Clean Water Action Council

OF NORTHEAST WISCONSIN

Celebrating 36 years of working to protect public health and the environment in Northeast Wisconsin

SUMMER 2021

Endocrine Disrupting Chemicals

What you need to know to protect your family.

The Valentine Family

Introduction by CWAC President Dean Hoegger

As parents and grandparents, we want to do all we can to protect the children in our care. We want them to be safe. We wrap them up when the weather is cold and protect them from the hot summer sun. We buckle them up when riding in a car. We have them wear a life jacket when on the water. These are all dangers that are readily seen.

But there are threats to their health that begin even before conception, which are not easily seen. There is a substantial group of chemicals known to disrupt the function of the endocrine system and many more are suspected. And each year new human-made chemicals enter the market with unknown effects on human health.

Referred to as endocrine disrupting chemicals (EDCs), these chemicals, either individually or in combination, interfere with the work of hormones produced by the endocrine system. The system includes glands and organs that produce, store, and transport hormones that act as messengers to other parts of the body.

EDCs can interfere by acting like or mimicking hormones, but they deliver a slightly different and unintended message. In some cases, they can block our bodies own hormones from delivering messages to our organs. Some chemicals increase or decrease the needed hormones produced or delivered. EDCs can also make our bodies more or less sensitive to different hormones.

The impact of EDCs can begin even before conception when mothers are exposed to these chemicals. Fetal development can be a period of high risk to exposure as some EDCs are known to cross the placenta. After birth, infants can be exposed from consuming breast milk or infant formula and even the air they breathe.

Through childhood, the effects of exposure to these chemicals are amplified due to a child's smaller body size and weight. If a child is exposed to EDCs over time, bioaccumulation can occur. This accumulation of a chemical in an individual over time can lead to health effects that appear later in childhood or adulthood. Exposure can occur through the food we eat, the water we drink, the air we breathe, and through contact with the skin.

Evidence in recent years shows we must be extremely vigilant and not depend on industry or the government to protect our families from this threat. In the book *Exposure*, environmental lawyer and author Rob Billet describes a decade long battle with DuPont to first warn the public about the hazards of their Teflon products and then take responsibility for the harm.

In Wisconsin we have seen the state legislature reluctant to take significant action on PFAS contamination as recommended in Governor Evers' budget proposal. As you will learn by reading "The Action in CWAC" in this issue, the Wisconsin Manufacturers and Commerce is suing the Wisconsin Department of Natural Resources to reduce their authority to administer the Spills Act including testing for and cleanup of PFAS. Organizations such as CWAC are fighting back.

The cost of exposure to EDCs can have significant health and emotional costs that cannot be measured in dollars and cents. However, pediatrician and medical researcher Leo Trasande found that when it comes to the monetary impact, it costs the U.S. $340 billion each year, or 2.3% of our GDP in medical care and related costs due to EDC's.

We must continue to fight individually by making our vote count at the polls and in the marketplace. Vote with your dollars by supporting companies that produce and/or sell products free of EDCs. Fight collectively by supporting national organizations such as the Hormone Health Network and local organizations such as Midwest Environmental Advocates and CWAC.

Read the additional articles in this newsletter about the effects, exposure routes, and protections from EDC's.

Common EDCs	Used In
DDT, Chlorpyrifos, Atrazine, 2, 4-D, Glyphosate	Pesticides
Lead, Phthalates, Cadmium	Children's Products
Polychlorinated biphenyls (PCBs) and Dioxins	Industrial Solvents or Lubricants and their Byproducts
Bisphenol A (BPA), Phthalates, Phenol	Plastics and Food Storage Materials
Brominated Flame Retardants, PCBs	Electronics and Building Materials
Phthalates, Parabeans, UV Filters	Personal Care Products, Medical Tubing, Suncreen
Triclosan	Anti-Bacterial Soaps, Colgate Total
Perfluorochemicals	Textiles, Clothing, Non-Stick Food Wrappers, Mircowave Popcorn Bags, Old Teflon Cookware

Chart courtesy of Hormone Health Network.

EDCs can negatively impact our endocrine system in numerous ways.

By Andy Wallander

Our endocrine system consists of hormone producing glands. Hormones are naturally produced chemical substances released into our blood system, where they act as catalysts for numerous chemical reactions occurring in specific tissues throughout our bodies. The endocrine system affects most of our biological functions including: temperature regulation, metabolism, sexual function, reproduction, our moods, and bodily growth and development.

Hormones bring about changes in cells by binding to specific hormone receptor sites on a cell's wall or sites within the cell itself. Many hormones circulate throughout our body, coming into contact with many different cell types. However, they only affect cells that possess the necessary receptors, much like the fitting together of a specific lock and key.

Our cells respond to a specific hormone if they contain the specific receptor protein for that hormone. Binding results in a chemical reaction that leads to cell type-specific responses. Receptor binding alters cellular activity, resulting in an increase or decrease in normal body processes as needed for our survival.

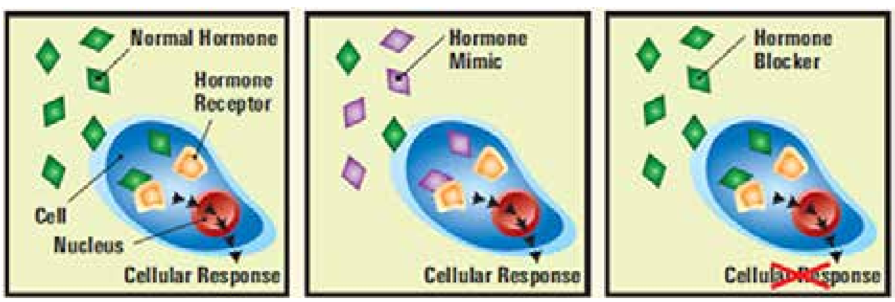
Endocrine disrupting chemicals (EDCs) can negatively impact our endocrine system in numerous ways. Some EDCs can mimic our naturally produced hormones, fooling our bodies by overstimulating the response to a hormone, such as an overproduction of growth hormone that results in increased muscle mass. EDCs can also cause our endocrine system to respond at inappropriate times, such as producing insulin when it is not needed.

Other endocrine disrupting chemicals can have the impact of blocking the effects of a hormone from certain biological chemical receptors, an example being blocking growth hormones required for normal development. Still other EDCs can directly stimulate or inhibit our endocrine system and cause overproduction or underproduction of hormones, as found in an over or underactive thyroid gland.

The example of endocrine disrupting "mimicry" involving the hormone estrogen provides a relevant example which can be applied to many other endocrine hormone disrupting chemicals. Estrogen mimicking chemicals can act as artificial hormones that have a slightly different chemical structure, and therefore send a different message to the cells than the naturally produced estrogen hormone.

Endocrine disrupting chemicals can bind with receptor sites on a cell wall, or inside the cell itself, preventing the correct hormone from having a free binding site. The normal hormonal reaction then fails to occur and the body fails to respond properly. EDCs can interfere or block the way our natural hormones and receptors are made or controlled.

