that would require the municipalities to look for another water source.

What can be done to reduce the levels of blue-green algae? Bill Hafs, Director of Environmental Programs for NEW Water, maintains that reducing phosphorus and sediment levels in the Fox River watershed should be our primary goal. Because agriculture is the single largest source of phosphorus and sediment the greatest gains can be attained by reducing agricultural runoff but municipal sources also need to be addressed. The whole situation in Green Bay is extremely complicated. The expression Erin Wilcox uses is that there is a lot of "noise" in the system. You have nutrient and sediment loading, invasive species such as zebra and quagga mussels that exacerbate the situation, habitat destruction, (particularly of wetlands), and habitat creation such as the Cat Island Chain. Teasing out how all of these factors work together is extremely difficult but is necessary to really get to the root of the problem.

Neonics Wreaking Havoc on Aquatic Life, Honeybees

By John Hermanson

Widespread use of a class of systemic pesticides called neonicotinoids (neonics) threatens bees and broad ecosystems in soils and waterways.

The accelerating widespread use of a class of pesticides called neonics is contentiously being linked to recent honeybee colony collapse with average yearly winter bee loss of one-third versus an historical 10-15% loss.

It needs to be stated this link between high bee mortality and neonics appears to be strengthening but the smoking gun, cause over correlation, is elusive and complicated by many factors. The grave high mortality rate of bees is of concern because 75% of the varieties of crops we eat are insect pollinated—most of which are performed by bees. Another popular figure is that every third bite we take is a plant that was pollinated by a pollinator.

The United States Geological Survey's July 2014 report, "Insecticides Similar to Nicotine Widespread in Midwest," showed levels of neonicotinoids (neonics) to be found as high as 257, 185 and 47.7 nanograms per liter (clothianidin, thiamethoxam, and imidacloprid) in river water they tested in Midwest states, including Wisconsin. The USGS report explains this is a concern since 10 to 100 nanograms per liter sampled of imidacloprid is known to be toxic to aquatic organisms and it is thought that similar concentrations for the other two pesticides would have the same effect.

Neonics are a class of pesticides that have been ushered in within the last couple decades with great promise to replace organophosphates and carbamates that are more toxic to mammals. They are usually used as a systemic insecticide, which is water-soluble. Neonic variations have been devised that are ever more persistent in the environment with the half-life of some neonics lasting longer than 1,000 days in the soil. Plants take them up and become neurotoxic to whatever insect eats them. Nearly all corn and most soybeans planted seeds are treated with neonics. Neonics and related fipronil insecticides are not just used in agriculture but are also widely used in our backyard, golf courses, and even on our pets.

There are numerous recent studies that bring more scientific evidence to build a case that regulations in the U. S. need to be revisited before the scheduled review of neonics by the Environmental Protection Agency sometime between 2016 and 2019. The Task Force on Systemic Pesticides has released a mega-analysis of 800 peer-reviewed papers entitled, "Worldwide Integrated Assessment on Systemic Pesticides." This international body's lead author, Jean-Marc Bonmatin, concludes their comprehensive overview supports that "far from protecting food production, the use of neonicotinoids is threating the very infrastructure which enables it, imperiling the pollinators,

habitat engineers and natural pest controllers at the heart of a functioning ecosystem." Co- author Madeleine Chagnon goes on to declare that "as independent scientists, we can now say conclusively there is clear evidence of harm sufficient to trigger regulatory action."

Further concern for neonics in our environment is highlighted by The Xerces Society for Invertebrate Conservation, Sept. 2013, mega-analysis study, "Beyond the Birds and the Bees Effects of Neonicotinoid Insecticides on Agriculturally Important Beneficial Invertebrates." The study concludes that these pesticides are:

• Harmful to a variety of beneficial insects leading to secondary pest outbreaks

• Integrated Pest Management Practice (IPM) principles are being abandoned for a widespread preemptive application

• The current practice of treating all corn seed with insecticides is unwarranted and unsupported by pest pressure or yield increase

• Widespread use of neonics across landscapes leads to a decrease in soil health.

Bees, birds, worms and other soil invertebrates and aquatic insects are shown to be affected or are thought may be affected and should receive further study (i.e. soil and aquatic productivity).

There has been evidence showing species are affected at low sub-lethal levels resulting in reduced growth, developmental delay, reduced immune function, behavioral abnormalities and reproductive problems, all leading to population decline. Numerous studies have shown that sub-lethal doses of neonics affect honeybees susceptibility to pathogens and parasites, to less food gathered and to an increase in larval mortality ("No Longer a Big Mystery, Recent scientific research confirms the role of pesticides in pollinator decline," Beyond Pesticides, Spring 2014).

Another recent study in the Netherlands has shown how songbirds diminish in number as neonics concentrations proportionally increase ("Decline in insectivorous birds are associated with high neonicotinoid concentrations," Nature, 2014). It seems the presence of neonics reduces the supply of insects the birds feed on. It has also been shown that particular seed-eating songbirds will die if they eat even one treated neonic seed ("Birds, Bees, and Aquatic Life Threatened by Gross Underestimate of Toxicity of Worlds Most Widely Used Pesticide," American Bird Conservancy, March 2013).

Over the last several years, many organizations and beekeepers have challenged the EPA neonics permits including Center for Food Safety, Beyond Pesticides, Pesticides Action Network and most recently the Natural Resources Defense Council. The law requires they show "imminent hazard," which they have not been able to prove to the EPA's satisfaction. There was a Pollinator Summit in March, 2013, that led to the conclusion neonic products are better for the environment than older pesticides and that neonics use could be safely continued. There was also some further bee-sensitive product labeling required—do not use on flowers or when bees are present, etc.

With enough evidence to cast doubt on neonics safety the European Union put a two-year moratorium on the use of three neonics on seed treatments, drench or spraying of bee attractive crops starting Dec. 1, 2013. EU's regulatory body uses the "precautionary principle" in its regulation while the EPA is mandated to regulate considering economic, social and environmental costs and benefits along with human health.

Political will, local organizing and Internet activism is bringing about awareness and change. More people have begun to raise bees in cities and or are supporting local honey production. Organizations such as the "Bee Safe Neighborhood" campaign have formed to reduce or eliminate pesticides in city neighborhoods. The Great Sun Flower Project is also using citizen science to bring information and enthusiasm to our backyard landscapes to help bees and monitor their numbers. There have been many petition drives to educate, organize and let officials know of their constituent concerns.

A substantial effort and contribution to actively bring this issue to attention is the Friends of the Earth campaign and report, "Gardeners Beware: 2014 Bee-Toxic Pesticides Found in "Bee-Friendly" Plants Sold at Garden Centers across the U. S. and Canada." This large report both brings attention to our use of neonics we purchase as plant consumers and the associated concern for bees that visit these plants, but also current science that supports regulatory action related to larger neonic concerns. This campaign has led to Home Depot pledging to label what plants are treated and attempt to reduce or remove all neonics from plants they sell in the future.

The U.S. House of Representatives introduced a bill, "Saving America's Pollinators Act," (HR 2692) that is a bipartisan effort to suspend seed treatment, soil application and foliar uses of certain neonics on bee attractive plants until the EPA review. There are statewide proposals and

Legacies, memorials, and direct gifts to CWAC are deeply appreciated.

Please contact our Executive Director, Dean Hoegger at contact@cleanwateractioncouncil.org for more information.

local bee-friendly ordinances being passed as well.

