Clean Water Action Council

OF NORTHEAST WISCONSIN

Celebrating 34 years of working to protect public health and the environment in Northeast Wisconsin

SUMMER 2019

Are We Ignoring Environmental Warning Bells in NE Wisconsin?

A critical look at the risks involved with exposure to toxic chemicals and what we can do about it.

Introduction by CWAC President Dean Hoegger

We must not ignore the fact that we are surrounded by chemicals, many potentially harmful. More than 80,000 chemicals are registered for use today of which only a few have been studied by a government agency for safety. Each year, as many as 2,000 new chemicals are introduced. Many of these chemicals are delivered directly to our homes in items we buy such as furniture, toys, clothing, children's car seats, and even the receipts for these items.

Our food is grown and exposed to an ever increasing list of herbicides, pesticides, and preservatives applied by producers. Many other chemicals inadvertently enter the food chain through burning fossil fuels and manufacturing processes.

But, there is hope. In 2016 President Obama signed into law the first overhaul of toxic chemical rules in 40 years. He said it will especially help people who are more vulnerable to chemicals, including children, pregnant women, the elderly and the poor. On the downside, the EPA will only review about 20 chemicals each year, so it could take centuries for all the unregulated chemicals to be reviewed.

We must therefore demand our legislators do more, both at the state and federal level. And, we must be proactive in limiting what we allow into our homes, our food, and our bodies. Read the articles in this issue to learn about some potential chemical threats in northeast Wisconsin and how to protect our family.

This issue is dedicated to Dr. William Iwen, a longtime CWAC member who sees chemical exposure as our greatest environmental threat, and who urged us to publish on this topic.

Get the Lead Out!

By James Wagner

Editor's introduction:

Lead contamination likely has the greatest negative impact on child development and there are solutions. Yet, Wisconsin's Republican leadership is criticizing Governor Evers' budget because it included significant funding to replace lead pipes around the state. They say too much money is going to Milwaukee and it is not fair to the rest of the state's tax payers. Yet, when you read below about the impact lead has on infants and children, and you consider the economic status of many of Milwaukee's families, it clearly becomes a social justice issue. As Governor Evers tweeted, "Why the heck wouldn't we...?"

When you think about lead poisoning from water pipes, you'd be forgiven for thinking of the multi-year boondoggle that is the Flint, Michigan saga, rather than your own backyard. But for years residents have not paid enough attention to the lead pipes going to our own water taps.

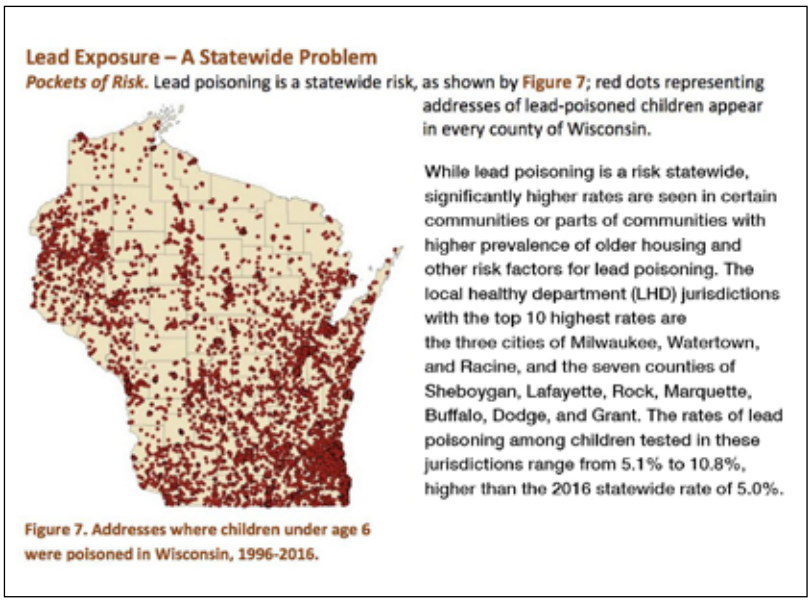


Figure 7. Addresses where children under age 6 were poisoned in Wisconsin, 1996-2016.

Lead poisoning, according to the World Health Organization, attacks the brain and central nervous system with effects that range from reduced brain development, hypertension and reproductive issues to coma, convulsions, and death. What's worse, lead bioaccumulates and has no known safe level of exposure. In other words, a person could get poisoned after their first exposure, or tenth or hundredth.

Wisconsin, and the nation in general, has done a good job removing lead from paints, gasoline, ceramics, glass, jewelry or any other number of products. However, lead water pipes were long favored for transporting drinking water from the municipality to the home because of its malleability and stability. Only recently it has been targeted for the danger it poses to human health, especially children under 6 years of age. In Wisconsin, more than 200,000 children have been diagnosed with lead poisoning from 1996-2016.

One of the first proclamations made by newly-elected Governor Tony Evers was to declare 2019 the "Year of Clean Drinking Water" and followed words with action in his budget proposal, seeking approval for a $40 million bond authority for replacement of lead service pipes. The Republican-controlled state legislature nixed the proposal, saying most of the money would go to Milwaukee county line replacements. It should be noted the county, which is a Democrat enclave, has approximately 95,000 lead water pipe lines—significantly more than the next four counties combined—and that 10.8 percent of Milwaukee children had elevated levels of lead in their blood, higher than the overall Wisconsin rate of 5 percent and significantly higher than the 2.4 percent rate found in Flint.

While Milwaukee County stands out, nearly all Wisconsin households are potentially affected by elevated levels of lead in their drinking water above the EPA's federal action level of 15 parts per billion. And yet, lead poisoning hasn't resonated among state residents.

The Centers for Disease Control threshold for lead poisoning is 5 micrograms per deciliter. In 2016 the Wisconsin Department of Health Services *Report on Childhood Lead Poisoning in Wisconsin,* the department found the following percentage of children under 6 who met that blood lead level:

Outagamie – 2.08
Winnebago – 3.86
Calumet – 2.92
Waupaca – 4.41
Brown – 1.60
Shawano – 3.85
Oconto – 1.36
Marinette – 3.56
Door – .36
Kewaunee – 2.07
Sheboygan – 8.42
Manitowoc – 4.46
Fond du Lac – 4.28
Green Lake – 4.00
Marquette – 5.84
Florence – 0
Menominee – 3.33
Waushara – 2.38

(Statewide average is 4.98%, with 4,353 exceeding EPA limits out of 87,443 total tested)

What Can You Do?

Dr. Sarah Yang, a toxicologist with the Wisconsin Division of Public Health, recommends that "because lead can come from a number of plumbing components, we recommend that all water users take action to reduce their potential lead exposure. This includes steps like using only cold water for drinking, regularly cleaning out the aerator on the faucet, and flushing the water for several minutes before using it for drinking."

The EPA recommends a screening test for all children ages 1 and 2, and to test your drinking water:

- Annually, or when a new baby is expected
- If you notice a peculiar taste, odor or staining issue
- If there are unexplained illnesses in the family
- If there was a chemical or fuel spill/leak near your water supply

Lead testing from a Wisconsin Department of Natural Resources-certified lab will cost anywhere between $20-$100

but will provide the most reliable data. For a list of certified labs, see *https://dnr.wi.gov/regulations/labcert/documents/LabLists/SDWA_Pb.pdf.* Also, the EPA requires all community water systems to prepare an annual water quality report, the *Community Confidence Report*. Contact your local water utility for a copy of their latest report.

And finally, tell your state legislators that the state has a significant role in protecting all children from the effects of lead exposure and urge them to provide the funding requested by Governor Evers.

For more information, go to the following state and federal resources:

DHS Lead-Safe Wisconsin:
https://www.dhs.wisconsin.gov/lead/index.htm
CDC: *https://www.cdc.gov/nceh/lead/leadinwater/*
EPA:
https://www.epa.gov/ground-water-and-drinking-water/basic-information-about-lead-drinking-water

Lead Poisoning Symptoms:

Newborns
- Be born prematurely
- Have lower birth weight
- Have slowed growth
- Lead poisoning symptoms in adults

Children
- Developmental delay
- Learning difficulties
- Irritability
- Loss of appetite
- Weight loss
- Sluggishness and fatigue
- Abdominal pain
- Vomiting
- Constipation
- Hearing loss
- Seizures

Adults
- High blood pressure
- Joint and muscle pain
- Difficulties with memory or concentration
- Headache
- Abdominal pain
- Mood disorders
- Reduced sperm count and abnormal sperm
- Miscarriage, stillbirth or premature birth

(Information courtesy of Mayo Clinic)

Sources:
WHO - *https://www.who.int/news-room/fact-sheets/detail/lead-poisoning-and-health*

WI Environmental Improvement Program proposal - *https://doa.wi.gov/budget/SBO/2019-21%20320%20EIP%20Executive%20Budget.pdf*

WI Lead Line Replacement Proposal Nixed - *https://www.usnews.com/news/best-states/wisconsin/articles/2019-05-14/budget-panel-to-consider-evers-clean-water-borrowing-plan*

WI Childhood Lead Rates Worse than Flint - *https://observatory.journalism.wisc.edu/2018/05/10/wisconsins-rate-of-lead-poisoning-worse-than-flint-michigans/*

2016 WI DHS Lead Poisoning Report - *https://www.dhs.wisconsin.gov/publications/p01202-16.pdf*

What is the risk from BPA coated cash register receipts?

By David Verhagen

We got to the checkout counter and the cashier was wearing gloves. They were the thin disposable kind worn by the people dishing up salads in the deli. But here she was, ringing up purchases at the checkout wearing sanitary gloves.