An excellent resource to learn more about the endocrine system, hormone action, endocrine disrupting chemicals and EDC impacts on human beings is an *Introduction to Endocrine Disrupting Chemicals (EDCs): A Guide for Public Interest Organizations and Policy-Makers*, published by the Endocrine Society (http://endocrine.org/).



Source: National Institute of Environmental Health Sciences

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https://www.cleanwateractioncouncil.org/newsletter/archives/2018/CWAC_spring-2018.pdf

Reproductive Harm Due to Endocrine Disrupting Chemicals

By Carol Pearson

All humans, both male and female, are exposed to Endocrine Disrupting Chemicals (EDCs) through the environment they live in. The environment includes exposure via occupation, food, water, and air. The EDCs do not break down in the environment. They are on the list of what is termed "forever chemicals". The chemicals interfere with hormone synthesis by disrupting the endocrine system.

The endocrine system is a group of glands that function by producing and releasing hormones into the blood stream. The blood stream transports the hormones throughout the human body to the different organs. Hormones are also called the body's chemical messengers.

At the organ level, the information and instructions they carry are expressed. They control functions such as development, growth, reproduction, mood, how the organ functions, and metabolism. The

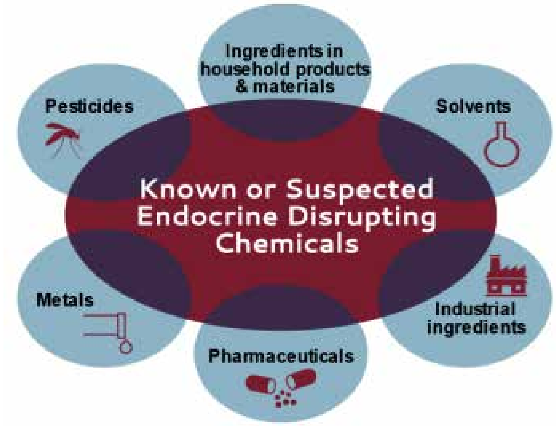


Image courtesy of Collaborative on Health and the Environment.

hormones from the endocrine system influence almost every organ, cell and the function of the human body. The quantity of each hormone is regulated by the endocrine system. If there is too much or too little of a certain hormone, it can cause harm to the organ or body itself.

The endocrine disrupting chemicals are substances or a mixture of chemicals that disrupt the female and male endocrine function and hence the reproductive hormones. The EDCs do this by their interaction with hormone receptors where they can alter hormone action, production, transport, and metabolic processes. The following are some of the classes of endocrine disrupting chemicals that humans are exposed to: herbicides (i.e. DDT), pesticides, metals, dioxins (i.e. PCBs), and plastic contaminants (i.e. TCS and BP). The world's production of EDCs has increased from 50 million tons to 300 million tons since the 1970s.

Hormones are critical in human reproduction. There are two major effects on male reproduction caused by EDCs. Both are caused by the EDCs interfering with the synthesis and mechanism of action of the male sex hormones.

The first effect is decline in semen quality. Studies show that there has been up to a 50% decline in sperm counts in the last half century. The second is the decline in testosterone levels. Testosterone is the hormone that controls the maturation of the male reproductive system. It stimulates sperm production as well as the male sex drive along with building bone and muscle mass.

EDCs have also been linked to urethra defects and undescended testicles in males. Both declines are expressed in the rise in the level of male infertility around the world.

Endocrine disrupting chemicals have a similar effect on female reproduction. They also interfere with the synthesis and mechanism of action of the female sex hormones. In females, they may result in miscarriages, premature ovarian failure, precocious puberty, polycystic ovarian syndrome and increased risk of breast cancer.

This infertility in women is a public health concern worldwide. It is associated with a decrease in quality of life and results in higher medical costs. Premature ovarian failure and abnormal hormone levels not only lead to early infertility but also increased depression, osteoporosis, cardiovascular disease and early death.

Studies have found that the exposure to EDCs during the neonatal and fetal periods causes developmental reprogramming leading to reproductive diseases in adult males and females. Exposure during these time periods may also result in children being born with ambiguous gender.

Studies have shown that the sex ratio of male to females is also being affected by exposure to EDCs. Typically there are 103-108 males to 100 females born each year. It was found that EDCs were positively associated with more Y-chromosome bearing sperm being produced than X-chromosome bearing sperm. The higher level of Y-chromosome sperm tends toward more male births occurring than female. This will result in the ratio being more and more out of balance.

To summarize, the effects of EDCs on the human population is trans-generational. Currently there are few regulations of EDCs because of effective lobbying by chemical companies looking out for their profits. The regulations that do exist focus on plastic toys in an attempt to limit exposure in children.

We know there is a link between these chemicals and the hormones affecting reproduction in humans. We need to demand greater regulation of the chemicals. Inaction will result in an increase of harmful effects. For the human race to have a future, EDC exposure needs to be eliminated or at a minimum severely reduced.

What's the Source of Endocrine Disruptors in Our Waters?

By Jim Wagner

Every good sleuth wants to know where the primary culprit did the act, but in the case of finding the source of endocrine disrupting chemicals (EDCs) in our waters, the answer is both simple and complex: everywhere.

Other articles in this newsletter explain where EDC's come from, everything from bisphenol A and phthalates in plastics, to polybrominated diphenyl ethers used for flame retardants, to prescription medications, to triclosan in personal care products, to herbicides and pesticides sprayed on fields and food. They are even sourced in naturally-occurring substances like phytoestrogens, which is an estrogen occurring naturally in legumes.

Nature's ecosystem being what it is, they all eventually make their way into our waters. Endocrine disruptors leach from landfills into groundwaters, where they eventually make their way into our wells and basins and into larger bodies of water. They are in runoff from agriculture, washed away in the rain and collecting in rivers and lakes. They are also the result of flushing our body wash or medications down the drain into the municipal sewer lines, where they eventually make their way to wastewater treatment plants (WWTP) and then on to rivers and lakes.

Although EDC sources are widespread, it's clear that more research is necessary to determine which sources of EDC pose the most risk for water resources, and how. For example, although concentrated animal feeding operations (CAFOs) would seem a likely major nonpoint source of EDCs in groundwaters, the research isn't definitive on the scope of the hazard.

A 2011 University of Wisconsin study assessing the levels of EDCs in Northeast Wisconsin groundwater — EDC leachate is particularly hazardous in fractured karst regions where it can quickly sink to wells and groundwater — found estrogenic activity was most noticeable during the months of August & November. While researchers noted this is related to times when land application of manure is frequent, sample contamination could also have come from pharmaceuticals from leaky septic systems or pesticides.

The following year, another UW study looked into the potential of hormones in livestock operations making their way into groundwater and noted that while there is clear evidence that livestock produce a large concentration of hormones, environmental factors like temperature, soil type and moisture will absorb EDCs to varying degrees before reaching groundwater.