Recognizing the value and concern for the loss of pollinators, a Pollinator Health Task Force was created by presidential executive order, June 20. Its purpose is to take additional steps to protect and restore domestic populations of pollinators including honey bees, native bees, birds, bats and butterflies, which have been determined to be critical to our nation's economy, food system, and environmental health. The following represent concrete measures being taken to fulfill the above stated purpose:

• The Department of Interior and the U.S. Department of Agriculture have joined 45 state governors in issuing Pollinator Week Proclamations, publicly acknowledging the vital services pollinators provide.

• The EPA released guidance designed to help scientists accurately assess the potential risks that different pesticides may pose to bees.

• As part of its Conservation Reserve Program, the USDA has announced an $8 million initiative to provide funding to farmers and ranchers who will establish new pollinator habitats on agricultural lands. This funding goes to the upper Midwest including Michigan, Wisconsin, Minnesota, North and South Dakota where more than half of managed honeybees are kept. This is in addition to $3 million USDA designated to the Midwest states to support bee populations earlier this year through the Natural Resources Conservation Service Environmental Quality Incentives Program.

• Federal agencies are to lead by example by creating and managing habitat for pollinators on select federal lands. Education and support will go towards local communities to create pollinator habitats like those started in Brown County. The Green Bay Pollinator Corridor is working to provide habitat refugees less than one-half mile between each other in order to create a corridor for beneficial bugs.

• The U. S. Fish and Wildlife Service's National Wildlife Refuge System manages 150 million acres across the country. In July, 2014, James Kurth, chief of the refuge system, stated in a memo that "we have determined that prophylactic use, such as a seed treatment, of the neonicotinoid pesticides that can distribute systemically in a plant and can effect a broad spectrum of non-target species is not consistent with Service policy."

As part of the president's recognition of good bugs in peril is our opportunity to do our part as land users. As the bug doctor Phil Pelliterri, UW entomologist emeritus, always reminds us to *read and follow labels on pesticides*. He will often follow up with the fact that homeowners do not follow through on pesticide labeling and are inclined to use a stronger dose, at their convenience or use more often than labeled. Residential use of neonics is labeled at rates that far exceed farm use labeled rates. Friends of the Earth's recent net-accessible publication, "Gardeners Beware," and Xerces Society have great recommendations for home landscape care in regards to bees and other beneficial insects.

Thoughts on the perfect lawn, garden and rose bush and how they are maintained: "I think it really requires us to start looking and becoming disgusted when we see these symbols that are supposed to signal opulence. They're not, they're just symbols of death"—Dennis van Engelsdorp, University Maryland, assistant professor, entomologist and bee expert. While this admittedly initially sounds a bit harsh, landscapes that look perfect and those less than perfect all deserve to be held accountable. Reduced input and organic lawn and garden practices can result in attractive landscapes. Residents to our north in Canada seem to be getting along fine with most Provinces having cosmetic pesticide bans. Many botanical gardens that showcase plants use low-input methods and Integrated Pest Management (IPM) successfully.

EPA regulation is more often based on single chemicals in a laboratory versus real world conditions—a chemical soup where synergistic effects have been demonstrated (fungicide, neonic metabolites, disease, other pesticides connections) and the cumulative persistent nature of neonics has led to underestimating toxicity. Dangerous levels are being discovered in the environment with current legal-labeled rates being used. The European Food Safety Authority cites studies showing neonics may harm developing human nervous systems and some are suspected endocrine disruptors.

Bees have become the indicator species both scientifically and as a high-profile "celebrity" species but as several of the above studies highlight what is at stake is an attack on widespread ecosystems resulting in species diversity reduction, diminished natural capital and less resilience to handle changes such as global warming and habitat reduction. While these studies point out gaps in our scientific knowledge there is enough information to reasonably conclude regulation re-evaluation is due considering new evidence and a more holistic review of older studies.

As an important footnote, it is reasonable to not totally ban systemic pesticides such as neonics where it is determined appropriate. One Northeastern Wisconsin regional case relates to emerald ash borer (EAB) treatments. There is an effective botanical treatment for EAB that is made from the neem plant, TreeAzin (azadirachtin), but is not as well accepted in the U. S. and appears may be more expensive. It is interesting that it was developed in Canada where TreeAge (emamectin benzoate) and imidacloprid are not allowed in urban landscapes. The loss of trees in and of themselves is a great environmental and economic loss that may justify an exemption. It may be determined that tree injections rather than drenches is worth the extra initial cost and reduced exposure to the rest of our environment.

Considering the stakes and current science our situation begs for more science, vigilance and the more risk-adverse "precautionary principle" Europe and Canada

are modeling. As of 2014 the EU has adopted an IPM agricultural model where insecticides are the last resort and a host of other environmentally softer methods are initially employed.

It is time to revisit EPA and state regulations, along with local ordinances, in regards to systemic insecticides such as neonics in order to protect honeybees, other pollinators and ecosystems that provide valuable services.

Coal Tar Sealants Pose Threat to Water and Health

By Jim Wagner

A fairly common practice throughout communities in northeastern Wisconsin, the sealcoating of driveways, parking lots and even playgrounds to preserve asphalt and concrete, is gaining greater attention from environmentalists and government agencies over the short- and long-term health hazards associated with the practice.

You can tell a place has been sealcoated just by looking at it—it's black in color and makes those driveways, parking lots and playgrounds look like they've been freshly installed. They also serve a beneficial service in areas with extreme climates like Wisconsin, where the constant changes in temperature and weather condition conspire to create cracks and potholes through oxidation and moisture penetration. The sealant is meant to preserve the life of asphalt and concrete, adding years of life to the surface and, generally, it's sprayed on by a professional asphalt repair company.

The common practice of using coal tar sealcoats (because it's cheaper than alternative technologies), which contain polycyclic aromatic hyrdocarbons (PAHs), have been linked to a host of problems in fetuses and infants that continue well into their adult lives—lower IQ, childhood asthma, low birth weight, heart malformations, behavioral issues and anxiety/depression. The health hazards extend to aquatic lifeforms, as the PAHs find their way into the town's lakes and streams. And while PAHs can be found anywhere fossil fuels are used—oil, coal, gasoline, etc.—their use with tar-coal sealcoats dramatically increases exposure risks to communities. According to the U.S. Geological Society, tar-coal sealcoats contain 50,000-100,000 parts per million of PAHs, which is 1,000 times higher than asphalt-based sealcoats and hundreds of times higher than tire particles or used motor oil.

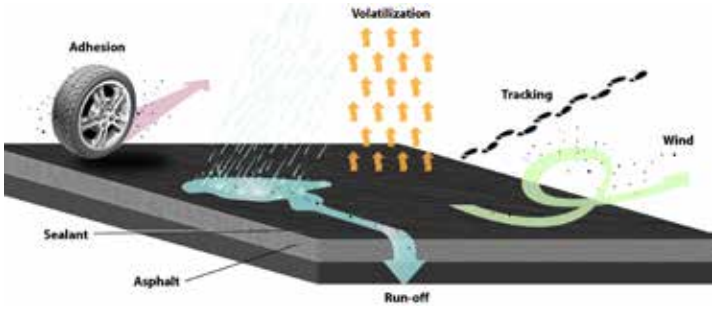
Sealcoats are typically applied by spraying onto the surface.
Photo courtesy of Texas Water Center, USGS

Tar coal sealants are an unlikely and largely overlooked contributor to a spike in PAH levels in waterways. The most common culprits are usually identified as vehicle-related sources like spilled motor oil or gasoline that leak into groundwaters, or oil or wood combustion that is captured in the atmosphere and added to waterways through precipitation. But a 2010 report of PAH levels in 40 U.S. urban lakes and streams indicates coal tar sealcoats are the largest contributor, and continue to increase in relation to the other sources as cities grow. "Many lakes with large fractional contributions of PAHs from [coal tar] sealcoats are in watersheds that have undergone urban sprawl, are characterized by residential and commercial development, and have rapid increases in PAH concentrations," notes the report's authors. "These rapid increases and the predominance of [coal tar] sealcoat as a source to the 40 lakes leads us to conclude that [coal tar] sealcoat is the primary cause of upward trends in PAHs in response to urban sprawl in much of the United States."