It turns out that she was well advised to be careful. The receipt printer at her station, just like receipt printers nearly everywhere, uses a specially coated paper that printed without the use of ink ribbons or cartridges. The printer uses a small amount of heat to release an acid onto the paper that turns the paper black, acting like ink and providing a written record of the customer's purchase.

The special coating on the receipt comes from a versatile little acid known as bisphenol A, or BPA, made famous when it was removed from baby bottles and some food packaging due to customer demand. You can be forgiven if you thought that it had been banned from food packaging by the government, but our government rarely bans environmental toxins. Testimony in recent glyphosate court cases has revealed, chemical companies exercise great influence with government regulators (*as reported by National Public Radio on a May 30, 2019 broadcast*).

Courtesy of Wikimedia Commons, the free media repository.

BPA lives in the lining of beverage containers, canned foods, bottle tops, movie theater tickets, clear food containers, and even in plastic forks and spoons. Its uses are so widespread that this endocrine disruptor is now detected in the urine samples of 93% of Americans. (*Dr. Josh Axe, July16, 2018*)

Science Daily reported in July 2018 that researchers at Texas A&M published a study which found that BPA affects the microbiome: "This is the first study to show that BPA can negatively impact gut microbial amino acid metabolism in a way that has been associated with irritable bowel disease," said Jennifer DeLuca, a graduate student in the nutrition and food science department and first author for the study.

You don't need to eat or drink BPA for it to enter your body; it can be absorbed through the skin too. For most of us, there is little to be concerned about. The EPA has determined that the exposure we get from receipt paper is inconsequential. But for those who are going to work every day and use a thermal printer regularly, the exposure can add up. "There's more BPA in a single thermal paper receipt than the total amount that would leach out from a polycarbonate water bottle used for many years," said John Warner, Ph.D., president of the Warner Babcock Institute for Green Chemistry.

Consider, whereas the BPA in your water bottle is tied up as part of a complex polymer, the simple BPA monomer on the surface of your receipt easily wipes off onto your finger. Toxicologists, at the French National Institute for Agricultural Research in Paris, found that such "free" BPA can be efficiently absorbed through the skin. Researchers used radioactively labeled BPA to track its movement through human skin and found that 46% of the substance was absorbed.

A huge factor in skin absorption is whether the person has dry hands or not. Working at a grocery that sells fresh produce and frozen packaged items, cashiers often wind up with wet hands. Moist skin has been shown to absorb ten times as much BPA as dry skin. Compounding the problem for cashiers is the use of hand lotion to soothe chapped hands. Oil based lotions and hand creams result in even greater absorption.

At Harvard University they looked at concentrations of BPA in the bloodstream of 389 pregnant women. By occupation, cashiers who handle BPA coated thermal receipts had the highest concentrations by far in their blood, at 2.8 micrograms per gram (µg/g). Teachers averaged a concentration of 1.8 µg/g, and industrial workers tested out at 1.2 µg/g.

While the average consumer doesn't handle enough receipts in a day to be concerned with BPA contamination, those working as cashiers in stores, at restaurants, and countless service counters handle receipts throughout the day. At busier stores they need to replace the roll of paper periodically as well. The extra handling involved in threading it through the printer coats their hands with a far greater amount of chemical than does tearing it off and handing it to the customer. Often the employee is too busy to wash their hands after such maintenance, and use of hand sanitizers makes absorption worse.

When you are offered BPA coated movie tickets, price labels, and purchase receipts throughout the day, ask the clerk to drop them into your bag. Once you get home, you can drop them into your recycling bin and wash off residues then. You could go one step further by slipping the cashier a copy of this article so they take action to protect themselves.

The key to staying healthy in this modern world may come down to how successful we are at avoiding exposure to the ever-expanding and little regulated list of chemicals.

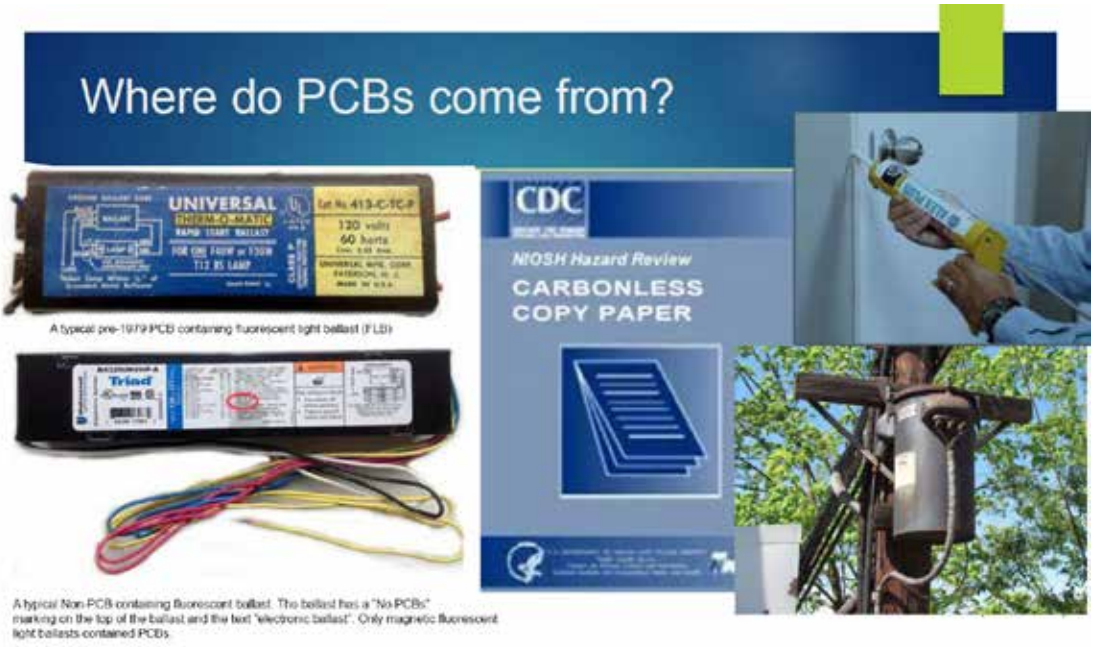
Exposure to PCBs Remains a Threat in Northeast WI

By Dean Hoegger

What are PCBs and what are the local sources?

Polychlorinated biphenyls, or PCBs, are manufactured mixtures of up to 209 chlorinated compounds. PCBs are resistant to heat, acids, and bases and therefore were used as an insulating material in electric equipment, such as transformers and capacitors. Although production was banned in 1977, PCBs may still be present in electrical equipment from this time period, including the ballast in fluorescent fixtures manufactured before 1/1/1977. The manufacture date can be found stamped into one end of the fixture.

PCBs have also been used in a wide range of products such as plasticizers, surface coatings, inks, adhesives, flame-retardants, paints, and carbonless duplicating paper.



PCB use in carbonless paper resulted in the contamination of the Fox River from Menasha to Green Bay as well as lower Green Bay. This resulted primarily from cycling the carbonless paper and discharging processing water into the river. View the Fox River Cleanup Project overview video at *http://foxrivercleanup.com/*

What are the pathways of exposure to PCBs?

Exposure to PCBs can occur through ingestion, inhalation, or skin contact. While the most likely pathway to exposure is ingestion, inhalation and skin contact should not be overlooked.

Inhalation of PCBs can occur from breathing contaminated air. The average PCB concentration in outdoor air in urban areas is often around 5ng/m3, and can be as much as 10 times higher in industrial settings, especially in PCB disposal facilities. One such facility is in Green Bay on State Street along the Fox River. Contaminated Fox River sediment is dewatered there before being transferred to one of two toxic landfills in northeast Wisconsin.

In an effort to control contaminated dust, the Fox River Cleanup Group explains on their website that all of the dewatering and loading of sediment occurs indoors and the trucks are covered for the 40-50 mile trip to the landfill. During a visit to the facility, I also observed a street cleaning vehicle attending to the parking lot. The risk then appears to be primarily to those working in the facility. However, those living or working downwind from the site may want to collect dust from their property to have it tested for PCBs. A request to the Fox River Cleanup Group by a neighborhood association to do so may carry more weight than from an individual.

Incineration can also lead to inhalation of PCBs. We must resist efforts of the incinerator industry to convince local governments that waste-to-energy incinerators are good for the community. Kadant Grantek, Inc., a paper mill sludge processor at 607 Liberty Street in Green Bay, should be monitored for PCB emissions. The EPA site *https://echo.epa.gov/* indicates that in 2008 the company released 2.3 lbs. of PCBs into the air, but then no data was reported since that year.

Skin contact could also be a contamination route and would be of greater concern for workers in PCB contaminated industrial sites during evaluations or cleanups. Children playing in such sites prior to remediation could also be exposed.

The greatest risk for PCB contamination is through ingestion. Eating contaminated fish poses a risk that can be partially minimized through preparation and cooking methods that reduce the fats in the fish. Broil, grill or bake the trimmed and skinned fish on a rack so the fat drips away. Do not use the drippings to prepare sauce or gravies. The WDNR provides a fish consumption advisory at *https://dnr.wi.gov/topic/fishing/consumption/*

Ingestion of PCBs by infants through consumption of human breast milk and from drinking water containing PCBs has been steadily declining since 1982 and risk for the general population is now considered minimal.

What are the risks from exposure?

The most commonly observed health effects in people exposed to large amounts of PCBs are skin conditions such as acne and rashes.