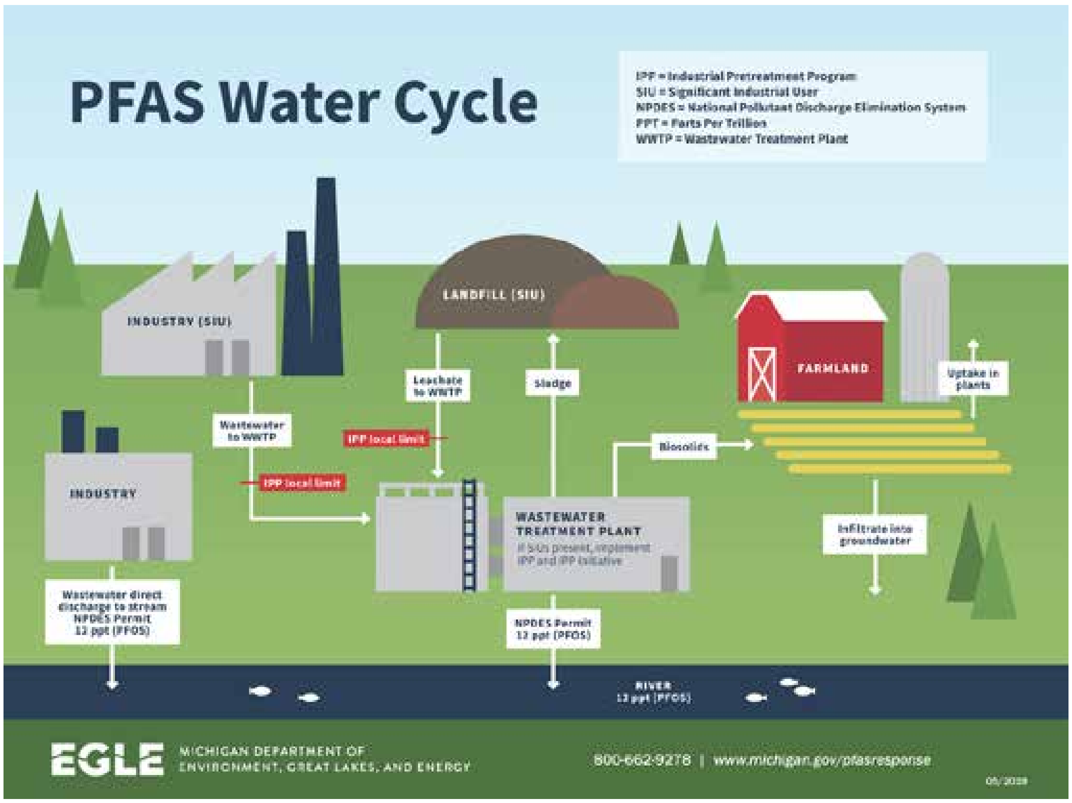
Businesses and residences pool EDCs at WWTPs where they go into surface waters. A 10-year study conducted by the U.S. Geological Survey tracking nine known endocrine disruptors from the effluent of WWTPs around the Great Lakes, found all nine at every plant. But it doesn't look like help, in the form of environmental protections, is going to occur anytime soon.

In a 2012 triennial report, the Wisconsin Department of Natural Resources found "low but surprising" amounts of pharmaceutical byproducts in Wisconsin waterways that are an area of concern but tabled any action. The most recent triennial report workplan, released in March, considers it a low-priority issue and will continue to monitor research as it comes out. However, balancing out the disregard for pharmaceuticals, the DNR is developing water quality standards for perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS), both endocrine disruptors that fall under the per- and polyfluoroalkyl substances (PFAS).

What You Can Do

No one likes to be part of the problem, but as consumers we all bear responsibility for the products we use and the waste output of our activities — in this case, down the drain or into our garbage bags. One important thing you can do is to return all unused prescriptions to the place you picked them up, where they will responsibly dispose of the medication. Alternatively, there are other local options available.

Our legislators need to step up more forcefully to assist the DNR to fund research and resources to mitigate point and nonpoint EDC pollution sources. Call your senator and assembly representatives, as well as your city government, to ensure town/region wastewater facilities are filtering out these dangerous compounds.



Most, but not all, PFAS are endocrine disruptors but all EDCs follow the same pathways to waterways as PFAS whether it's from a business, residence or farm. *Graphic courtesy of Michigan Department of Environment, Great Lakes, and Energy.*

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Assessing Levels of Endocrine Disrupting Chemicals in Groundwater Associated with Karst Areas in Northeast Wisconsin *https://www.wri.wisc.edu/wp-content/uploads/FinalWR08R004.pdf*

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WI DNR Triennial Standards Review *dnr.wi.gov/topic/surfacewater/documents/2011-2014FinalTSRReport.pdf*

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Endocrine Disrupting Chemicals in Land-Spread Wastes

By Andy Wallander

All living organisms produce wastes that are unwanted or unusable. These wastes encompass a wide variety of materials, both organic and inorganic. Some receive little attention at all. Others, such as sewage, are highly regulated by local, state and federal governments to safeguard human and environmental health. Still others are deemed "natural" or "organic," like animal manures.

Agricultural, industrial and municipal wastewater containing huge loads of endocrine disrupting chemicals (EDCs) and pharmaceutical metabolites are extensively distributed far and wide through our current wastewater land-spreading practices. Metabolites are substances made or used when the body breaks down food, drugs or chemicals.

Many chemical compounds found in land-spread industrial wastes, such as pesticides, flame retardants, synthetic hormone-like compounds, heavy metals, and chemicals derived from basic compounds (such as industrial plasticizers and catalysts) are major endocrine disruptors. Major EDC sources can include industries such as pulp and paper, tannery, distillery, textile, pharma, etc.

One major source of EDCs, pharmaceutical manufacturing facilities, can be a significant source of pharmaceuticals to the environment. Effluents from wastewater treatment plants receiving discharges from pharmaceutical manufacturing facilities can have 10 to 1,000 times higher concentrations of pharmaceuticals than effluents from treatment plants that do not receive this type of discharge. Many EDCs and pharmaceuticals are not fully broken down through our conventional wastewater treatment facilities.

Another major source of EDCs and pharmaceuticals in wastewater is you and me. Municipal wastewater contains pharmaceuticals and personal care products, or their metabolites, passed through and excreted from our bodies. Many of the drugs that most of us take are not fully metabolized in the body, and often times the excess ends up in the wastewater leaving our homes and businesses entering sewage treatment plants. Again, our current treatment plants do not routinely adequately remove these compounds from wastewater. Treated wastewater then enters streams, rivers, and lakes. The remaining solids are often land-spread.

Agricultural EDCs are found in land-spread animal wastes. They can occur as natural constituents of animal manure or represent metabolites from drugs added to the feed of, or pharmaceuticals given to certain food animals, such as cattle. They can be either organic or inorganic in nature. However, they both share the ability to interfere with the endocrine systems in animals and humans. These compounds possess the potential for causing adverse health effects in the exposed organism or future offspring.

EDCs can mimic the function of estrogenic (female) or androgenic (male) hormones, or they can interfere with cell hormone receptors, altering the outcome of internal hormonal signaling events. A major concern with EDCs is that some may display activity at very low concentrations (e.g. parts-per-trillion or nanograms-per-liter). Some examples of EDCs in animal wastes include steroids, pharmaceuticals and cleaning or sanitizing chemicals.