While sealcoats preserve the lifespan of driveways, they aren't a one-and-done solution. Reapplications are necessary every two-three years as the sealant is degraded by vehicle and foot traffic, snow shoveling/plowing, wind and rain. The graphic on page 8 shows how the sealant is spread once these environmental factors take place—the particulates are either washed into ground- or surface-water sources or make their way into homes and into respiratory systems.

The University of New Hampshire's Stormwater Center states water running off pavement with coal-tar based sealants have 30 times more PAHs than untreated sites, the nearby soils have highly elevated PAH levels, and dust with elevated PAH concentrations can travel up to 20 yards. According to the USGS report, people living adjacent to coal-tar-sealcoated pavement have 38 times greater cancer risk than those who live near untreated sites—with more than one-half the risk occurring during the first 18 years of life.

So what's being done about it? Surely, a proven danger would have not just environmentalists, but any concerned family member, looking for a solution from the government or business world. Unfortunately, for most of Wisconsin, not much is being done about it. Dane County passed an ordinance in 2011 banning coal tar sealcoats, with fines imposed on both businesses and customers who violate the law, but it is the only locality in the state to do so. In fact, nationally, there are only two states that have banned coal tar sealcoating—Minnesota and Washington. Illinois has a proposed ban that would go into effect in 2016.



After application, the sealcoat erodes over time with dust particles carried off via rain, foot and vehicle traffic, or wind.
Graphic courtesy of Freshwater Future, original artwork by Aaron Hicks of Austin, TX

In the business world, there are several national outlets that no longer display or sell coal tar sealants—Ace Hardware, Do It Best, Lowe's, The Home Depot and True Value. Regional outlets Menards, Agway, and United Hardware have stopped selling it as well. There are also a number of asphalt repair companies in Wisconsin that have stopped using coal tar-based sealants, but there are many, many more that continue using the harmful substance.

In Green Bay, there are many that will only use coal tar sealcoats, with no intentions of stopping. Bayland Sealcoat, for example, states on their web site: "Until we are forced otherwise, Coal Tar will be our product of choice…other companies may feature asphalt emulsion because they are forced to follow regulations in their larger territories. Bayland services NE Wisconsin including Green Bay and is currently by law, free to use Coal Tar." Other 100% coal tar sealcoat vendors include Valley Sealcoat, Inc., and Bay Valley Sealcoating. In fact, according to the Great Lakes Coal Tar Sealcoat PAH Reduction Project, there are no applicators within Brown County that have certified they will end or reduce sales of coal tar-based products. The nearest vendors that have done so are Jay's Asphalt Maintenance in Luxemburg, Klein Asphalt Maintenance in Manitowoc, and Fond Du Lac Asphalt Paving, Inc., in Fond du Lac.

What can you do, if you are a concerned citizen or a customer who routinely, or is thinking about, sealcoating your driveway or business? The following are some recommendations:

• Contact your local and county government and inform them of the dangers of coal tar sealcoating, and get them to put it on the agenda of the public meeting. Until there is enough public awareness of the dangers from coal tar sealcoats, local government is unlikely to change a business practice firmly supported by local sealcoating companies.

• Refuse to do business with—and tell your neighbors to do the same (since their actions certainly affect your family)—vendors who do not provide alternative sealcoating options.

• Find a sealcoat applicator company that has certified they will not use coal tar sealant. In business, money talks, and if enough customers opt to do business with a company that cares about the environment and the social costs of unsafe practices, other businesses will follow. You can find certified vendors at the Minnesota Pollution Control Agency's site (http://www.pca.state.mn.us/index.php/water/water-types-and-programs/stormwater/stormwater-management/great-lakes-coal-tar-sealcoat-pah-reduction-project/find-contractors-applying-safer-sealcoat.html) If you know of a vendor close to you that is moving towards safer sealcoating, recommend they certify with the MPCA so others can find them as well.

• Do it yourself, using the safer alternatives for sale at the above regional and national stores.

• When buying or going with a vendor, according to the MPCA, find out what ingredients are listed on the safety data sheet. If they contain the words coal tar, refined coal tar, refined tar, refined coal tar pitch, tar, RT-12, caol tar pitch volatiles, or the Chemical Abstracts Service (CAS) numbers 65996-93-2 or 8007-45-2, don't buy them.

• There are alternative sealants on the market (Gilsonite, acrylic and agricultural oil-based) that coal tar vendors say is more expensive and suffer lower performance. According to the MPCA, however, the most common and cheapest alternative to coal tar is petroleum asphalt-based sealcoat, which contains 1/1,000th the PAH levels and will provide 2-4 years protection if properly applied.

Industrial Farm Model is Damaging Environment

A guest commentary by Lee Luft

The shallow soils and karst (cracked) bedrock common in northeast Wisconsin provides little filtration for the animal waste being applied here. Today, Kewaunee County is home to approximately 42,000 cows (this is believed to be actual milking cows not the total number). The majority of these Kewaunee County cows are housed on 15 Concentrated Dairy Animal Feeding Operations (CAFOs). The operators of just these 15 factory farms must find a way to dispose of more than one billion pounds of untreated animal waste each year. Most of this waste is in a liquid form that can quickly permeate our thin soils. This is the equivalent human waste of the cities of Milwaukee, Madison, Green Bay and Appleton—combined.

The very predictable result of applying this much untreated waste is that nearly one-third of all wells tested here are unsafe for drinking or bathing. In some townships in Kewaunee County, the number of unsafe wells is 50% of those tested! Efforts by our top county officials to enlist the help of our State DNR and DATCP (the Department of Agriculture, Trade and Consumer Protection) have proven fruitless. Those in the DNR and DATCP, right up

to the State Secretaries, Kathy Stepp and Ben Brancel, have met with our county leaders and indicated they can/will do nothing to assist us, even as some of our communities drift into third-world water status. Meanwhile, Kewaunee County, Brown County and Manitowoc Counties have become the poster counties for unsustainable agricultural practices that apply far too much waste on our highly vulnerable topography. Our State Representatives acknowledge we have a problem but have done nothing to address the growing concerns of our citizens. In short we are on our own here in Kewaunee County and in much of northeastern Wisconsin.

The concern has become so great, that our county is now taking some modest first steps to limit the flow of untreated manure and other wastes into our groundwater during the time of the year when the groundwater is most vulnerable. This is a good first step, but as Andy Wallander, our Kewaunee County conservationist indicates, even this modest effort to slow the damage being done here will very likely be challenged by the powerful dairy lobby and perhaps even by the State agencies charged with protecting our environment and improving farming practices, the DNR and DATCP. The Dairy Business Association hesitates to acknowledge their member's role in contaminating our water supplies and the horrific impact unsafe water has on the quality of life, much less support efforts to stem the flow of untreated wastes.