The Department of Health and Human Services (DHHS) has concluded that PCBs may reasonably be anticipated to be carcinogens. The Environmental Protection Agency has classified PCBs as probably carcinogenic. Exposure to highly chlorinated PCB mixtures is associated with cancer of the liver in animals. The Mayo Clinic also reports adverse health effects on the nervous system.

Some estrogen-like PCBs are also believed to cause hormone disturbances and create adverse effects on reproduction.

A report from a CWAC member suggests that over time, his workplace exposure as an environmental engineer from contaminated dust led to elevated levels of PCBs in his blood. He believes this to be the cause of his rare form of cancer which has not been successfully treated.

What can be done to minimize exposure and risk?

Since PCB exposure occurs mainly through ingestion of contaminated foods, and the toxin accumulates in the body, it is important to minimize lifetime exposure. This would include suggestions above for choosing and preparing both locally caught and imported seafood. Limiting imported fish such as bluefish and farm raised salmon is also advised. The Mayo Clinic reports that in general, bottom-feeding fish (striped bass, bluefish, American eel, sea trout) and larger predator fish (bass, lake trout, walleye) caught in contaminated waters contain higher levels of PCBs. For more details on cooking and fish choices see *https://www.mayoclinic.org/healthy-lifestyle/*

Breast feeding mothers should also consider their past exposures and bioaccumulation of PCBs before breastfeeding. Anyone concerned with the level of PCBs they have accumulated in their body should consult with their doctor for having serum blood levels evaluated.

The French Agency for Food, Environmental and Occupational Health & Safety (ANSES) considers that "the effects of PCBs on the mental and motor development of children exposed in utero are the best documented 'critical effects' for establishing the critical concentration level in humans." They recommend setting the critical concentration threshold for pregnant women, women of childbearing age, breastfeeding women and children under three years of age at 700 ng of total PCB per gram of plasma lipids.

There is no known treatment of chronic exposure to PCBs. Therefore, preventing exposure is critical.

Sources:

https://toxtown.nlm.nih.gov/chemicals-and-contaminants/polychlorinated-biphenyls-pcbs

https://www.anses.fr/en/content/what-are-critical-blood-concentration-levels-pcbs

https://www.atsdr.cdc.gov/csem/csem.asp?csem=30&po=10

https://www.greenfacts.org/en/pcbs/l-2/6-effects-human.htm

http://www.inchem.org/documents/cicads/cicads/cicad55.htm#4.0

https://www.pediatrics.emory.edu/centers/pehsu/concern/pcb.html

The Use of Farm Chemicals in NE WI Poses a Threat to Human Health

By Lauren Felder, CWAC Spring Intern

Pesticides are considered some of the best tools to use in non-organic modern farming. They allow greater profit for farmers by reducing crop losses. However, prolonged exposure to most pesticides can pose a risk to human health. Many pesticides contain endocrine disrupting chemicals, which can cause a host of health issues ranging from relatively minor developmental issues to cancer.

Despite this information, two-thirds of more than ninety varieties of pesticides used in Wisconsin are not subject to health standards in drinking water. Furthermore, a 2016 survey of wells in Wisconsin found that one-third of tested wells were contaminated with at least one pesticide.

In 2016, the most widely used active ingredient in pesticides used on corn was **atrazine**. According to information provided by the Door County Co-op, which is a

licensed applicator for many pesticides used in Wisconsin, the average use of atrazine in the county was about half a pound per acre. It was noted that this amount is reduced from three to four pounds per acre from just a few years ago. **Atrazine is an herbicide which can cause cardiovascular or reproductive health issues including birth defects.**

Although the US EPA originally classified the chemical as unlikely to cause cancer, recent studies have linked exposure to atrazine to increased risk for breast and prostate cancer. In some places in Wisconsin, the chemical has been banned because it can leach into groundwater and contaminate drinking water supplies. In Northeast Wisconsin, only a few select areas in Brown County and Outagamie County are subject to this ban (you can see the areas subject to the ban at *https://datcpgis.wi.gov/AtrazinePA/*

A court case between plaintiffs representing several farm labor unions and social justice groups against the EPA began in 2007 over the neurological effects on children.

A 2016 study conducted by the Wisconsin Department of Agriculture, Trade, and Consumer Protection showed that 41.7% of Wisconsin wells were contaminated with atrazine or one of its metabolites.

Another prevalent herbicide is **glyphosate**, more widely known by its trade name Round-Up. It is commonly used on several crops including corn, buckwheat, potatoes, and soybeans. In 2016, 71% of the 4,050,000 acres (about 2,875,500 acres) of corn planted in Wisconsin were treated with glyphosate. This high usage of glyphosate is due to the popularity of genetic modification of crops such as corn and soybeans to be "Round-Up ready," meaning the application of the herbicide will only harm weeds.

This genetic modification has caused the rise of "superweeds," a term coined to refer to herbicide-resistant weeds. These superweeds have prompted an increase in the use of glyphosate or mixing it with other herbicides in order to increase its potency.

Short-term effects of exposure to glyphosate include skin and eye irritation, headache, and nausea. Inhalation and ingestion can cause more severe effects including burns in the nose and throat, vomiting, and diarrhea.

In 2015, the World Health Organization (WHO) conducted a study of glyphosate in response to public outcry about its safety. The agency concluded that, despite its previous classification as not likely to be carcinogenic, it is a likely human carcinogen. Like many pesticides, it is hard to prove the link between glyphosate and cancer, but the WHO study showed that there is likely a link between glyphosate and non-Hodgkin lymphoma.

Chlorpyrifos appears to be one of the most controversial and dangerous chemicals that could be used on crops. It is an organophosphate insecticide which works by inhibiting a certain enzyme needed for neurotransmission in various organisms, which causes death. The chemical was even used as a nerve gas in World War II. Concerns over its health effects on humans prompted a ban on use of chlorpyrifos as an indoor insecticide in 2000. However, it remained a popular insecticide to use on row crops such as corn, soybeans, and Christmas trees. Currently, 42 insecticides and insect baits in which chlorpyrifos is the active ingredient are registered for use in Wisconsin.

The controversy over continued use of chlorpyrifos began in the mid-2000s. A court case between plaintiffs representing several farm labor unions and social justice groups against the EPA began in 2007 over the neurological effects on children. The plaintiffs claimed that the pesticide caused developmental issues, memory problems, and attention deficit and hyperactivity disorder in children exposed to it both in and out of the womb.

The case was delayed by the EPA until August 2018, when the 9th Circuit Court of Appeals ruled that chlorpyrifos should be removed from the market within 60 days. However, the EPA is appealing this decision and chlorpyrifos remains registered for use pending a decision.

The claims the plaintiffs made about effects of chlorpyrifos on children have been backed up by scientific studies. Various studies have concluded that in addition to those ailments, children exposed to the insecticide can have marginally lower IQs and are more likely to be on the autism spectrum. Exposure of adults can cause headaches, nausea, vomiting, drooling, issues with vision, and in severe cases, loss of muscle control and paralysis.

Even if the use of chlorpyrifos was banned, the chemical can remain in the environment at low levels for extended periods of time. It has also been noted by the EPA to be a chemical of concern in drinking water contamination.

It is obvious that most pesticides are not entirely safe. In addition to the effects mentioned above, long term exposure to other types of pesticides can cause ailments such as Parkinson's disease, leukemia and other cancers, depression, and anxiety. Pesticides certainly benefit farming but educating the public and re-evaluating the safety rating of many of them would benefit Wisconsin citizens.

Special thanks to Dean Hoegger for contacting the Door County Co-op.

Sources:

https://dnr.wi.gov/lakes/plants/factsheets/2,4-DFactSheet.pdf

https://dnr.wi.gov/lakes/plants/factsheets/GlyphosateFactsheet.pdf

http://www.panna.org/resources/atrazine

http://www.panna.org/resources/chlorpyrifos-facts

https://datcp.wi.gov/Documents/GroundwaterReport2017.pdf

We must continue to reduce mercury pollution to protect our children!

By John Hermanson

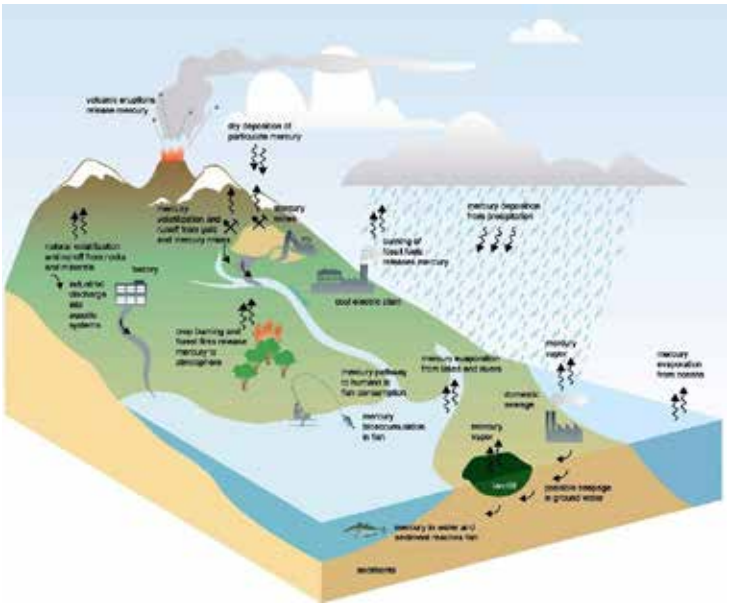
Mercury is a threat to our Wisconsin environment and public health especially for developing fetuses and children under fifteen. One in six women of childbearing age have mercury levels in their blood that are unsafe for a developing fetus.