Another indirect but important agricultural source of EDCs is the use of pesticides and herbicides in the production of crops grown as animal feed. Pesticides that have been implicated with endocrine disruption are numerous and include alachlor and atrazine, the latter being utilized extensively in the production of corn and other feed crops. Atrazine has shown endocrine disrupting activity in birds, fish, amphibians and mammals, including humans. Many of the metabolite products from the breakdown of agricultural pesticides have also been shown to be toxic.

Between August 2008 and March 2009, the University of Wisconsin–Green Bay completed a well sampling study in Kewaunee County. The 2011 final report from the study, *Assessing Levels of Endocrine Disrupting Chemicals in Groundwater Associated with Karst Areas in Northeast Wisconsin* was published (https://www.wri.wisc.edu/wp-content/uploads/FinalWR08R004.pdf). During the study, groundwater samples were collected from wells on the following dates: August 11 and 12, 2008 (first sampling period), November 17 and 18, 2008 (second sampling period), February 13, 17, 24, and March 2, 2009 (third sampling period), and March 18 and 19, 2009 (fourth sampling period).

Estrogenic activity was detected in a portion of the groundwater samples during all four sampling periods. The estrogenic equivalency found in the samples used in the study were below the range known to cause endocrine disruption in wildlife and are within the range of levels found in other similar studies. Levels of estrogenicity were highest during the months of August and November. Average bacterial contamination increased following snowmelt events in February and March 2009. Coliform, enterococci, and E. coli levels were positively correlated throughout the study. Significant correlations were not found between nitrate and bacteria, or nitrate and estrogenicity.

Results from the study indicated that groundwater contamination with EDCs, bacteria and nitrates is a common problem in karst areas of Northeast Wisconsin. EDC contamination was greatest during the months of August and November, times at which land application of manure is frequent. Potential sources of EDC contamination within the study area (e.g., pharmaceuticals from leaky septic systems, land-applied manure, estrogenic pesticides) remain speculative based on the information provided in the study. Their identification provided an intriguing avenue for future research, however.

A PowerPoint slide presentation on the study can be viewed at https://dnr.wi.gov/topic/Groundwater/documents/GCC/Minutes/talkBauerZorn201208.pdf.

CWAC photo of manure spreading on saturated soil over limestone bedrock in Door County Wisconsin.

Hidden Dangers of EDCs in Personal Care Products

By McKenzie McDermott, CWAC Intern

The European Union (EU) has banned 1,328 chemicals from cosmetics and personal care products, requires full disclosure of ingredients in every product, and safety assessments prior to being marketed to consumers. In comparison to the precautions taken by the EU, the United States has only restricted 11 chemicals from these products, does not require full disclosure of ingredients, and does not require the same level of safety assessments as the EU.

In 2020, California passed the Toxic-Free Cosmetics Act, which banned the use of 24 toxic chemicals commonly found in cosmetics, personal care products, and perfumes by 2025. This is the first major piece of legislation introduced regarding chemical regulation in cosmetics. While this does not apply nationwide, it may influence additional legislation among other states or at the federal level.

Fragrance is a common ingredient in so many personal care products in the U.S., but on the ingredients list, you may only see "fragrance" listed rather than the chemicals that make up the fragrance. Phthalates are a known endocrine disrupting chemical and a common fragrance ingredient that do not need to be listed individually. Phthalates have been linked to delays in fetal development, reproductive harm, and cancer. Phthalates have been nicknamed "The Everywhere Chemical" by the National Institute of Health because they are one of the most common chemicals found in personal care products and soft, flexible plastic products.

The effects of phthalates on humans are still being researched but are particularly dangerous due to their "hit and run" nature. Dr. Leonardo Trasande describes the effects of phthalates as being relatively untraceable, as no fingerprint of the exposure is left behind, making it difficult to know how serious the effects can be, especially to young children.

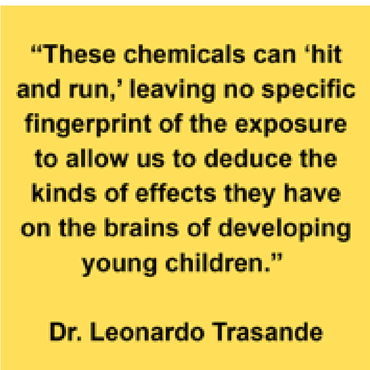

Image by McKenzie McDermott, quote from *Sicker Fatter Poorer* by Dr. Leonardo Trasande.

If so many of these harmful chemicals are found in everyday products but do not have to be listed, how can we protect ourselves from them? Dr. Trasande encourages consumers to read the ingredient labels on personal care and cosmetics products and avoid products that include fragrance. Dr. Trasande states that choosing personal care products free of fragrance or phthalate free can reduce your exposure to harmful, endocrine disrupting chemicals by 27% – 44%.

Photo: vectorstock.com

To make reading ingredient labels easier, in 2004, Environmental Working Group (EWG) released the *Healthy Living App*, which has allowed consumers to scan personal care and cosmetics products on their smart phones as they shop. A main focus of the Environmental EWG is toxic chemicals and ensuring companies provide the information necessary to help us protect our families from harmful toxins. EWG has since expanded the scannable products to include over 160,000 items including grocery and cleaning products.

Each product is ranked as low, moderate, or high hazard based on the safety of the listed ingredients. This app is recommended by Dr. Trasande in his book *Sicker Fatter Poorer* and is a great way to be more aware of hazardous products you may regularly use and reduce the number of hazardous products you purchase in the future. This app can be downloaded on iPhone and Android phones from the App Store.

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The Mutant Bass of the Susquehanna River, A Lesson for NE WI

By Charlie Frisk

In 2012 the team from Luxemburg-Casco that I coached won the Wisconsin Envirothon (a competition testing knowledge of environmental concepts) and then traveled to the Penn State campus in Pennsylvania for the North American competition. While the students were preparing for their tests, a group of us advisors kayaked the Susquehanna River.

Our outfitter for the kayak trip told us that just a few years ago his primary business had been guiding smallmouth bass anglers on the Susquehanna. At that time the Susquehanna had been considered one of the top smallmouth rivers in the country, and it was not unusual for a party of 4 anglers to catch and release 200-300 bass in a day. Since then the smallmouth bass population had collapsed (4 anglers would catch 0-5 bass in a typical day) and now his primary business was guiding kayakers on sight-seeing tours of the river.

Normal smallmouth spawning goes like this. The females dig out a small oval depression called the "bed." The female deposits her eggs in the bed and almost immediately a male deposits his sperm on the eggs. The female then leaves the bed and the male stays behind to guard the eggs and young fry from predators and other male bass.

The outfitter had an interesting story to explain the collapse of the Susquehanna's world class bass fishery. The spawning procedure starts out like normal, but partway through it goes haywire. The females would prepare the bed and lay their eggs, the males would deposit their sperm, and then the same ***males would deposit their eggs***, and swim away from the nest. As soon as these intersex males (individuals with both male and female sex cells, a.k.a. hermaphrodites) would abandon the bed, green sunfish would swim in and eat all of the eggs.