Dairying in Wisconsin should continue to be a great institution, employing thousands of our citizens and providing delicious and nutritious milk products for all to enjoy. The industrial farm model in use today is doing great harm to that proud tradition, to our environment and to our health. The Dairy Business Association could do their members and all stakeholders a great service if they begin a leadership role in recognizing those practices (e.g. over-application of liquid manure) that are most harmful and aid their members in finding workable solutions.

Thank you to organizations like the Clean Water Action Council and Midwest Environmental Advocates who educate the public and take actions to protect the public and our environment. Hopefully we can come together as a community to better our environment and the lives of ALL our citizens before even more NE Wisconsin waters are damaged.

Lee Luft is a CWAC member and resident of the town of Pierce. He represents the 18th district on the Kewaunee County Board of Supervisors and on the Water Conservation District.

A river is the report card for its watershed.
~ Alan Levere

Walker Weakened Protections of State's Wetlands

A guest commentary by Frank Zuern

When Rachel Carson urged us to vigilant action in the quote: "Conservation is a cause that has no end. There is no point, at which we say, "Our work is finished." Who would have envisioned that on Feb. 29, 2012, Gov. Scott Walker would sign a weakened wetlands regulatory "reform" bill (Act 118), and do so in front of an appreciative Wisconsin Realtors Association meeting.

Every native marsh in our state takes us to the threshold of time-to a sacred place of nature. It is where the life in water and the life on the land converge in a biological blur. It is where precious water is stored and filtered. To be metered out slowly from this magical sponge, to support life downstream.

Fortunately, the Wisconsin Wetlands Association, a citizen's group pledged to preserve Wisconsin's Wetlands Heritage, opposed environmentally damaging parts of Act 118. Nearly every environmental group in Wisconsin has raised deep concerns about the bad parts of the new law which [became effective July 1, 2012].

Act 118 completely fails to acknowledge that certain rare types of wetlands cannot ever be replaced (or restored) once they are filled, dredged, or drained. The changes brought about by this bill, as I have studied them, cause the present wetland rules to be seriously weakened.

Further, this law continues to allow Department of Natural Resources staff to "evaluate the 'significance' of any wetland." There will be a DNR analysis of that wetland's "functional value." This allows the DNR staff to decide whether a certain wetland is "important enough" to save. This is exactly the kind of legal "gobbley-goop" that has allowed the DNR bureaucrats to issue permits in 2011 that filled in, and destroyed 80 acres of mostly small, but very functional wetlands. (Note: the 80-acre figure is directly, and accurately quoted from the DNR documentation.

A positive aspect of the new law was that it created a requirement for public notice and comment on all individual permits and gives the DNR inspection and citation authority for wetland fill violations. This was something the Wisconsin Wetlands Association lobbied for.

Next, we come to the mitigation aspect of the law. Defined: "To make less severe, less painful." This wetland policy has been a DNR rule since 2002. It is a key part of Act 118. Mitigation has been thoroughly discredited by wetland conservationists nationwide. It has no basis in biological science; there is no reputable research data that supports this specious policy/practice. Simply put, it is a political sop. Why so? Under the new wetland law, mitigation is still a key player. It allows a developer the option to get a DNR permit, to fill a viable wetland.

Thus for every acre of a marsh destroyed, a 1.2 acre of a sterile mud-hole can be an equal replacement. Humbug! Therefore, mankind can legally destroy a marsh area that

took nature at least 10,000 years (since the glaciers) to create and perfect.

Long-time CWAC member Frank Zuern is a retired elementary school principal and former director of Outdoor Education for the Oshkosh School District from 1970 to 1983. He was also a citizen signer to CWAC's lawsuit against Utica Energy, ending thousands of permit violations. See Frank on this topic at https://www.youtube.com/watch?v=vWoanfcoePE

Editor's note:

CWAC signed on to opposition to Act 118 for many reasons. One key concern was that it eliminated the "areas of special natural resource interest" designation for certain types of wetlands that cannot be replaced through mitigation. We also opposed allowing mitigation to occur outside of the watershed where the impact would occur. In general, the bill significantly reduced requirement to avoid wetland impacts

The Wisconsin Wetlands Association (www.wisconsinwetlands.org) Policy Director Erin O'Brien reminds us that it is up to citizens to understand and look out for the natural resources in our community, including wetlands. She stated that state and federal laws provide opportunities for public input on applications to fill wetlands and a little input can go a long way. Here's some info on how to weigh in:

1. To sign up for public notices related to development of federally-regulated wetlands visit: http://mvp-extstp.mvp.usace.army.mil/list_server/

2. Contact the WDNR Water Management Specialist for your county to request notice of applications for state-issued wetland permits (note, this should be available electronically but the last time I checked the electronic list-serv did not work properly).

3. Information about the proposed federal rule to clarify what wetlands are protected under the Federal Clean Water Act can be found at: http://www2.epa.gov/uswaters. Comments on the rule are due October 20th. Contact EPA, and your Congressional Representative to let them know that you support the rule-making process and would like to see isolated wetlands and headwater streams protected.

A Major Victory for Protection from High Capacity Well Permits

From Friends of the Central Sands

An administrative law judge issued a decision finding that the DNR must consider the cumulative impacts of groundwater pumping when considering new high-capacity well permits.

The ruling came in a case brought by Friends of the Central Sands (FOCS) and others challenging a well permit for the proposed Richfield Dairy concentrated animal feeding operation (CAFO) in Adams County. The DNR had said it lacked authority to take the impacts of existing and future wells into account when issuing new high-capacity well permits.

The judge found that the DNR "took an unreasonably limited view of its authority," and that the public trust doctrine, statutes, and decades of court precedent required DNR to consider cumulative impacts. The decision continued, "It is scientifically unsupported, and impossible as a practical matter, to manage water resources if cumulative impacts are not considered."

"It is common sense that the DNR must consider cumulative impacts of groundwater pumping before allowing another well," said Bob Clarke, Founder of FOCS. "This decision recognizes that science and the law compel consideration of cumulative impacts, too."

The decision comes at a critical time, as studies have shown surface water levels are dropping in the Central Sands area due to high-capacity well pumping, primarily for irrigation. Evidence presented at a hearing showed water resources near the proposed CAFO were already pumping-impacted, including Pleasant Lake, wetlands, and numerous Class 1 and 2 rated trout streams.

Yet the DNR has seen record numbers of well permit applications in recent years.

"For years, we have failed to consider the consequences to our water resources when allowing new high-capacity wells," said Bill Vance, a home owner on Pleasant Lake and FOCS board member. "This decision recognizes that the DNR must do the math and consider how much is too much."

This week's decision caps a process that began in 2011, when Richfield Dairy first applied for a high-capacity well permit. Court decisions in 2012 and 2013 had determined the DNR's analysis of the well application was flawed. This week's decision comes after three weeks of hearing, where experts testified on the existing and projected impacts to water resources.

The judge's decision reduced the allowable amount of water the dairy may pump in one year. In a companion case, the administrative law judge determined the DNR should have established a cap on the number of animals that may be confined at the CAFO.

A copy of the decision is available the Friends of the Central Sands website http://www.friendsofcs.org.