The major threat to Northeastern Wisconsin residents comes from eating fish and shellfish. The Wisconsin Department of Natural Resources (WDNR) has a fish-eating advisory suggesting safe limits depending on where fish are harvested and the FDA has further consumption advice.

It is disconcerting to find mercury concentrations of 3.0ng to 5.0ng in many Wisconsin lakes and streams when the EPA recommends not harvesting fish from waters exceeding 1.3ng/Liter. Yet, the WDNR is routinely approving variance requests for levels nearly three times the EPA recommended limit. (See Mark Your Calendar—Hearings)

Methylmercury is the most toxic form of mercury that bioaccumulates and becomes a hazard to humans and wildlife. Wetlands and associated organic matter increase the amount of inorganic mercury that is converted to methylmercury. Health concerns include central nervous system toxicity (higher levels) and diminished cardiovascular health and endocrine disruption (lower levels). The EPA estimates that more than 300,000 newborns in the United States each year are at risk of increased learning disabilities due to methylmercury.

Emissions of mercury from human activities include consumer and household products, industrial manufacturing, some small-scale gold mining and combustion of coal. According to the *United States Geological Survey* since 1990 mercury emissions have decreased in the United States by about 60%. However, to reduce mercury contamination in seafood to meet safe consumption levels, it will require further reductions from the U.S. and other industrialized nations.



Courtesy of Flicker

When we consider that fishing brings $2.75 billion a year to Wisconsin's economy and supports 30,000 jobs, we have an economic reason to reduce mercury contamination in our environment. There are also subsistence-based cultures around the world that depend more on seafood and thus will require even less mercury contamination to safely carry on their way of life.

A clean energy economy can reduce mercury emissions. According to the EPA, coal-burning power plants are the largest source of mercury emissions to the air in the United States, accounting for about 50%. As we know, what is put into the atmosphere is deposited to the earth's surface, including our waters.

A footnote to this is that according to the Mercury Deposition Network Project, 83% of mercury deposited from the atmosphere comes from international sources. This fact suggests another reason the United States should be a model for utilizing clean energy.

The Clean Water Act (1972) and the Clean Air Act (1963) are founding laws that have helped to reduce mercury pollution and led to the creation in 2012 of the EPA's finalized *Mercury and Toxic Air Standards* (MATS). In 2013 the Minamata Convention on Mercury, currently with 108 countries as members, is trying to reduce mercury on a global level. Wisconsin's 2009 Mercury Product Bill is also significant to Wisconsin's mercury reduction efforts.

Currently, the Trump Administration, including the appointed EPA Chief Andrew Wheeler (former coal-lobbyist) has taken a position to try to re-interpret various laws including the Clean Power Plan, Fuel Economy Standards, National Climate Assessment and the Mercury and Toxic Air Standards.

In regard to the mercury law, Wheeler is attempting to weaken the law by changing how the science is done and how policy is determined. MATS cost-benefit analysis would be done by not accounting for the co-benefits that a reduction in mercury would bring. It therefore leads to the cost out-weighing the benefit.

Edison Electric Institute's (the largest utility trade association) spokesperson Brian Reil says that the "EPA should leave the underlying MATS rule in place and unchanged, and they should not finalize any action that would undermine the existing MATS rule. Since the MATS rule took effect in 2012, electric companies have reduced mercury emissions by nearly 90 percent" as reported by *The Washington Post* article, "EPA to make it harder to tighten mercury rules in the future."

It is feared that such a ruling by the EPA will not only make it more difficult to advance further reductions in mercury that continuing science is suggesting is prudent, but it undermines full accounting of the cost-benefit analysis of reducing other pollutants.

Some good news is that the cost of solar, wind, and energy storage makes a clean energy economy with less mercury pollution more probable. Some of the organizations in our state that are at the forefront of helping move this future

closer include Clean Wisconsin, Wisconsin Beyond Coal, and RENEW Wisconsin.

There have been other initiatives put forward by Clean Wisconsin to try to get manufacturers to take responsibility for the lifecycle of the products they make and sell that have environmental impacts. They promoted the Electronics Recycle Program in Wisconsin and tried to do the same with older thermostats that contain a substantial amount of mercury that require proper recycling or disposal.

Be sure to properly dispose of your compact florescent bulbs, which contain a small but important amount of mercury as well as older thermometers and some switches. The WDNR recommends placing them in their original packaging and then in a plastic bag to prevent from breaking: *https://dnr.wi.gov/files/PDF/pubs/wa/WA195.pdf.*

Business and institutions are not allowed to send them to a landfill. Recycle with your local municipality when possible.

Editor's note:

Wisconsin Public Radio just published this story regarding mercury contamination in Wisconsin Fish:
"Climate Change Causes 'Roller Coaster' Mercury Levels In Wisconsin Fish. Researchers Find Climate Change-Caused Variations In Wisconsin Lake Levels Have Begun Reversing Recent Gains In Controlling Environmental Mercury"
See the article at https://www.wpr.org/climate-change-causes-roller-coaster-mercury-levels-wisconsin-fish

Sources:

https://dnr.wi.gov/topic/Fishing/consumption/index.html

https://dnr.wi.gov/topic/fishing/documents/FishContaminantsAdvisories19702010.pdf

https://www.cleanwisconsin.org/enviropedia/

Take Action on PFAS Contamination

By Dean Hoegger

Per- and polyfluoroalkyl substances (PFAS) are a large group of man-made toxic chemicals used to make consumer products such as stain and water-repellent fabrics, nonstick products, polishes, waxes, paints, cleaning products, and fire-fighting foams. The PFAS group of substances includes several thousand chemicals; two of the most well-known are perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS).

PFOS, PFOA, PFHxS, and PFNA have been more widely studied than other per- and polyfluoroalkyl substances (PFAS). However, there have been few studies about the effect on human health from exposure to multiple PFAS. Research has shown probable links between PFAS exposure and cancer, thyroid disease, high cholesterol, ulcerative colitis, and pregnancy-induced hypertension.

The Agency for Toxic Substances and Disease Registry reports that some, but not all, studies in humans with PFAS exposure have shown that certain PFAS may:

- Affect growth, learning, and behavior of infants and older children
- Lower a woman's chance of getting pregnant
- Interfere with the body's natural hormones
- Increase cholesterol levels
- Affect the immune system
- Increase the risk of cancer

Concern about PFAS and in Wisconsin arose with the closure of the Badger Army Munitions Plant near Baraboo, WI around 2013 when several local wells were first found to be contaminated with carcinogenic solvents. The action group, Citizens for Safe Water Around the Badger (CSWAB), was formed and actively worked to have further testing done.

The suspected source of PFAS in area wells is aqueous film-forming foams (AFFF) which have been used by the Department of Defense for over 40 years for suppressing liquid fuel fires, fire-training exercises and other emergency fire response activities. In the fall of 2018, CSWAB and residents pushed the Army to test all public drinking water systems within a four-mile radius of the plant.

PFAS have also been found at Wisconsin military sites at the Air National Guard 128th Air Refueling Wing in Milwaukee and Truax Field in Madison.

During the same decade Tyco/Johnson Controls in Marinette, Wisconsin was contaminating groundwater with PFAS as a result of testing firefighting foam without containment practices. The PFAS have spread via groundwater and runoff ditches threatening nearby fisheries as the contaminate moved to spawning streams and the waters of Green Bay.

It has also affected residential wells. So far, at least 36 families have been exposed to PFAS in their drinking water. The highest concentration detected in a private well was 1900 ng/L, far above the EPA's Health Advisory Level of 70 ng/L (parts per trillion).

Residents in the Marinette County Town of Porterfied are also concerned that soil, groundwater, and animal feed could be contaminated as a result of land spreading wastes from the Marinette municipal sewage treatment facility over the course of several years. Although neither the DNR or Tyco has conducted any testing, the DNR has halted sludge spreading in the interim, requiring burning or landfilling the sludge. In February, 2019 with 14 other state environmental groups, CWAC signed on to a joint position statement opposing the incineration of PFAS wastes requesting that they be stored until a proven method of destroying the chemicals is found.

Litigation is now underway seeking damages in Marinette County which are already quite extensive even though the

impact on human health may not be known for decades. The WDNR referred the case to the state Department of Justice for action. In the meantime, Democratic and Republican legislators are pushing somewhat different bills to deal with the problem of PFAS, with the Democrat's legislation being far more protective of human health and the environment.

The Democratic bill is patterned after measures in other states and would require the DNR to set limits on allowable concentrations in drinking water, groundwater, surface water, air, soil, solid waste, and sediments of public waterways. It would also allow the DNR to set interim standards while further research is done.

If you worry your well water may be contaminated with PFAS chemicals, use the link below to learn about testing for $70. Testing info and order form:

https://freshwaterfuture.org/services/water-testing/

Please contact your state representatives and urge them to support the stronger bill proposed by the Democrats.

Republican bill proposed:

http://legis.wisconsin.gov/senate/02/cowles/news/2019/rep-nygren-and-sen-cowles-introduce-bill-curbing-use-of-pfas-fire-fighting-foam/

Sources:

https://ehextra.com/Content/News/News-Articles/Article/What-s-in-the-soil-/12/35/53559

https://wkow.com/news/top-stories/2018/09/11/group-urges-army-to-test-drinking-water-near-former-badger-ammo-plant/

https://www.atsdr.cdc.gov/pfas/health-effects.html

https://www.jsonline.com/story/news/politics/2019/05/23/tony-evers-backs-bill-regulate-forever-chemicals/1197045001/

Are you at risk from pesticides in your home?