An article ***"Mutant Fish in the Susquehanna River"*** by Nate Schweber, August 15, 2014 in Al Jazeera America explains the likely hypothesis for these intersex smallmouth bass. A U.S. Geological Survey (USGS) study has determined that male smallmouth bass in the Susquehanna are sprouting female egg cells in their testes.

The USGS scientists think that the explanation for these mutant male bass is that the Susquehanna has become saturated with estrogenic (the primary female hormone) compounds from animal manure and, to a smaller degree, human sewage.

Also troubling, biologists say, is that many of these intersex bass have visible signs of disease — black splotches on their skin and grotesque open sores. **"We do think some of the same feminization chemicals are causing immunosuppression,"** said Vicki Blazer, a fish biologist for the USGS.

A smallmouth bass exhibiting the lesions that many of the intersex bass from the Susquehanna River have. Photo courtesy of the U.S. Geological Survey.

Blazer points to a recent spike in livestock numbers in the Susquehanna watershed. They are "raising more animals in the same space," she said. "As those numbers increase, obviously the nutrients and estrogens and other hormones they excrete increases as well."

The proportion of estrogen in waterways that results from agricultural pollution is generally more than 90%, while the proportion from human waste is less than 10%, said Tracey Woodruff, a reproductive-science professor at the University of California-San Francisco, who co-authored a 2010 report on estrogen pollution. "Human waste is at least treated," she said. "Cows don't use toilets, and a lactating (milk producing) cow, for example, produces a lot of estrogen."

Annual revenues from sport fishing in Pennsylvania average around $4 billion a year, and until the estrogen problems caused the smallmouth bass population to plummet, about 100,000 anglers fished the Susquehanna annually.

John A. Arway, Executive Director of the Pennsylvania Fish and Boat Commission, wrote to the Environmental Protection Agency and pleaded for its help in regulating agriculture. "We've been trying to explain that the river is sick," he said in an interview. **"And the problem is not what we're putting in the water; it's what we are putting on the land."**

Although the number of dairy cows and egg-laying chickens is quite large and growing in the Susquehanna watershed, it doesn't compare with the concentration of dairy cows in Northeast Wisconsin. This story should give pause to all residents of NE Wisconsin, the Dairy CAFO Capitol of the world!

A Parent's Concerns about Endocrine Disruptors and Leo Transande's Research

By David Verhagen

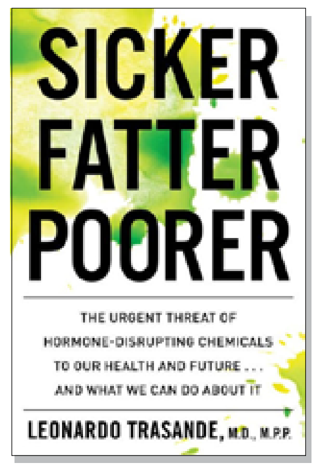
Raising children is never easy. Parents need to provide their kids with a nurturing and protected environment while fostering their curiosity and good judgment. You can add to that task protecting them from endocrine disruptors (EDs) in our environment. Just how concerned must parents be?

Leo Transande is a parent of young children and a pediatrician concerned with that same question. Dr. Transante is also a professor at NYU School of Medicine where he researches environmental health issues: https://med.nyu.edu/faculty/leonardo-trasande. He gave an excellent presentation at the WEHN Conference, *Making the Connection*, this spring.

He is alarmed at the prevalence of these compounds in our everyday world, and writes about them in his book *SICKER, FATTER, POORER*. It is subtitled "The Urgent Threat of Hormone-Disrupting Chemicals on Our Health and Future...And What We Can Do About It".

A scientist, Leo Transande writes in layman's terms, parent to parent. He is not selling anything. He is simply making a call-to-arms for parents to act in the best interests of their families. It is not a long book, just 227 pages that will bring you into a conversation that will leave you better informed and better equipped to deal with this rising problem.

For an introduction, he has a two-minute video YouTube: https://youtu.be/F_3Tfif82g0



Transande's book is available for checkout from the CWAC lending library. E-mail your request.

Are the current regulations on endocrine disrupting chemicals enough?

By Lauren Felder

Endocrine disrupting chemicals, or EDCs, are introduced to the environment through many sources including farm chemicals and personal care products. Many are under strict regulations due to extremely detrimental health effects. At the national level, endocrine disrupting chemicals (EDCs) are regulated under section 408(p) of the Federal Food, Drug, and Cosmetic Act (FFDCA), which requires the EPA to screen chemicals to determine their effects on human endocrine systems.

As a result, the Environmental Protection Agency (EPA) created the Endocrine Disruptor Screening program and two tiers of classification for EDCs. Chemicals tested at the tier one level have the potential to interact with human endocrine systems and move on to tier two, which identifies any adverse health effects on the endocrine system that the chemical could cause.

At the state level, Wisconsin has mostly relied on the EPA to provide guidance on which chemicals are endocrine disruptors and which are not. However, experts and activists criticize the agency for not providing such information. Research and regulation efforts within Wisconsin are underfunded with poor information sharing and coordination. As a result, there is very little umbrella regulation of EDCs. Most chemicals that fall under this definition are individually regulated for other health effects but are also EDCs, such as lead, mercury, and cadmium.

Chlorpyrifos, specifically, has caused a lot of public uproar due to the risk it poses in affecting the neurodevelopment of children. The chemical has been used in the US as a pesticide since 1965. In 2000, those registered to use chlorpyrifos as a pesticide agreed to voluntarily phase out use of the chemical due to these growing health concerns.

At the end of 2020, the chemical was under the regulation of an interim decision wherein the chemical is still registered for use with safety regulations while the EPA conducts a registration review. The EPA has proposed additional requirements to be considered in the registration review: label amendments addressing drinking water risks, more personal protective equipment for applicators, and spray drift mitigation. The registration review will be finished no later than October 1, 2022.

Aerial pesticide application, photo courtesy of ASP, Inc - Fotolia

Another commonly known chemical that is an EDC is bisphenol A, or BPA. This chemical is commonly found in food packaging and has been used since the 1960s. Wisconsin banned its use in sippy cups and baby bottles in 2010, the third state to do so, in contrast to its slow action on other EDCs. The US Food and Drug Administration did the same in 2012 and banned the use of BPA in infant formula packaging in 2013. Currently, there are no additional safety regulations at the state or national level, and the Food and Drug Administration notes that the levels currently found in food are safe.

Atrazine and glyphosate are commonly used pesticides in agriculture that have also been shown to be EDCs. Atrazine use requirements seem to be slightly more stringent than glyphosate and include prohibition zones, registration, a limited window of time when atrazine may be applied, maximum limits for application, and record keeping standards. There is more concern about glyphosate contamination of groundwater, so standards have been set to avoid contamination and to keep the water content of the active ingredient in the chemical, nitrosamine, below 0.1 ppm.

BPA free baby bottle, photo courtesy of Getty Images.