PCB Contaminated Sediment Cleanup Continues for a Sixth Year

By Dean Hoegger

We are pleased to report that polychlorinated biphenyl (PCB) cleanup continued again this year in the Fox River. CWAC, under the leadership of Rebecca Katers, spent thousands of dollars in legal costs in the 1990's to ensure that removal of toxic sediments would take place. This year, dredging is taking place in the lower Fox River from DePere to Green Bay. The goal is to remove 673,000 cubic yards of sediment by mid-November.

The EPA reports that the capping and covering of 60 acres of riverbed will also take place before November. Capping involves covering with a layer of sand followed by a layer of stone. Covering is done only with a layer of sand. CWAC has always fought against this cheaper solution since it does not remove the contaminated sediment, leaving the problem for future generations. Some experts contend

that additional PCBs can enter the ecosystem as a result of unusual weather patterns affecting these capped and covered areas.

Sediment is removed through a special dredging process designed to provide minimal disturbance to the riverbed, thereby minimizing the movement of PCBs into the river. The sediment is dewatered at the State Street facility on the west shore and then trucked to landfills. Higher contaminated sediments, greater than 50 parts per million, go to the Ridgeview Recycling and Disposal facility in Whitelaw, near Manitowoc. Less contaminated sediments are transported to the Veolia Hickory Meadows Landfill in Chilton."

Dredging to remove contaminated sediments continues on the Fox River.

Oneida Tribe Partners to Restore Trout Creek

By Jim Snitgen

For at least 20 years, the stream called Trout Creek acted as a sewer for construction, farm field and livestock runoff. Stories of a trout here and there had been heard, but routine sampling produced no brook trout. Sediment, fertilizer, manure runoff, ditching, and tiling were preventing any chance for development of favorable conditions for trout to live in the creek.

Fifteen years ago, an Oneida community member complained that he thought it was awful that his dogs would get sick from drinking out of the creek. The Oneida Water Resources Team began to investigate. They took water samples at County Highway U during a rain storm in the fall of 1999. The results of those samples were shared and an amazing thing happened. A partnership formed between the Oneida Tribe and several state, local and federal agencies with the goal of cleaning up the agricultural runoff to the stream. While the Wisconsin Department of Natural Resources, Brown and Outagamie County Land Conservation Departments and the Department of Corrections worked on the biggest problem to the stream (manure runoff at the State farm), the Oneida Water Resources Team surveyed the Trout Creek watershed (see next column) to prioritize projects to restore it. Meanwhile,

Trout Creek Watershed

the partners began buffering headwater tributaries, doing wetland restoration projects, and asking farmers to help to continue improving the stream.

Because the stream lies completely within the Reservation, and the Oneida people care about protecting and restoring their water resources, efforts to restore this trout stream have been taking place for the past 13 years. Using a strategy of "headwaters down" restoration, we began by first addressing and eliminating the largest water quality stressor in the headwaters area, and then continued downstream with headwater channel restoration, as well as wetland and instream habitat enhancement projects.

Focusing on big problems first, Oneida Environmental, Health and Safety staff continued to obtain grant money for implementing restoration projects, working their way downstream as stream conditions improved. They also continued detailed sampling of the water quality and the fish and bugs present in the stream to determine water quality progress. Direct signs of progress were encouraging as wildlife such as mink, wood turtles and other animals associated with healthy, clean streams were spotted.

The visibility and positive impacts to water quality and the biological community further reinforced public support for further restoration projects. After decades of absence, brook trout have been reintroduced and a management plan implemented.

The most recent restoration project was completed last fall on a headwater reach between Olson Road and County Highway U. Management and protection efforts will continue to further strengthen the integrity of the stream.

Three size classes of brook trout in Trout Creek in 2011.

The Action in CWAC

By Dean Hoegger

HAVE YOU RENEWED YOUR MEMBERSHIP FOR 2014?

Please help us continue to take action on your behalf to protect the environment and human health by renewing your annual membership. If your newsletter label does not have a '14 after your name, or e-mail notice does not indicate you paid your membership in 2014, PLEASE RENEW! Our membership donations make up a significant part of our budget.

Please contact Dean at 920-495-5127 to volunteer at the office at 2100 Riverside Drive, Green Bay. You can help us with issue research, grant writing, outreach projects, member contacts, filing, record keeping, helping at exhibits and much more!

Read below about actions we have taken in the last three months. Be sure to contact us if environmental issues arise in your community. CWAC is here to support citizen action. The following are our most significant activities since June.

Legal Actions

CWAC Petitioned Wisconsin Supreme Court for Review of the Appeals Court Decision in the Appleton Coated LLC Case

As we previously reported in the Summer, 2014 Newsletter, we lost our case with the state court of appeals over the Appleton Coated permit challenge, so we petitioned the Wisconsin Supreme Court for a review of the appeals court decision. The court has yet to respond.

CWAC vs. EPA

In February of 2013, several of our members signed on to the case Clean Water Action Council et al. v. EPA. Our attorney, Dave Bender, presented oral argument in the case before the U.S. Circuit Court of Appeals for the Seventh Circuit on September 23, 2013. A favorable ruling in this case would create case law at the federal level that would ensure rights granted in the Federal Clean Air Act and could be used in appeals at the state level. We are still awaiting the Court's ruling.

CWAC's Educational Efforts in the Community

Part of CWAC's mission is to provide education on environmental issues to our members and the community. Since the last newsletter, we have actively pursued that mission. Here is an update. Contact us to schedule a presentation for your group on a variety of environmental issues.

The Price of Sand

Interns Emma Peterson and Pheng Yang organized and hosted this event at Harmony Café on August 6. The DVD is available for check or we can present it to your group.

Environmental Links to Cancer and Human Health

Sandra Steingraber's DVD, "Living Downstream," is available for checkout or we can present it to your group with a discussion. Steingraber's books are also available for purchase or for loan.

Protecting the Waters of Northeast Wisconsin Presentation

We can provide this slide presentation to your group. It describes what CWAC does and what the public can do under state and federal laws.

Zero Waste and Food Waste Presentations

These slide shows can be tailored to your group's interests to focus on what other communities on the road to zero waste are doing, the latest efforts for keeping food waste from landfills, and an update on local efforts.

Training to Monitor Pollution Permit Compliance

CWAC offers this workshop twice a year, which often features environmental law attorney, Jimmy Parra, from Midwest Environmental Advocates. The next workshop will be held the first week of October and the details are being finalized as we go to press. Contact us for the time and location and to register.

Exhibiting for CWAC

Interns Robyn Nielson and Pheng Yang exhibited for CWAC at the Big Green sustainable event in Kaukauna on August 16. Exhibiting at these events provides us opportunities to educate the public about issues and expand our membership. Be sure to invite us to events with an environmental theme in your community.

Weekly CWAC Updates

Each Monday we e-mail a weekly update of actions, alerts, events, and the latest information on topics of concern. If you are a member with an e-mail address and you are not getting the CWAC Weekly Update, check your spam folder before e-mailing us to request to be put on the mailing list, sent Bcc to protect your privacy.

CWAC's Actions in the Community

Recycling Committee Meetings

CWAC continues to participate in meetings of the East Central Food Waste Task Force to find ways we can educate and support removing methane producing food waste from landfills and recycling it instead. The next meeting will be on October 14, at 10:00 a.m. at the East Central Wisconsin Regional Planning Commission located at 400 Ahnaip Street, Suite 100, Menasha, WI, 54952.