By Caitlin Cravillion

Living in Northeast Wisconsin, it would be easy for one to assume pesticide contamination is caused by external factors such as farms or industrial use. However, if we were to dig deeper into all the sources of pesticide contamination, we would find a great deal of exposure within our home. This article will discuss the significant risk that NE Wisconsinites have from household pesticide contamination and what can be done to lower the household exposure risk.

According to a 2018 Environmental Protection Agency (EPA) survey, 75 percent of U.S. households used at least one pesticide product indoors during the past year. Products used most often are insecticides and disinfectants; but another EPA study suggests that 80 percent of most people's exposure to pesticides occurs indoors and that measurable levels of up to a dozen pesticides have been found in the air inside homes.

Elevated indoor pesticide levels can be explained by noting the addition of other potential sources including contaminated soil or dust particles that float or are tracked in from outside, such as pesticides used on lawns to kill weeds. These contaminants can then accumulate in the air, collect on household surfaces, or the food we consume.

Another household source of contamination is from common consumer products used in or around the house such as cockroach traps and baits, insect repellants, rat and mouse poisons, flea and tick sprays and collars for pets, disinfectants, products that kill mold and mildew, weed killers, bug sprays, and swimming pool chemicals.

It's important to be aware of the health effects that prolonged exposure to pesticides can have on humans. These include irritation to eyes, nose, and throat, damage to the central nervous system, kidneys, and even an increased risk of cancer. Chronic exposure to many household pesticides can result in damage to the liver, kidneys, and endocrine and nervous systems (EPA, 2018).

These risks are increased in children due a number of factors. Children are unable to remove pesticides from the body as well as an adult. They take more breaths per minute, potentially breathing in more airborne pesticides. They also spend more time closer to the ground where the pesticide may be applied, especially crawling infants and toddlers. And, they are also more likely to put their fingers, toys, and other objects into their mouths. *http://npic.orst.edu/health/child.html that may be contaminated.*

For residents who live in rural areas, the effects of pesticides in the home increases. According to the Department of Agriculture, Trade and Consumer Protection (DATCP) 2016 study, one-third of private drinking water wells in Wisconsin had pesticide contamination. This is putting a large demographic of NE Wisconsin residents at risk. *https://madison.com/ct/news/local/despite-strict-rules-pesticides-pose-threat-to-wisconsin-drinking-water/article_170a2f6a-2726-5738-92d4-30da6b86a769.html*

Many common pesticides are available in aerosol spray containers. Although convenient, the small mist of the pesticide spray can linger in the air for a long time. This puts people and pets at greater risk.

Pesticides used on lawns to kill weeds are very common in Wisconsin and are regulated minimally. Wisconsin professional applicators are required to use warning flags after lawn applications and keep them posted for 72 hours after application. Unfortunately, the state does not require homeowners to provide notification (Wisconsin does provide flags with pesticide product purchase).

This could mean that pesticide drifting could be occurring without one's knowledge, and that pesticides have the potential to drift into neighboring lawns, gardens, and homes.

The last household exposure risk to be discussed is the risk from food products.

Whether it be food from a garden or from the grocery store, almost all produce brought into the home has some level of pesticide on it.

The Environmental Working group updated the list of 12 fruits and vegetables that contain the most pesticides. In order of pesticide concentration, 2019's Dirty Dozen list is: strawberries, spinach, kale, nectarines, apples, grapes, peaches, cherries, pears, tomatoes, celery and potatoes.

There is also a list of the cleanest produce based on pesticide levels. This includes: avocados, sweet corn, pineapple, frozen sweet peas, onions, papayas, eggplants, asparagus, kiwi, cabbage, cauliflower, cantaloupe, broccoli, mushrooms, and honeydew melon. *https://www.cbs58.com/news/kale-joins-the-ranks-of-the-annual-dirty-dozen-pesticide-list*

So, what can be done to reduce your household exposure to pesticides? To start, verify your pesticide levels in your drinking water, especially if you are part of the rural population.

Carefully choose your household products and choose low or pesticide free alternatives, and especially avoid the use of aerosol pesticide products. Do not apply pesticides on a windy day. Check to see if your community has lawn care ordinances and reduce your lawn care applications. If applications are used, ensure they stay on the lawn and eliminate foot traffic on treated areas.

Buy fruits and vegetables grown in the U.S. and wash them before eating (I personally soak my fruit in apple cider vinegar for a half hour) to reduce the amount of pesticides on them. Choose fruits and vegetables from the Clean 15 *https://www.produceretailer.com/article/news-article/2018-dirty-dozen-and-clean-15-lists-released*

Better still, purchase food grown without pesticides, especially for foods which have tested high for pesticide residues, or grow your own food without using pesticides.

Finally, educate your family, friends, and neighbors to reduce both their risk and yours. From the water we drink, the food we eat, the air we breathe, the common household products we carry, and to the everyday activities we do, we are at risk of pesticide contamination in our homes. Let's take simple steps towards reducing our in-home risks to pesticides.

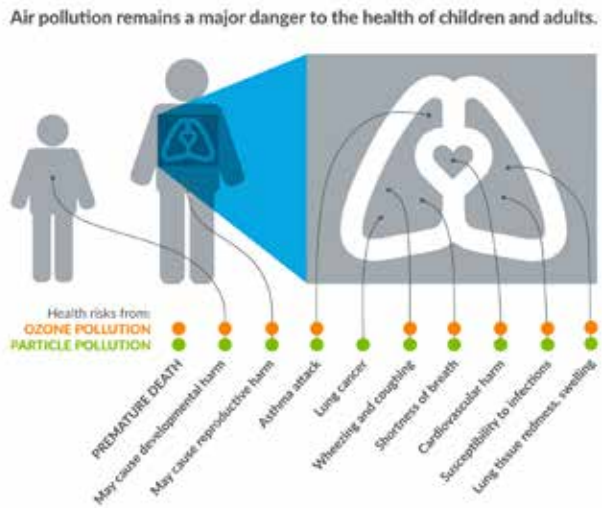
We must reduce toxic air from ozone and particulate pollution!

By Charlie Frisk

Ozone is a toxic gas. When the emissions from vehicles, power plants, industrial boilers, refineries, chemical plants and other sources are exposed to sunlight and heat they form ozone. Eight counties in Wisconsin received failing grades for ozone levels from the American Lung Association, and unfortunately, two of those counties, Door and Manitowoc, are in northeast Wisconsin.

When inhaled, ozone can damage the lungs. Relatively low amounts can cause chest pain, coughing, shortness of breath and throat irritation. Exercise during exposure to ozone causes a greater amount of ozone to be inhaled, and increases the risk of harmful respiratory effects. For people like my wife Kathy, who has an inherited lung disorder, high levels of ozone can be debilitating and life threatening.

Ironically, according to the American Lung Association, some Wisconsin counties have the cleanest air in the country, but unfortunately for us northeast Wisconsin residents, those counties are primarily in the western and northwestern parts of the state.



Courtesy of the American Lung Association

Particle pollution, also called "small particulate matter", refers to tiny particles, both liquid and solid, that can get into your lungs. They tend to come from the same sources that trigger ozone production with the two largest sources being coal fired power plants and vehicle exhaust.

Particle pollution causes early death (both short and long term exposure), cardiovascular harm (heart attacks, strokes, and congestive heart failure), asthma, COPD, cancer, and reproductive and developmental harm.

What can the average citizen do to reduce the problems of ozone and particle pollution? The Air Quality Index in your local weather forecast will issue an "unhealthy warning" whenever ground level ozone is at a dangerous level. On high ozone days everyone should restrict their outdoor exercise to early morning when the ozone levels are naturally lower, and people with pre-existing conditions such as asthma should

avoid outdoor activities altogether.

In a perfect world people should not have to alter their activities to avoid ozone and particle pollution. What can we do to move us in the direction of that perfect world? The Federal Clean Air Act of 1970 did more to reduce the number of "unhealthy air days" than any legislation ever passed. But, there is still much more that could be done. Eliminating coal fired power plants and replacing conventional gasoline powered vehicles with electric vehicles would greatly reduce both ozone and particle pollution. The U.S. needs to show the same political will we had when the Federal Clean Air Act was passed, to go the extra distance to make our air truly safe to breathe.

Will you ask your federal legislators to support the Green New Deal which promises to reduce toxic air and water pollution from oil, gas, and coal combustion? Learn more at *https://www.sierraclub.org/trade/what-green-new-deal.*

If you would like to learn more about both ozone and particle pollution, visit the American Lung Association at *https://www.lung.org/our-initiatives/healthy-air/sota/health-risks/.*

The Hidden Dangers of Milk House Wastewater

By Lora Jorgensen

The dangers of untreated agricultural waste (liquid manure) and the effects it can have on surface and groundwater are becoming more apparent with the contamination of private wells, but the hidden contaminates contained in untreated milking parlor wastewater are rarely addressed.

Dairy cows produce an average of 7 gallons of milk per day. Approximately the same amount of water is used each day for washing/sanitizing purposes per cow. Once the milk arrives at a processing plant, it takes an additional 9 gallons of fresh water per gallon of milk, to process it into saleable products. In total, that is a 10:1 ratio (10 gallons of fresh water to produce 1 gallon of saleable milk).

Just ONE Concentrated Animal Feeding Operation milking an average of 6,000 cows will produce over 15,000,000 gallons of wastewater annually, which is added to nearly 40,000,000 gallons of liquid manure the herd produces. The 55 million gallons of untreated, combined waste is typically held in a liquid storage system and applied to fields as nutrients.