Dioxin-like compounds and polychlorinated biphenyls (PCBs) are also EDCs. PCBs were banned in the 1970s over concerns about other health effects including liver damage and cancer, but later research showed that endocrine systems are also affected. The federal and state drinking water standard for PCBs is 0.05 ppb and the Wisconsin groundwater standard is 0.03 ppb. The problem with PCBs is that they accumulate in the environment and the human body, making them extremely hard to eliminate entirely. Dioxins have similar health effects and bioaccumulation properties and the enforcement standard in Wisconsin is set at 0.00003 ppb.

Perfluoroalkyl and polyfluoroalkyl substances (PFAS) have recently come to the forefront of public debate in Wisconsin due to the contamination found in groundwater and drinking water systems. It should be noted that PFAS actually refers to a large group of chemicals, not all of which have the same types of effects on the human body. Wisconsin groundwater standards for perfluorooctane sulfonic acid (PFOS) and perfluorooctanoic acid (PFOA or C8) have been set at 20 ppt. These are only two of the many that fall under the PFAS umbrella, leaving much of the rest of this chemical family unregulated.

The PFAS contamination of groundwater in Wisconsin was caused in part by firefighting foam. In 2020, the Wisconsin Department of Natural Resources promulgated language to mitigate PFAS contamination, the most restrictive of which was suspended by the legislature in December 2020. Later in March 2021, the Wisconsin legislature blocked Act 101, which would have banned the use of firefighting foam containing PFAS and set cleanup standards for the foam when it is used for testing.

Ultimately, endocrine disrupting chemicals are regulated at the state and national level, but with the evidence of poor health effects mounting, some may wonder if these regulations are adequate. Many EDCs are persistent pollutants as well, so this is not an easily fixed issue. Education and political engagement are important to push for additional EDC regulation, including PFAS testing and clean up in Wisconsin.

Selected sources:

https://wisconsinwatch.org/2013/04/concerns-grow-about-hormone-disrupting-chemicals-in-wisconsin-water/

https://www.dhs.wisconsin.gov/chemical/pfas.htm

https://www.epa.gov/ingredients-used-pesticide-products/chlorpyrifos

https://www.chemsafetypro.com/Topics/USA/Endocrine_Disruptor_Regulations_and_Lists_in_USA.html

https://dnr.wisconsin.gov/topic/Groundwater/CurrentStandards.html

At-Home Best Management Practices to Avoid EDC Exposure

By Andy Wallander

There has been a growing awareness of the possible adverse effects in humans and wildlife from exposure to chemicals that can interfere with the endocrine system. The effects from these endocrine disrupting chemicals (EDCs) may include developmental malformations, interference with reproduction, increased cancer risk and disturbances in the immune and nervous system function.

The following is a list of precautionary practices, developed and made available by the Hormone Health Network (https://www.hormone.org) that you can take to minimize EDC exposure to you and your family. These precautions are especially important if you are pregnant or planning a family.

FOOD AND WATER

- Consult local guides regarding which sport fish are safe to consume.
- Trim fat from meat and the skin from fish and cook using a rack to allow fat to drain.
- Thoroughly wash fruits and vegetables before consuming them.
- Don't microwave plastic food containers or use them for storing hot liquids.
- Avoid plastic containers designated #3, #6, and #7.
- Reduce consumption of canned and processed foods.
- Use glass, porcelain, or stainless-steel containers when possible, especially for hot food and drinks.
- Prepare more meals at home and emphasize fresh ingredients.
- Consider using a water filter.

Source: United States Environmental Protection Agency

- If possible, purchase organic produce, meat, and dairy products.
- Replace older non-stick pans with newer ceramic-coated pans.
- Eat a diversified diet with plenty of variety.

EXERCISE AND ACTIVITY

- Check air quality in your area [https://airnow.gov].
- Avoid outdoor exercise when pollution levels are high.
- Avoid exercise near high traffic areas. Choose routes away from busy roads and vehicles

PERSONAL CARE

- Read labels and avoid products containing phthalates.
- Choose products labeled "Phthalate-Free," "BPA-Free," and "Parabean-Free."
- Avoid fragrances and opt for cosmetics labeled "no synthetic fragrance" or "scented only with essential oils."
- Wash your hands often, especially before preparing and eating food.
- Minimize handling of receipts and thermal paper.

AROUND THE HOME

- For those with a submersible pump in their well who notice an oily film or fuel odor in their well water, check to see if the pump has failed and, if so, replace it. Contact your local Department of Public Health for information on how to clean the well.
- Replace and discard safely old fluorescent bulbs and deteriorating construction materials from older buildings.
- Minimize burning wood or trash.
- Use hand-powered or electric lawn care equipment instead of gas-powered alternatives.
- Forbid smoking indoors and advocate for measures to make public spaces tobacco-free.
- Clean your floors regularly and remove dust from your home.

- Plant trees, which filter out airborne gases and particulate matter.

<u>FOR CHILDREN</u>

- Avoid hand-me-down plastic toys.
- Use infant formula bottles and toys that are labeled "BPA-Free."

<u>TRANSPORTATION</u>

- Choose transportation options and transit routes that limit time sitting in traffic.
- Encourage your child's school to reduce school bus emissions, including reducing idling.

The Action in Clean Water Action Council

By Dean Hoegger, CWAC president

Thank you to the many members who already renewed in 2021. Those renewals will help "keep our doors open," until our fall banquet fundraiser. ***<u>Please save the date, Thursday, October 7, 2021 for the banquet.</u>*** *(Previous save the date had a conflict with a Packers home game.) Tickets will be available on our website beginning July 29 at https://www.cleanwateractioncouncil.org/events/*

Have you renewed for 2021? To check your membership status, look at this newsletter label which shows your last renewal year. Emailed newsletters include the last renewal year in the body of the email. Membership donations provide funding for most of our operations, and we also offer the opportunity to sponsor a newsletter or an intern, beginning at the $250 dollar level.

You can mail your membership donation or join CWAC with the enclosed form, or go online to http://www.cleanwateractioncouncil.org/membership/.

<u>Read below about the actions we have taken in the last three months.</u>
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.

WMC vs WDNR

On June 14th, CWAC, together with several other organizations and individuals filed for intervener status with a Waukesha County circuit court case. Wisconsin Manufacturers and Commerce, along with an Oconomowoc leather-cleaning business is suing the Wisconsin Department of Natural Resources (WDNR) over the agency's authority to clean up toxic chemicals such as PFAS.

At risk in this case is the WDNR's broad authority under the Spills Law, which gives the Department the flexibility to address the spill of any substance that poses a hazard to public health or the environment as the need arises. Successful intervenors are granted full party status, which means they can accept or reject a proposed settlement.

In another recent case, an unfavorable settlement between the WDNR and the Dairy Business Association unreasonably limited DNR's authority to prevent pollution from concentrated livestock feeding operations. It then required legal action brought by Midwest Environmental Advocates (MEA) on our behalf to undo this settlement.

MEA is representing our group in the case. As a member of this group, CWAC will be fundraising for some of the legal costs, which will depend on the course this case takes. Contact us if you would like to make a contribution.