CWAC also monitors and participates in meetings of Wisconsin's Council on Recycling, which is facilitated by the WDNR. We have had success in moving the Council away from making energy recovery recommendations

when there is potential for reuse or recycling industrial wastes. Energy recovery usually involves burning waste in boilers, often with reduced air pollution regulations. On July 8, CWAC brought Incinerator Free Brown County, a representative from the Oneida Eye, and the WDNR council's representative together for a conference call to answer our questions regarding incineration and gasification permits. We were pleased to learn that there were no current permit applications for gasification or pyrolysis projects, such as the one the Oneida Tribe had tried to build in Green Bay.

We are also pleased to report that the Waukesha Environmental Action League successfully provided education to their community which helped end plans for a gasification incinerator in Adams, WI. We have collaborated extensively with WEAL in past to monitor for, and stop incineration projects. You can read, "Settlement Agreement Ends GEITS Gasification Incinerator Plan for Adams, WI" by Charlene Lemoine at www.weal.org

Monitoring for Illegal Sales of Lawn Fertilizer with Phosphorus

Since 2009, a ban went into effect for the sales of most lawn fertilizer containing phosphorus unless it is being put on new lawn or if a soil test shows a deficiency in phosphorus. Fertilizer with phosphorus is allowed to be applied to farmland, pasture and home gardens.

Last summer, CWAC randomly checked 10 businesses and found two were not in compliance with the law. This summer, another random check was made of 10 businesses, plus the two that were not in compliance last year. This year, all were in compliance. However, one business that was not in compliance last year, while likely meeting the letter of the law this year, certainly did not meet the spirit of the law. The Door County Cooperative store in Sturgeon Bay still displayed bags clearly marked Lawn Fertilizer 10-10-10. While they were not displayed on the store shelf, the product was easily accessible to customers who routinely shop for items in adjoining warehouse.

What is most unfortunate is that the legislation was co-authored by a Door County legislator to protect the waters of Door County, and the rest of the state from excessive algae growth.

How do you know if your fertilizer is phosphorus-free? The package should have three numbers on it, denoting (in order) the percentage of nitrogen (N), phosphorus (P) and potash (potassium) (K) inside. If the middle number is 0, the fertilizer is phosphorus-free.

Well Water Testing for Presence of Roundup

We have completed our initial study with a test of 21 wells. At this time, we are awaiting a sample containing a known amount of glyphosate to verify testing accuracy and to do additional sampling for testing a broad spectrum of commonly used agricultural herbicides.

Task Force to Ban Aerial Spraying of Agricultural Waste

CWAC called for the formation of this task force in the summer issue. We had responses from individuals in Door and Kewaunee Counties, and we are still encouraging participation by individuals from other counties with large numbers of concentrated animal feeding operations, such as Brown, Outagamie and Manitowoc. The task force has about 15 members at this time.

The Task Force currently has a number of actions in Door County at both the town and county levels to pass ordinances that would ban or regulate spraying agricultural waste using irrigation equipment and other spray techniques. (See CWAC Summer, 2014 for further details about the danger of this practice that the American Lung Association says can transmit 160 known pathogens.)

So far we have supported efforts to pass an ordinance in both the towns of Sevastopol and Sturgeon Bay, and we have led the efforts in the Towns of Gardner and Nasewaupee. We are still seeking residents in other towns who we can help to bring the issue to their town board meetings.

At the county level, we are working with CWAC members Peter Sigmann and Victoria Cerinich to bring the issue to the Land Conservation Committee and the Public Health Committee.

In another effort, CWAC will be the primary funder for a billboard calling attention to the issue and the need to pass ordinances to ban waste spraying before it becomes a common practice. Board member and graphic designer Bev Watkins will create the billboard image which will be unveiled October 1 in Door County for southbound traffic on State Highway 57, a few miles north of the State Highway 42 intersection.

Contact us if you would like to join the Task Force or would like to start one in your area.

Read the next piece by intern Robyn Nielson about the 10% rule for content of manure lagoons. These lagoons are the source of the waste that could be sprayed using irrigation equipment.

CWAC Investigates Whether Human Waste Can Be Disposed in Manure Lagoons

By Robyn Nielson

Individuals knowledgeable about the waste found in manure storage lagoons have been aware that up to 10% industrial waste can be added to the agricultural waste. Industrial waste is defined by NR 214.02(1) as wastes generated by "any industrial, commercial or agricultural operation which results in a point source discharge that has no detrimental effects on the soils, vegetation or groundwater of a land treatment system," such as fish and poultry products processing, commercial laundromat and motor vehicle cleaning, and fruit and vegetable processing operations, among others.

However, recently it was brought to our attention that commercial septage haulers have been dumping into manure lagoons on farms in the region. A CWAC investigation into the legality of this action turned up some uncertain results.

NR 113.12(4) of the DNR septage code states that "Septage may be stored at sites such as, but not limited to, manure storage facilities and sludge storage lagoons." However, certain conditions must be met; for example, septage may not be stored if the storage facility is located under a building where animals are housed, and approval for the action must come from the DNR. Also, on-site toilets cannot be directly routed to these storage facilities, as this plumbing is covered by local sanitary and plumbing codes. Additionally, section 17 of the DNR's land treatment code, NR 214, allows an exemption for these wastes on a case-by-case basis, provided that the mixture is less than 10% of the total volume at the time it is land spread, and the mixture is determined to have beneficial properties to the soil.

The uncertainty arises when the standards which govern waste storage facilities are considered. According to Richard Castelnuovo, the Resource Planning Section Chief for the Wisconsin Department of Agriculture, Trade, and Consumer Protection (DATCP), most farm manure storage facilities are designed to conform to the standards outlined in NRCS 313, the waste storage facility code, but these standards do not apply to the storage of human waste. Facilities intended to store more than 10% of the design volume or more than 25,000 gallons in non-manure wastes should be regulated by the DNR under other codes associated with those specific waste categories. So, why is the storage of human wastes allowed at all in these types of facilities?

NR 113.07(f) indicates that, depending on whether a holding tank or septic tank is located within the service area or a specific distance of a publicly owned treatment works (POTW) and the cost imposed by that facility to haul the septage, disposal of wastewater may or may not be required to that treatment facility, and alternate storage and disposal may be allowed. For example, a hauler transporting waste from a holding tank located within 20 miles of a POTW that is willing to accept the waste but charges more than $20 per 1,000 gallons to the hauler, is not required to discharge into that POTW. In this case, a manure storage lagoon could be considered an acceptable disposal site under this regulation, provided that the farm has a permit and certain disposal procedures are followed. This only applies to small systems which generate less than 3,000 gallons of septage per day. Larger systems must contract with a wastewater treatment facility as per paragraph (e) of that same section.

It is a little unclear, but NR 113 also seems to indicate that disposal via manure storage lagoons is also authorized during winter months and during emergencies. Regardless, these facilities still require a permit and the wastes have to be reported. Jim Jolly and Jon Bechle, Director and Assistant County Conservationist, respectively, of the Brown County Land and Water Conservation Office indicated that any farm determined to have exceeded the 10% maximum volume for non-manure wastes will be charged an unintended use fine of $2,000 per year. Many farms were not accounting for these wastes in their annual nutrient management reports and the fine has helped in reducing and preventing such oversights.