Milk house wastewater (water used to clean milking equipment and cows) can contaminate both groundwater and surface water if it is poorly managed. Runoff from the milking parlor itself or this effluent being spread on fields can wreak havoc on the health of humans, as well as cause environmental distresses.

The effluent coming from milking parlors contains a high concentration of organic materials and suspended solids such as manure, phosphorus, bacteria, oil, grease, casein, and lactose. There are also several inorganic compounds found in Milk House wastewater such as; chlorine, iodine (in the form of iodophors), quaternary ammonium compounds, chlorine dioxides, surfactants, and sodium hydroxide.

Chlorine dioxide: used for sanitizing, can cause brain development delays in fetuses and young children.

Quaternary ammonium compounds (QACs): used as surfactants and disinfectants. This antibacterial agent is commonly used in household and industrial cleaners. QACs are a known skin irritant, and to cause respiratory disorders, including asthma.

Sodium hydroxide: used as a disinfectant, Sodium hydroxide is highly corrosive and irritating to the skin, eyes, and mucous membranes of animals and humans. Sodium hydroxide can severely affect the pH of surface water and plant life.

Milk house effluent can be especially detrimental to surface water due to its extremely high biological oxygen demand (BOD), and chemical oxygen demand (COD). If the content of milk house effluent makes its way into water bodies, it can cause an ecological imbalance, which will result in algae blooms, fish die-offs, abundant foam, and strong odors.

Local loss of fish species. Discharges and runoff into rivers and streams can be lethal to aquatic life depending on the strength of the contaminant and size of the waterway. Repeated exposure to sub-lethal doses of some contaminants can cause physiological and behavioral changes in fish that have long term effects on the population, such as reduced reproductive success, abandonment of nests and broods, a decreased immunity to disease, tumors and lesions, impairment of the central nervous system, and increased failure to avoid predators.

Local loss of invertebrate species. Contaminants can be particularly lethal to invertebrates. Invertebrates are also food for fish and persistent discharges that kill invertebrates could cause fish to travel farther in search of food, exposing them to greater risks and stress.

Decreased dissolved oxygen (DO) levels. Waste compounds released into waterways initiate biochemical reactions that use up oxygen as the stream bacteria break down the organic matter (Biogeochemical Oxygen Demand, BOD). Excess nutrients can also lead to algal blooms, and oxygen is used up when the algae die and decompose. Fish 'breathe' oxygen through their gills, a decrease in available oxygen (anoxia) in the water column threatens their ability to respire, which may lead to death. Fish that tolerate low levels of dissolved oxygen (such as the introduced species gambusia) may replace native populations that are less tolerant.

Increased turbidity and decreased water clarity. Water may become cloudy or discolored with chemical contamination which reduces the ability of fish to see prey and detect predators.

Sources:

https://www.hindawi.com/journals/jther/2016/3746316/

https://www.niwa.co.nz/our-science/freshwater/tools/kaitiaki_tools/impacts/chemical-contaminates

https://ag.umass.edu/crops-dairy-livestock-equine/fact-sheets/milkhouse-wastewater-management

Avoid Coal-Tar-Based Pavement Sealants at All Cost

By Dean Hoegger

Editor's note: *We conclude this group of articles with one on an issue we can take immediate action to correct. After reading the article, contact us to help bring it to your town, village or city leaders.*

Coal-tar-based pavement sealants contain dangerous carcinogenic chemicals that put humans at risk, especially children. These chemicals, polycyclic aromatic hydrocarbons, or PAHs, increase a child's lifetime risk of cancer by 14 times when they spend their preschool years living near parking lots where coal tar sealants were used. A lifetime exposure is thought to increase one's risk of developing cancer by 38 times.

Pavement sealants are the jet-black coatings that homeowners and contractors apply to asphalt driveways and parking lots to give them that new look. The research is mixed as to whether any sealants extend the life of the pavement. Coal tar, or tar-based sealant, is the one that contains significant amounts of the harmful PAHs, as much as 200,000 parts per million (ppm). Asphalt-based sealants have about 50 ppm and the latex version has none.

As the sealcoat wears off, it can be transported by wind, rain, and human and animal traffic. Studies of the transport of PAHs into ground floor apartments from coal-tar treated parking lots have indicated extreme levels of PAHs. An Austin, Texas study showed 25 times the level of PAHs compared to apartments where there was a non-coal-tar sealed parking lot. Removal of one's shoes upon entry can limit transfer of contaminates.

Children are most vulnerable to exposure to PAHs. They often play on playgrounds, parking lots, and driveways. Young children ingest house dust and soil when they put their hands or objects into their mouth. Much of the estimated excess cancer risk associated with the ingestion of PAH-contaminated soil and house dust is incurred during early childhood.

Ingestion from contaminated food is another possible exposure route, especially when that food is grown next to a coal-tar treated parking lot. PAHs have been linked to bladder, liver, lung, skin, and stomach cancers in animal studies.

Inhalation is also a significant pathway for human exposure to PAHs. Volatilization of PAHs occurs from freshly coal-tar sealed pavement at levels tens of thousands of times higher than from unsealed pavement. Even up to eight years later the level can be an average of 60 times higher.

So, why are coal-tar sealants used if they are so harmful? The answer is historical in nature. Coal-tar is a byproduct of the coking of coal, which was done mainly east of the continental divide where the nation's steel mills are located. Various products were created from the waste material, including pavement sealant. As more asphalt parking lots were created, (*"They paved paradise, and put up a parking lot"-Joni Mitchell*) the demand for sealants increased. Only in recent years has the research on PAHs shown the true risk to humans and the environment.

Routes of PAH contamination.

Not only is this product harmful to humans, it is also a serious environmental contaminant, especially to aquatic life such as invertebrates and minnows. Studies by the United States Geological Survey (USGS) and the U.S. Fish and Wildlife Service found extremely high death rates of minnow species where there is runoff from parking lots treated with coal-tar sealants into nearby streams. Runoff from non-coal tar sealed lots had normal death rates. The USGS also found that total PAH concentrations varied little from the first days after application to months later.

Runoff to streams and storm water retention ponds has cost municipalities millions of dollars in cleanup costs. At a cost of $23 million, of which 35% was State of Wisconsin funding, 13,000 pounds of PAHs and 1,200 pounds of PCBs where removed from parts of the Kinnickinnic River in Milwaukee. Seven Minnesota cities are suing chemical refining companies for the cost of removing PAH contaminated sediment from storm water pounds. The cost is expected to reach millions of dollars.

An awareness of the hazards of coal tar sealants happened first at the consumer level. Going back nearly ten years, big box and hardware stores began taking if off their shelves and

providing customers safer choices such as asphalt or the latest pavement sealants. Unfortunately, that has not been the case with the commercial seal coat companies who have continued to use the product—even though product costs can be very comparable.

At a recent presentation about coal tar sealants in Sturgeon Bay, of the three companies represented, only one used asphalt sealant instead of coal tar. Additional reports from municipal service directors and seal coating companies indicate that more needs to be done to protect the public. For this reason, the state of Minnesota, Dane County, Wisconsin, and most of Milwaukee County's municipalities have banned the product. Sheboygan and Green Bay recently voted to do so as well

Is it time for you to step up to protect the children in your community? Will you make sure you will not use or hire a contractor to apply coal tar pavement sealer on your blacktop? Can you go one step further by contacting us to schedule a presentation to your community, church, or business group or your elected officials? We must ban the use of coal-tar-based sealants immediately.

Contact us for additional literature and sample ordinances.

Sources:

"Coal-Tar-Based Pavement Sealcoat—Potential Concerns for Human Health and Aquatic Life." USGS. https://www.usgs.gov/mission-areas/water-resources/science/coal-tar-based-pavement-sealcoat-pahs-and-environmental-health?qt-science_center_objects=0#qt-science_center_objects

"Health Concerns Over Common Driveway Sealant Continue to Prompt Local Bans." EESI.https://www.eesi.org/articles/view/health-concerns-over-common-driveway-sealant-continue-to-prompt-local-bans

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The Clipper Barber Shop
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Wally's Spot Supper Club
Waterfront Mary's Jet Ski Rental
Wave Pointe
White Lace Inn
Wisconsin Timber Rattlers
Wonder Springs Golf Course
YMCA

The Action in Clean Water Action Council

By Dean Hoegger

The CWAC Dinner, Dance, Silent Auction, and Banquet were a huge success! ***Thank you*** to the 205 attendees and contributors to this year's banquet. A complete list of donors can be found on page 13.

Seth Hoffmeister (right) receives award from CWAC President Dean Hoegger.

We were pleased to honor Seth Hoffmeister with our *Environmental Citizen Award* for his work to bring sustainability issues to Green Bay by being a founder member, and then chairperson of the Green Bay Sustainability Commission. Thanks to Seth's and the commission's work, the Green Bay City Council voted to ban the use of coal tar-based pavement sealant containing polycyclic aromatic hydrocarbons. Seth is also an important leader for the Wisconsin Conservation Voters and often advises us on issues and actions.

Our membership drive for 2019 began with the winter newsletter issue. Please join the many members who renewed their membership if you have not already done so. For membership status, please check the date on your mailed newsletter address label for the last renewal year. For emailed newsletters check your status in the body of the email.

To renew, use the enclosed membership form, or go to *http://www.cleanwateractioncouncil.org/membership/* to use a credit card.

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

Be sure to contact us if an environmental issue arises in your community. CWAC is here to support citizen action.

LEGAL ACTIONS

As a citizen organization, an important function of CWAC is to take legal actions on behalf of our members to protect human health and the environment. Because individual members may be reluctant or unfamiliar with how to file a legal action, the CWAC board of directors believes that taking legal action on behalf of our members is an important part of our mission. Here are some current legal actions and our efforts to improve environmental laws.