At the time of this writing, it is not known whether the court will accept our petition to become intervenors. Watch the *Weekly Update* for the latest developments.

Monitoring for Lawn Fertilizer with Phosphorus Sales.

We monitored for retail sales of fertilizer violations this spring, as we do each year. Door County Cooperative again had significant violations. CWAC President Dean Hoegger discussed the violations with the store manager. A return visit by Hoegger several weeks later found that the violation continued. Even his recommended solution of placing a sign next to fertilizer with phosphorus indicating it was not for lawns had not been done. As a result, intern Maya Hearden prepared a violation notice letter and mailed it to the cooperative's board members.

Fertilizer with phosphorus on display to the public with other lawn care products at the Door County Cooperative.

Earlier this spring, intern McKenzie McDermott sent letters to 60 lawn service companies informing them about the phosphorus fertilizer ban. An article about the results of that effort follows in this newsletter.

CWAC Monitors for Plowing Violations.

The plowing or cultivation setback is only five feet from a stream bank, a very modest distance. Violations create a greater risk of soil and nutrients entering the watershed and finding their way to Green Bay and Lake Michigan. Contact us if you observe a suspected violation, which will be easier to observe again as snow melts and streams overflow their banks.

Our staff did extensive monitoring in Brown, Door, and Kewaunee counties in 2020. This spring and summer we will focus on Manitowoc, Calumet, Oconto, and southern Brown counties. We are seeking donations to purchase a drone, or the use of a drone with a drone operator, to assist with this effort.

CWAC Commented on Pollution Permits, Sent Letters to Government Officials and Elected Representatives

We monitor notices for new water pollution permits and renewals, especially regarding requests for variances. Variances are usually requested when the polluter is not meeting requirements of the current permit. We published the notices for Northeast Wisconsin in our *Weekly Update*. At times, we attend hearings and/or submit comments.

With the help of MEA attorney Andrea Gelatt, we commented on the WDNR's proposed revisions to the storm water runoff rules. Our intern Carl Woitekaitis submitted comments on NR 809 and NR 140 to establish groundwater and drinking water standards for 12 kinds PFAS and combined standards for four kinds of PFAS.

Please monitor the emailed *Weekly Update* for permit renewals, variances, and hearings for rule changes. Previously approved variances have included much higher levels of pollutants, often at prior exceedance levels.

PAH and Coal Tar Asphalt Sealant Ban

It appears that legislation to ban this dangerous sealant will not be passed in this session. It becomes imperative that we act on a local level to get ordinances passed to protect our children in schools, daycare centers, churches, and apartment complexes just as Green Bay, De Pere, Sturgeon Bay, and other communities along the lakeshore have already done. Contact us to help get a ban passed in your community.

Click this link for a slide presentation on the topic: https://youtu.be/0xjvi-leDHg

Children risk exposure to PAH chemicals when playing on asphalt treated with coal tar pavement sealant.

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." http://www.cleanwateractioncouncil.org/issues/spray-irrigation/.

The Petition to the EPA for Corrective Action for Administration of the Clean Water Act

The petition was first filed with the Environmental Protection Agency in 2011. Two CWAC board members are petitioners to correct 75 deficiencies with the way Wisconsin administered the CWA. There are still a few deficiencies that need to be corrected. It is believed that through working with the Evers administration and cooperation from the legislature, and a more pro-active EPA, these can be resolved.

Citizen Complaints

Many of our more extensive actions, some requiring legal work, resulted from a follow up of citizen complaints. Keep us in mind if you have an environmental concern for which you need support.

Water Sampling

For the fifth consecutive year, CWAC will continue to participate in the WDNR's Lower Fox River water sampling program with the fourth year of water sampling and stream assessments for Baird Creek on Green Bay's east side. Phosphorous levels in 2020 for August, September, and October were found to be 0.160 MG/L, 0.069 MG/L, and 0.075 MG/L, respectively..

Educational Efforts in the Community

Food Waste Composting Education

21 people attended a workshop to learn about composting from Farmer Donna in May. We then began home delivery of composters with setup and instruction. Thus far, 45 composters have been distributed for composting food waste. Another workshop will be held on July 26. See the quarter page poster in this newsletter.

Newsletter Outreach

The spring newsletter, *Waste Not, Want Not, Seeking a Zero Waste Economy* was sent to 550 members in March. There are limited printed copies remaining should you want to distribute them to a group or organization. All newsletters are available on our website.

Get Our Weekly Update by Email

Each Tuesday we email the *CWAC Weekly Update* with 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 at contact@cleanwateractioncouncil.org 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.

Health Forums

We held a health forum in May: *Safe Lawns and Compost Tea*, online with John Meredith of Lakeshores Landscape and Design. Our next health forum will also be online regarding keeping your indoor air quality safe with Martine Davis. See the quarter page poster in this newsletter.

Contact us if you have suggestions for topics or speakers. **We are seeking business or member sponsors for individual health forums at the $200 level, either full or in part.**

Efforts to Stop the Back 40 Mine

We will continue to use the concept of social license to stop the Back 40 Mine, which is now more important than ever. With their wetlands permit not approved, Aquila Resources will be submitting a new plan. Opposition must be increased. Learn more about the threat from this mine at Back Forty Mine Presentation with Dr. Al Gedicks on YouTube https://www.youtube.com/watch?v=cilsGzrf1-g.

We are helping to organize and promote a stop the Back 40 Mine rally in Menominee Michigan on July 16. See the quarter page poster in this newsletter.

Presentations and Exhibits

On April 25, we gave a presentation to Lifelong Learning Institute members called *Moving Toward Zero Waste*. That presentation is available to other groups in person or on the Zoom online platform.

On June 6, we exhibited at the Full Circle Farm sustainable farming event.

On September 14, at UW-Green Bay, we will present to Lifelong Learning Institute members the current efforts to protect ground and surface waters and the most significant threats to our waters. We hope to be doing more in person exhibiting this summer and fall.

We have presentations on our website via YouTube. One is *The Threat from Micro-plastics in Clothing*. Another is *The Hazards of Coal Tar Pavement Sealants*. They can be found at https://www.cleanwateractioncouncil.org/resources/

Here is a list of current presentations that can be given online. The presentations can be tailored to your group's geographic location, age, and available time. Also, contact us if you would like us to promote or co-sponsor your event or presentation.

- Citizen Action to Protect the Waters of Northeast Wisconsin
- Communities on the Road to Zero Waste
- The Health Hazards of Burn Barrels
- The Health and Quality of Life Hazards from Manure Spraying
- The Health Threat from Coal Tar Pavement Sealants
- Micro-plastic Pollution from Clothing

Outreach through Newspaper and Radio

CWAC sends press releases to local media and is often contacted to comment on developing environmental issues.

Website Updates

Past newsletter issues can be found at the website as well as updated articles and additional resources 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, provide them with networking opportunities in environmental fields, encourage them to research and write for our newsletter and website, invite them to attend board meetings, and to represent CWAC at meetings with partner organizations. We are currently accepting fall semester internship applications.