Both the Brown County Land and Water Conservation Office and the Wisconsin DATCP stated that the disposal of human waste in manure storage lagoons is not an activity they come across very often, which explains, to a certain degree, the uncertainty which surrounds its regulation. One aspect that these offices did stress is that many domestic waste haulers often haul industrial and other wastes as well, so their presence may not necessarily indicate that human wastes are being disposed at such a facility at a given time.

We ask that anyone observing a septage hauler dumping waste into a manure storage facility to please contact us with the hauling company's name and the location where they were observed.

GREENING OUT YOUR TRASH CAN: INTERNATIONAL, NATIONAL, AND LOCAL STUDIES AND PROGRAMS ON FOOD WASTE

By Robyn Nielsen

Everybody eats. But how often do we think about the impacts caused by the food we eat? We can look at carbon emissions, water use, transportation costs, and social issues associated with the labor to produce, harvest, and process these products, but what about what we don't eat? How much food is wasted before it even makes it to our plates and why? With the help of the Food Waste Task Force, a local group of concerned residents, the following collection

of resources and information has been compiled to help answer these questions. Included are a number of programs at both the national and local levels which are designed to reduce our "foodprint", or the amount of food we waste on an annual basis.

Food Waste News has an excellent infographic that breaks down how much of our food supply is wasted on a global scale and the repercussions of that loss. For example, through a combination of means, 1.3 billion tons of food, or roughly one third of all produced food, is lost in wastage annually. Additionally, it is estimated that half of the food produced in the United States and Europe never gets consumed. This is especially alarming when we consider that 80% of deforestation, 70% of all freshwater consumption, and 30% of greenhouse gas emissions result from food production. To view the rest of the infographic, please visit: http://www.foodwastenews.com/facts-infographics/.

Popular Science also recently published an infographic based on a 2011 United Nations study which assessed food networks in 152 countries. It concisely illustrates from where the main sources of this wastage emanate, with greater percentages being attributed to fruits and vegetables (44%), and roots and tubers (47%), with the greatest losses overall occurring on the farm. Obviously, there are many reasons a crop can be lost, but some reasons are unacceptably frustrating. One example is a walk-by, which is a term used to describe a field that is left unpicked because the value of the harvest is less than the associated labor costs. Please visit the following site for the full infographic: http://www.popsci.com/article/science/how-world-wastes-food-infographic?dom=PSC&loc=recent&lnk=8&con=how-the-world-wastes-food-infographic.

In 2009, the Wisconsin Department of Natural Resources published the results of their *Statewide Waste Characterization Study* which showed that organic materials such as food scraps and yard waste constituted approximately 24% of the entire waste stream. Additionally, when existing recycling and other waste management programs are taken into consideration, it is further determined that roughly 53% of the entire waste stream finds its way into the landfill. A little math shows us then that 43% of the contents of the landfill is composed of these organic materials. More specifically, 10% of the waste stream and thus 20% of the landfill consists solely of food scraps. This study can be found here: http://dnr.wi.gov/topic/recycling/documents/wi_wcs_final_report_june-30-2010.pdf.

At the national level, a new program introduced in 2013 by the Environmental Protection Agency asks businesses and organizations to reduce, donate, and/or compost wasted food. The Food Recovery Challenge is part of the EPA's Sustainable Materials Management "Rethink" program, which goes beyond considering a product's life cycle to reduce waste and conserve resources, with the ultimate goal of slowing climate change and minimizing environmental impacts associated with the materials we use. To better facilitate this, the EPA also released a useful resource to assist commercial kitchens in reducing their environmental impact. *The Reducing Wasted Food & Packaging Toolkit* helps restaurants, grocers, caterers and others to determine the amount and type of food waste they are generating in order to better understand the reasons it is being generated in the first place.

The Food Recovery Challenge has attracted 877 participants this year from across the country, with four in Wisconsin: Goodkind, Kompost Kids Inc, and Odd Duck of Milwaukee, and the City of Madison Streets Division. Participating businesses and organizations not only benefit from an improved bottom line and reduced environmental footprint, but they can also receive national recognition for their efforts. For program requirements and a list of participants, please visit: http://www.epa.gov/epawaste/conserve/smm/foodrecovery/index.htm.

Diverting waste from landfills is a great economic opportunity for municipalities. Towards this end, the Brown County Port and Resource Recovery Department has launched an Organic Food Waste Drop-Off Program. Residents of Brown County can register online or in person at the department's South Broadway location. BPI-certified compostable bags can be purchased at local grocery and hardware stores, and in the coming weeks, from the Brown County Organics website. Materials accepted go beyond the usual "compost-only" fare to include paper towels, napkins, meat and bones, dairy products, and pizza boxes, and will be hauled to an anaerobic digester in Oshkosh to accelerate decomposition and capture the methane it produces. Drop-off sites are currently located at the Brown County Recycling Transfer Station at 2561 South Broadway and the Brown County Solid Waste Transfer Station at 3734 West Mason Street. For more information, including registration forms and drop-off location hours, please visit: www.browncountyrecycling.org/organics. Currently, a user fee is not being charged, but participants are being asked to register so that the department can track user rates in order to establish an appropriate pick-up schedule.

It is crucial that participants use the compostable bags specified by the program, as demonstrated by the recent cessation of a curbside organic waste collection program in Madison. The program was highly successful. It started in 2011, the pilot curbside collection program included 500 households and six businesses, with plans to add 1,600 households and 25 to 30 businesses this summer. The diverted materials were being transported to the digester at UW-Oshkosh, but Madison's Streets Division anticipated being able to build their own digester in 2016, with full-scale organics collection feasible in 2017. The digester was estimated to cost $20.6 million. Unfortunately, due to the high concentration of non-compostable plastic material

contained within the collected stream, the city was no longer able to send its materials to the digester in Oshkosh. A screen to remove these materials would cost an additional $120,000 to the planned digester construction project, a cost the city was not able to bear in view of other competing projects, such as absorbing higher landfill costs and fighting the emerald ash borer. To date, the program has collected 538 tons of food waste, paper contaminated with food waste, and pet waste. Find the article in the Wisconsin State Journal here: http://host.madison.com/news/local/govt-and-politics/madison-to-stop-pilot-organic-waste-collection-program/article_8e0596d0-52b4-50fe-a859-be23f1044ed8.html#.

For residents inclined to take matters into their own hands, at-home composting is always an option. Unfortunately, a 2013 online study conducted by Harris Interactive on behalf of the National Waste & Recycling Association (NWRA) determined that 72% of Americans do not compost their food waste, citing convenience (67%) and cost (62%) as the primary reasons. Sharon H. Kneiss, president and CEO of NWRA places a lack of understanding as the main culprit for these attitudes. She added, *"If you are passionate about expanding composting opportunities, you need to do more than lobby your local government officials or your community waste and recycling services provider to build such a program. You need to support efforts to educate your neighbors about the value of composting food waste."* For more information on this study, please visit: http://beginwiththebin.org/being-mindful/composting#2-12.

Backyard composting should not be overlooked as one of the simplest methods for removing food waste from landfills while producing a valuable soil supplement. Residents interested in developing their own at-home composting plan have numerous options available to them locally and online. The Wisconsin DNR has informational resources concerning home composting. If interested, please call (608) 266-2111. Most county recycling websites list compost bins for sale, and some University Extension Service offices also sell bins at a reduced price. Additionally, Amy Spears of the Oneida Environmental Health and Safety Division is a great resource for those interested in vermicomposting, which is composting using worms. She can be reached at (920) 869-1610. Of course, for those interested in larger-scale urban composting, Will Allen's Growing Power in Milwaukee is a great place to learn. Check out http://www.growingpower.org/ for tours and information.