CWAC monitors implementation of NR151 revisions.

Although not a typical legal action, influencing the rule changes has legal implications in the form of administrative rules. While serving on the DNR's Technical Advisory Committee, CWAC helped citizens demand stricter manure spreading rules in karst regions and the NR151 revisions were approved. Nearly all of CWAC's recommendations are in the new rules with the exception of requiring three feet of soil over karst bedrock.

Now we must continue to monitor the implementation of the new rules and we are asking that residents of Brown and Calumet Counties urge elected officials to have their county adopt the rules as a county ordinance.

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

One result of the Petition was to revise the NR151 manure spreading rules in northeast Wisconsin karst regions. CWAC was a member of the DNR's Technical Advisory Group and all of CWAC's recommendations are in the new rules with the exception of requiring three feet of soil over karst bedrock for spreading liquid manure. However, we feel more is needed to protect our groundwater.

We will continue to work with other state environmental groups to monitor NR151 enforcement and to seek other strategies for protecting the groundwater. We also are asking residents of Brown and Calumet Counties to urge elected officials to have their county adopt the rules as a county ordinance.

The petition and supporting documents can be found at: *www.cleanwisconsin.org/kewaunee-safe-drinking-water*

Update on Citizen Petition for Corrective Action for the Clean Water Act, filed October, 2015.

We previously reported that 68 of the 75 deficiencies have been resolved. There appears to be a need for a lawsuit to resolve the remaining issues. However, in the current political climate in the federal executive branch, waiting may provide more success.

CWAC promotes ordinances to ban manure spraying.

CWAC continues to offer presentations to residents and town officials. Thus far, at least 17 northeast Wisconsin towns and cities have passed a ban. If your town has not passed an ordinance, contact us to help get a ban and protect your family from this health threat.

For more information on this concern, go to our website for Priority Issues: "Ban Manure Spraying" for more information.
https://www.cleanwateractioncouncil.org/issues/spray-irrigation/
If your town has not passed a ban, contact us for assistance.

An example of plowing too close to a stream in Door County.

Spring brings monitoring of plowing setbacks from streams.

Each spring, during periods of high water, we monitor for plowing setbacks from streams. The State only requires a setback of five feet, yet we found and reported four significant violations this spring. In one Brown County case, it was reported that the owner agree to provide a 25 foot setback with a cover crop.

CWAC monitors water pollution permits.

We monitor for new permit notices and hearings and publish those in our *Weekly Update* and at times attend hearings and/or submit comments. At this time, there are two hearings scheduled for variances of mercury releases to the waters of the state. More information can be found in our Mark Your Calendar on page 17 and at *https://dnr.wi.gov/topic/wastewater/publicnotices.html.* Please monitor the emailed *Weekly Update* for permit renewals and variances.

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

Governor Evers introduces CLEAR Act in Green Bay on May 14 with DNR Secretary Preston Cole, Senator Dave Hansen, and Representative Staush Gryzinski, from left to right.

CWAC monitors actions by the state legislature.

Again, not a typical legal action, yet monitoring for harmful bills, and supporting those that provide greater protection, is necessary to insure that laws are not passed without public participation. We are currently supporting the CLEAR ACT bill proposed by Senator Dave Hansen and supported by Governor Tony Evers, which will provide greater protection from PFAS chemicals. (See the related article page 8)

COMMUNITY ACTIONS AND OUTREACH

Celebrate Water Door County 2019 Water Summit

CWAC Board members Lora Jorgenson, John Hermanson, and Dean Hoegger and intern Mike Reno attended the summit where they heard author Dan Eagan and others discuss the state of our waters and they networked with other concerned citizens and shared CWAC's work.

Water Sampling at Bairds Creek

CWAC is participating in the DNR's Lower Fox River water quality monitoring project with monthly sampling. Volunteers are encouraged to sign up to help with the sampling done the 3rd Thursday of the month.

Volunteer Mary Carlson and intern Mike Reno take measurements and water samples at Baird's Creek.

EDUCATIONAL EFFORTS IN THE COMMUNITY

Coal tar pavement sealant education to protect human health and water ecosystems.

Polycyclic aromatic hydrocarbons (PAHs), found in coal tar pavement sealants, are found to be a serious cancer risk in humans, and a risk to aquatic wildlife. See related article on page? CWAC hosted presentations in Marinette and Oconto Falls and gave one in Green Bay. We mailed over 300 information packets to officials with a duty to protect children in Brown, Marinette, and Oconto Counties. Our next

presentation will be in Sturgeon Bay on July 25 at the Door County Community Foundation.

The City of Sheboygan passed a ban, and In May the Green Bay City Council voted to have an ordinance drafted to ban coal tar pavement sealants. Progress is being made!

CWAC continued to monitor the PFAS Contamination in Marinette County.

Perfluorinated chemical contamination from the Fire Training Center in Marinette has been found at alarming levels in drainage ditches and creeks discharging to Green Bay and in well water in Marinette County. CWAC has been providing education and promotion of state legislation to protect citizens from this group of chemicals. See the related article on page 8.

Health Forums: Protecting Your Family from Toxins in the Home and Environment.

Doctor Susan Davidson, MD addressed "The Environment and Health: Why what we eat, touch and breathe matters" in April. Our health forums will resume this fall and will be published in the next newsletter on September 20.

Contact us if you have suggestions for topics or speakers and please consider sponsoring a health forum at the $150 level, or contact a business who will be a sponsor. The forums focus on protecting our families from toxins in the home and environment.

Presentations and Exhibits

Contact us to schedule a presentation for your group on a variety of environmental issues or exhibit at your event. Presentations include The Health and Environmental Threat from Coal Tar Pavement Sealants, The Hazards of Manure Spraying, Citizen Action to Protect the Waters of Northeast Wisconsin, The Hazards of Burn Barrels, Communities on the Road to Zero Waste, and more. The presentations can be tailored to your group's age and available time. Also, contact us if you would like us to promote or co-sponsor your event or presentation.

Since the last newsletter we presented to the Jacksonport Women's Club, the Helfenstein Soup Council's Earth Day celebration, and a two-part course for a UW-Green Bay Life Long Learning group.

Bus to Conservation Lobby Day

CWAC hosted and cosponsored a bus with the Brown County Conservation Alliance to Madison on March 27. Those attending received education on clean energy, drinking water, and the Knowles Nelson Stewardship program and then met with state representatives to discuss those issues.

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

CWAC continues to serve on the committee's education and outreach subcommittee and is planning to send representatives to the July meetings.

Efforts to Stop the Back 40 Mine

We continue to monitor these efforts and lend support when requested. We publish the latest developments in the Weekly Update. See Mark Your Calendar for details about the hearing on June 25.

Outreach through Newspaper and Radio

CWAC Vice President Charlie Frisk was interviewed by TV 26 about water quality issues and CWAC President Dean Hoegger was interviewed by Door County Daily News regarding priorities for federal funding for safe drinking water projects.

Website Updates

Articles and resources on our website continue to be updated as new information is available and past newsletter issues can be found at www.cleanwateractioncouncil.org

CWAC provides interns with valuable experiences

We provide our interns with valuable experiences and strategies for managing a non-profit organization. We invite them to attend area conferences and meetings providing them with networking opportunities in environmental fields, encourage them to research and write for our newsletter, invite them to attend board meetings, and we provide them with training to run a nonprofit organization. We sent our summer intern, Mike Reno, to the Water Summit.

Get Our Weekly Update by email.

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

Not receiving the Update? Send us an email request. It is sent out once a week via BCC email.

CWAC's Non-Profit Status

To learn more about our non-profit status and financials go to the Wisconsin Department of Financial Institutions and then go to Credential Search for Clean Water Action Council.

Please follow us on Facebook.
Click here for our page: ***Facebook***

Meet Our Summer Intern, Mike Reno

Mike Reno is currently a sophomore at Northeast Wisconsin Technical College. He is majoring in Environmental Engineering-Wastewater & Water Technology. He enjoys hiking, watching nature documentaries, and reading in his spare time. He is looking forward to continuing his education to benefit the community around him by finding ways to improve the efficiency of current technologies.

MARK YOUR CALENDAR! Meetings, Events and Happenings

HEARINGS:

WDNR
PUBLIC NOTICE OF INFORMATIONAL HEARING AND INTENT TO REISSUE A WISCONSIN POLLUTANT DISCHARGE ELIMINATION SYSTEM (WPDES) PERMIT No. WI-0001261-09-0 MAY 10

Permittee: Georgia-Pacific Consumer Operations LLC, PO Box 23790, Green Bay, WI 54305-3790
Facility Where Discharge Occurs: Georgia-Pacific Consumer Operations LLC, 500 Day St, Green Bay
Receiving Water and Location: The Fox River (East River Watershed, Lower Fox River Basin) in Brown County
Proposed Mercury Variance: Georgia is requesting a variance from 1.3 ng/L for mercury to 3.4ng/L. The Department has determined that a water quality-based effluent limitation (WQBEL) of **1.3 ng/L for mercury** is needed to protect wildlife and human health in the above-named receiving water. The permittee has submitted an application for an alternative mercury effluent limitation (AMEL) of **3.4 ng/L**
The Department concludes that the permittee is eligible for a variance, expressed as a daily maximum, continued influent and effluent monitoring.