Backyard composter available at UW-Extension office for under $60.

Another local group, the Food Waste Task Force, hosted by the East Central Regional Planning Commission, is a collection of representatives from schools, county governments, environmental organizations, grocery stores, and waste management services. CWAC has been attending most of the bimonthly meetings which are held to share progress and develop strategies for reducing food waste going to a landfill. One recent Green Bay action was reported: Mana for Life Food Pantry and Soup Kitchen started a new garden and compost site. New Leaf Foods, Inc., was awarded a Sow it Forward grant from Kitchen Garden International to install the demonstration garden, and Helfenstein Soup Council also helped with the project

This is only a brief overview of actions and resources for managing our food waste problem. Residents are encouraged to seek out their own solutions and encourage their neighbors to do the same. While every person matters, it will take the whole community to make an impact.

CWAC Interns

We wish our summer interns well with their continuing studies at UWGB. Robyn Nielson is an Environmental Science and an Environmental Policy and Planning student. Emma Peterson is a junior majoring in Geoscience. Pheng Yang is a senior pursuing double majors in Public Administration and Environmental Policy and Planning with a minor in Political Science.

We welcome two interns to CWAC this fall. Sadie DiNatale who will graduate this December with a degree in Urban and Regional Planning from the University of Wisconsin-Green Bay, and Keri Meyers who is majoring in Environmental Science with a double minor in Geoscience and Environmental Policy and Planning.

REMEMBER TO VOTE ON NOVEMBER 4!

The League of Conservation Voters has a scorecard for current Wisconsin Assembly and Senate legislators to inform your vote on environmental and conservation issues: http://conservationvoters.org/scorecard/scorecard-2013-2014/

MARK YOUR CALENDAR! Meetings, Events and Happenings

✺ **Saturday, September 27, 9:00 a.m. - 1:00 p.m.**
Electronics & Appliance Recycling Drive
Friends of the Wildlife Sanctuary, 1660 East Shore Drive, Green Bay

The Friends of the Wildlife Sanctuary will be holding their fall computer, electronics & appliance recycling drive at the Wildlife Sanctuary. Open to business and residential. Recycle your old computer, fax, printer, TV, other electronics and household appliances. A small fee will be charged for TVs & Monitors. Appliances containing freon & all other standard business and household electronics are recycled at no cost. A portion of the fees will go to support the Friends of the Wildlife Sanctuary.

✺ **Saturday, September 27, 8:30 a.m. - 3:15 p.m.**
Climate Science Workshop
Climate Change Coalition of Door County, Crossroads at Big Creek, Sturgeon Bay

The workshop will introduce teachers, naturalists and environmentalists to the basics of climate science and provide classroom-ready materials, as well as many interesting demonstrations that can be used in the classroom, as a laboratory experience or as outreach activities in nature centers, state fairs, etc.

Registration (ends 22 Sept.): Sherrill Anderson (LNRP) at sherrill@lnrp.org or 920-412-1920

Walk-ins Welcome, please contact Frank or Bruce after Sept. 22nd - http://climatechangedoorcounty.com/

✺ **October 2014, TBA**
Environmental Compliance Workshop
Clean Water Action Council - UWGB Campus—Room (TBA)

Clean Water Action Council will host a workshop on investigating industrial facilities for compliance with anti-pollution requirements. This will occur at UWGB in (TBA). Attendees will get an overview of the Clean Air and Clean Water Acts, learn how to gather information on industrial facilities using online databases and public records requests, review actual permits and compliance records for a Green Bay facility, and learn what steps they can take to reduce industrial air and water pollution in our communities. A field trip to the Green Bay DNR office for a review of records will be included. Jimmy Parra, an environmental attorney with Midwest Environmental Advocates in Madison, will lead the workshop.

Register for this free workshop by e-mailing contact@cleanwateractioncouncil.org.

Please reference Environmental Compliance Workshop in the subject header. Lunch will be provided for the first 15 participants who register.

✺ **Tuesday, October 7, 5:30 p.m.**
Taskforce to Stop Spray Irrigation of Agricultural Waste - Location TBA, Algoma
See related article in "Action in CWAC." Participants should contact Dean Hoegger at 920-421-8885 to register.

✺ **Tuesday, October 7, 7:00 p.m.**
Waterlife - UWGB iPat Film Series, Christie Theatre (Located in the lower level of the University Union)

Screenings in the series are followed by local commentary from an expert in the community or on campus. The series is FREE and OPEN to the public. Please join us for this important conversation (& free popcorn too!).

✺ **Wednesday, Friday, October 10—12**
2014 Autumn Assembly
Wisconsin John Muir Chapter Sierra Club, Phantom Lake YMCA in Mukwonago, WI

The Autumn Assembly is a fun, family-friendly event featuring indoor and outdoor environmental activities for people of all ages. Phantom Lake YMCA camp, founded in 1896, sits on 72 acres of scenic woodlands and offers a variety of opportunities for attendees to connect with nature. This year's Assembly, hosted by the Great Waters Group, whose territory includes the Greater Milwaukee Area, will celebrate the 50th Anniversary of the Wilderness Act and include updates on our campaigns to expand clean energy and transit and protect Wisconsin's water, land, and wildlife for future generations.

For further information and registration information: http://wisconsin.sierraclub.org/events/aa.asp

✺ **Saturday & Sunday, October 25—26**
All In Together and All Out to Restore the Climate, Great Lakes Conference
Green Bay Citizens Climate Lobby Chapter Events, Camp Manitoqua, 8122 W. Sauk Trail Frankfort, IL 60423

A weekend of learning, growing & having fun . . . with fellow CCL volunteers from the Great Lakes region which includes Illinois, Indiana, Michigan, Ohio, and Wisconsin.

You're welcome whether you've been in CCL for years or have never attended a CCL meeting. Our best people will share their knowledge and experience with you. There will be an introductory group start workshop for people new to CCL or who have not previously attended one. And, you can kick back and enjoy nature while you're saving it because the Camp Manitoqua Retreat center is a beautiful, peaceful area!

To learn about the Citizens Climate Lobby go to: http://citizensclimatelobby.org

To learn about the latest activities of the Green Bay Chapter and ask how to get involved email the chapter at: greenbay@citizensclimatelobbby.org

✺ **Tuesday, November 4, 7:00 p.m.**
Terra Blight - UWGB iPat Film Series, Christie Theatre (Located in the lower level of the University Union)

Screenings in the series are followed by local commentary from an expert in the community or on campus. The series is FREE and OPEN to the public. Please join us for this important conversation (& free popcorn too!).

✺ **Tuesday, December 2, 7:00 p.m.**
Dirt: The Movie - UWGB iPat Film Series—Christie Theatre (Located in the lower level of the University Union)

Screenings in the series are followed by local commentary from an expert in the community or on campus. The series is FREE and OPEN to the public. Please join us for this important conversation (& free popcorn too!).

Join or Renew Your Membership to Clean Water Action Council for 2014!

☐ Renewal ☐ New Member Date_____

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

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☐ 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

All contributions are tax-deductible. ***Thank you!***

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Phone numbers are listed under Board Members

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

www.cleanwateractioncouncil.org

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. *All contributions are tax-deductible.*

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