Hearing Date, Time, and Location: June 25, 2019 at 9:00AM, DNR Green Bay Service Center, 2984 Shawano Ave, Green Bay, WI 54313, Lake Michigan Room
The Department and the permittee have mutually agreed upon an AMEL of **3.4 ng/L**

WDNR
PUBLIC NOTICE OF INFORMATIONAL HEARING AND INTENT TO REISSUE A WISCONSIN POLLUTANT DISCHARGE ELIMINATION SYSTEM (WPDES) PERMIT No. WI-0030490-08-0 MAY 16

Permittee: City of Waupaca, 111 S Main St, Waupaca, WI 54981
Facility Where Discharge Occurs: Waupaca Wastewater Treatment Facility, 325 S. Oborn Street, Waupaca, Wisconsin
Receiving Water and Location: Waupaca River approximately 1⁄2 mile downstream of Shearer Bridge...
Proposed Mercury Variance: Waupaca Wastewater Treatment Facility is requesting variance from 1.3 ng/L to 4.5 ng/L for mercury. The Department and the permittee have mutually agreed upon an AMEL of **4.5 ng/L**. The Department proposes to grant the AMEL, this mercury variance must be approved by USEPA prior to its inclusion in the final reissued permit.

Hearing Date, Time, and Location: July 1, 2019, 10 AM, Department of Natural Resources, Northeast Region Headquarters, 2984 Shawano Ave., Green Bay, WI 54313

FARMERS MARKETS

Wednesdays, May 29 - September 25, 3 - 8PM
On Broadway Farmers Market
163 N Broadway, Green Bay
*Note: Markets end at 7 PM in September

Saturdays, May 25 – October 26, 7AM – 12PM
Green Bay Downtown Farmers Market
South Washington St., Green Bay

Thursdays, June 6 – October 24, 3PM – 7PM
Market on Military
1505 W. Mason St Green Bay

Thursdays, June 20 – September 26, 3PM – 8PM
Definitely De Pere Farmers Market
George Street Plaza, De Pere

Tuesdays, June 13 – September 24, 4PM – 7PM
Howard Farmers Market
Howard Village Center, Howard

Saturdays, June 15 – October 26, 9AM – 12:30PM
Downtown Appleton Farmers Market
100 W. College Ave., Appleton

Saturdays, June 15 – October 19, 8AM – 12PM
Future Neenah Farmers Marker
135 W. Wisconsin Ave., Neenah

Saturdays, June 1 – October 26, 8AM – 12:30PM
Downtown Oshkosh Farmers Market
400 & 500 Blocks of North Main St., Oshkosh

Saturdays, June 15 – October 5, 8AM – 12PM
Shawano Farmers Market
235 S Washington St., Shawano

Saturdays, May – October, 8AM – 1PM
Manitowoc Farmers Market
Quay Street Parking Lot, 720 Quay St., Manitowoc

Wednesdays, 5PM – 9PM
June 12 & 26, July 10 & 24, August 7 & 14
Manitowoc Night Market 920

Thursdays, June 20 – October 3, 12PM – 6PM
Meet me at the Market
N7332 Water Circle Place, Oneida

Saturdays, June 1 – October 26, 8:30AM – 12PM
Sturgeon Bay Farmers Market
Market Square, Sturgeon Bay

OTHER EVENTS:

June 25, 5:30 PM – 9 PM
Back Forty Mine Hearing
Stephenson High School gymnasium,
W. 526 Division St., Stephenson, MI

The Michigan Dept. of Environment, Great Lakes and Energy (EGLE) is holding a consolidated public hearing on Aquila's remaining mine permits (dam safety, air quality and amended mine permit)

June 26, 9AM – 11AM
Connect, Explore, and Engage-Nurturing Hope through F.I.E.L.D. Corps
Fox River Academy 1000 S Mason St, Appleton, WI

Classroom: Connect, Explore, and Engage: Nurturing Hope through F.I.E.L.D. Corps. Participants will engage in hands-on environmental-based learning, and explore how this academic approach can cultivate hope among students and staff. Facilitated by WI Green Schools Network. Register here: *https://www.wrccs.org*

More happenings on page 18...

Calendar continued...

July 5, 8:30PM – 10PM
Step into the Night Hike
Kettle Moraine State Forest - Northern Unit, Mauthe Lake, Campbellsport, WI

As the sun sets and the light fades from the sky, the day animals retire and a new group of animals awakens. Bring your bug spray and sense of adventure as we explore the night sky for bats. This night hike is best for families/groups with children at least 5 years old.

July 6, 7PM – 8:30PM
All About Ruby-throated Hummingbirds Summer Saturday Evening Event
Kettle Moraine State Forest - Northern Unit, Ice Age Visitor Center N2875 State Hwy 67, Campbellsport, WI

Ruby-throated hummingbirds flit through Wisconsin's summer. Via incredible images, discover their astonishing adaptations for surviving from nest building to defending territories. Learn how they are banded and what has been uncovered about these feisty flying jewels. This program is most appropriate for people over the age of 8.

July 13, 9:30 AM – 11AM
Incredible Insects!
Sheldon Nature Area, 1225 N. Oakwood Rd, Oshkosh
(Meet in the parking lot west of Oakwood School off of Old Omro Rd.)

Let's explore the diversity of aquatic and terrestrial insects! Join us for a family outing searching for insects in the prairie and the pond. We will be collecting insects and other "creepy crawlies" with sweep and pond nets. Afterwards they can be examined with bug viewers and magnifying lenses. Equipment will be provided. Wading boots or old shoes are recommended.

July 25, 7 PM
Learn About the Dangers of Coal Tar Pavement Sealants Used on Driveways and Parking Lots
Door County Community Foundation 222 N 3rd Ave, Sturgeon Bay

Join other concerned members of the community to learn about the dangers of polycyclic aromatic hydrocarbons, or PAHs, which are commonly found in coal tar sealants. Coal tar sealants are used in parking lots, driveways, and playgrounds and pose a risk to everyone, especially the sick, elderly, and young children, and are a biohazard to aquatic life. But, there are alternatives!

August 7, 6PM – 8PM
Prairie Walk
Harmony Arboretum & Demonstration Gardens
N3890 Cty Rd. E, Peshtigo

Stroll the 17-acre prairie at Harmony Arboretum with local native plant enthusiasts. Spend an evening learning what constitutes a prairie and why people are creating or restoring them. The trail is approximately one-half mile and does cover uneven terrain. Admission is free.

September 21, All Day
Citizens' Climate Lobby's Great Lakes Regional Conference
Saint Mary's College, Madeleva Hall, Notre Dame, IN

Thia conference offers empowering, inspiring events that gather climate advocates from around the Great Lakes region. Together, attendees explore current and relevant topics impacting their region: climate change, relationships with their legislators, and how all citizens can move Congress toward meaningful climate legislation. We'll have panels of experts in the field, strategy sessions, and skill-building workshops for citizen lobbyists, such as CCL's basic Climate Advocate Training. Experienced CCL members, brand new volunteers, and fellow climate-concerned citizens are all welcome! Registration will open in early July. Student pricing and scholarships will be offered.

LEARN ABOUT THE DANGERS OF COAL TAR PAVEMENT SEALANTS USED ON DRIVEWAYS AND PARKING LOTS IN DOOR COUNTY

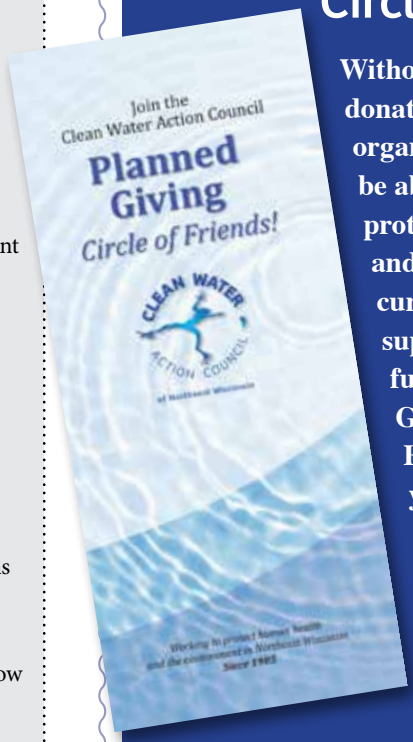
Join other concerned members of the community to learn about the dangers of polycyclic aromatic hydrocarbons, or PAHs, which are commonly found in coal tar sealants.

Coal tar sealants are used in parking lots, driveways, and playgrounds and pose a risk to everyone, especially the sick, elderly, and young children, and are a biohazard to aquatic life. But, there are alternatives!

The public is invited to this presentation hosted by The Democratic Party of Door County and given by Dean Hoegger, president and executive director of Clean Water Action Council of NE WI. The 45 minute presentation will be followed the monthly membership meeting.

July 25, 7:00 PM
Door County Community Foundation
222 N 3rd Ave, Sturgeon Bay

Join Our Planned Giving Circle of Friends



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

Contact us for a Planned Giving Brochure

Join or Renew Your Membership to Clean Water Action Council for 2019!

☐ Renewal ☐ New Member Date_____

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

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

( ) Non-member donation of $ _____for_____

( ) Other $_____

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

Name(s)_____

Address _____

City _____State _____ Zip _____

Phone _____

E-Mail _____

Receive FREE newsletters with each membership.

Please choose one...

☐ Printed version ☐ E-mailed version

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

☐ the newsletter ☐ events ☐ work at office ☐ mailings

☐ joining or leading one of the committees ☐ other

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

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

Office location:
A307 MAC Hall, UW-Green Bay
2420 Nicolet Drive
Green Bay, WI 54311

www.cleanwateractioncouncil.org

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

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. *Contributions may be tax-deductible.*

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in this issue...

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