We are thankful for five 2021 intern sponsorships by Marge and Ken Bukowski. Contact us if you would like to learn more about sponsoring a student intern.

Attendance at Conferences and Meetings with Other Environmental Groups

We attend biweekly meetings with the No Back 40 Mine group, monthly meetings with directors of other state environmental groups, and as issues arise, such as the state budget, we attend strategy meetings to address the issue.

CWAC's Non-Profit Status

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

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

PLEASE JOIN OTHER CWAC MEMBERS FOR SOME GREEN BAY PACKERS GAMES AS A CONCESSION VOLUNTEER

Experience the game day excitement at Lambeau Field and help us earn some operating funds. Game dates include August 21, October 3, and November 28. Email contact@cleanwateractioncouncil.org or phone us at 920-421-8885 for the details.

CWAC Monitors Use of Phosphorus Fertilizer by Lawn Care Companies

By McKenzie McDermott, CWAC Intern

Phosphorus is an important nutrient for plant growth. However, the amount of phosphorus found in common fertilizers was found to be significantly higher than what was necessary. Using excessive phosphorus on lawns and gardens can result in runoff into local waterways with any major precipitation, causing algal blooms.

According to the Environmental Protection Agency (EPA), algal blooms can deplete the amount of oxygen in the water and negatively impact ecosystems by killing fish, creating dead zones, and adding harmful toxins to local drinking water. The EPA warns that algal blooms can be toxic to humans and pets, and to avoid water that is green and foul smelling. To combat excessive algal blooms, Former Governor Jim Doyle signed the Wisconsin Zero-Phosphorus Fertilizer Law in 2009.

On April 1, 2010, the Phosphorus Fertilizer Ban (Wisconsin Statute 94.643) took effect, banning the display and use of lawn fertilizers containing phosphorus except under certain exemptions. The exemptions to the phosphorus ban include using phosphorus fertilizers when establishing new lawns or if the soil is determined to be phosphorus deficient after performing a soil test. Penalties for unlawful use of phosphorus fertilizers include fines of $50 or less for a first-time offense and up to $500 for any subsequent offense.

Each year, CWAC monitors retail sales for violations of the phosphorus ban. In previous years, violations were found, discussed with store managers, and in some cases reported to the Department of Agriculture, Trade, and Consumer Protection, and reported to our members. This year we found violations at Fleet Farm-West in Green Bay and the Door County Cooperative Country Store in Sturgeon Bay. The co-op has been in violation every year since we began monitoring in 2013. A request of the store manager to either move lawn fertilizer containing phosphorus out of view of customers or to put up signage indicating it was not for lawn use went unheeded.

This year, we also sent questionnaires to 60 different lawn care and landscaping companies throughout Northeast Wisconsin to remind them about the phosphorus ban and to allow them to report their policies on phosphorus.

The following is a list of lawn care companies that stated they have policies in place that comply with the use restrictions detailed in the Wisconsin Zero-Phosphorus Fertilizer Law:

Ahlswede Inc.
1960 County Road DK
Sturgeon Bay, WI 54235

Lakeland Landscape Service
4141 Viebahn Street
Manitowoc, WI 54220

Lowney's Landscaping Center
N3310 WI-47
Appleton, WI 54913

Meissner Landscape
4919 County Road T
Sturgeon Bay, WI 54235

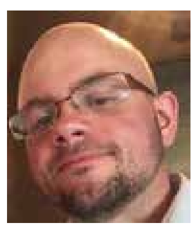
Pete's Lawn & Garden Services
N1760 Jannette Circle
Wautoma, WI 54982

Sunnypoint Landscape LLC
6951 WI-42
Egg Harbor, WI 54209

Sources:
https://www.epa.gov/nutrientpollution/harmful-algal-blooms
https://www.villageofallouez.com/depts/storm-water-management/phosphorus-fertilizer-ban-in-wisconsin/

Meet Our Interns

Maya Hearden is a Paralegal student at Northeast Wisconsin Technical College. After obtaining her associate degree from NWTC, she plans to further her education at UWGB. She hopes to use her knowledge gained from CWAC to get a job at an Environmental Law Firm. In her free time, Maya enjoys biking, rollerblading, and spending time with her family.



Carl Woitekaitis is a senior at the University of Wisconsin-Green Bay and is majoring in Political Science with a minor in Democracy and Justice Studies. He previously earned an associate degree in Paralegal Studies from NWTC. In his spare time Carl loves to read and take his son on adventures. He looks forward to working with the Clean Water Action Council this summer and researching how environmental issues intersect with issues of social justice in our communities. After graduating Carl hopes to attend law school.

"To put your hands in a river is to feel the chords that bind the earth together."

— *Barry Lopez* —

Attention Members:

Share Your Sustainability Stories!

We are looking for members to share their sustainability stories to feature in our fall newsletter and at our fall banquet. Volunteer for **us to write your story** or suggest another member with a story.

Examples of Sustainable Actions Include:

- Use of solar/wind energy
- Driving an electric car
- Growing your own food
- Recycling and minimizing the use of single-use plastics
- Reducing food waste
- And more…

Please email us at contact@cleanwateractioncouncil.org to schedule an interview or with any questions.

Clean Water Action Council

Food Waste Composting Workshop

with Dean Hoegger

Join us for a composting workshop with Clean Water Action Council President Dean Hoegger. Learn how to compost food waste at home and how it benefits the environment!

Date: Monday, July 26, 7:00-8:30 PM

Location: Crossroads at Big Creek
2041 Michigan St, Sturgeon Bay, WI

FREE REGISTRATION

A limited number of composters will be available for purchase at the event for $54.

To register, email:
contact@cleanwateractioncouncil.org
or leave a message at
920-421-8885.

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Thursday, August 5, 7:00 – 8:00 PM

"Protecting Your Family from Toxic Air Exposure in the Home"

with Martine Davis, Certified Building Biologist

Online Presentation via Zoom. Join on a computer or telephone.

Register in advance for this presentation at:

https://us02web.zoom.us/meeting/register/tZIpceygqTMiHNGUK8hixbzbJXuV4i4kz9Jn

Or email us for the link at contact@cleanwateractioncouncil.org

After registering, you will receive a confirmation email containing information about joining the meeting.

Learn how to minimize exposure for yourself, children, and pets.

Submit questions for Martine to answer at: contact@cleanwateractioncouncil.org

Identify Pollutants in your Home From:

- Construction Materials
- Household Chemicals
- Environmental Contaminants
- PAHs from driveway sealants
- Electromagnetic Fields (EMFs)
- Clothing & Furniture with special emphasis on PFAS exposure.

Opposition to the Back Forty Mine

A Water Celebration!

Friday, July 16, Stephenson Island, Marinette

12:00pm:
Event Opening

1:30pm:
Special Guest Speaker:
Dr. Al Gedicks

1:50pm:
Western Mining Action Network Speech

2:10pm:
Menominee Nation Speech

2:30pm:
BLESSING OF THE WATERS CEREMONY

3:30pm:
"River's Edge Trio"
Performance & Raffle*
*Custom-Built guitars appraised at $4,500

4:00pm:
Bridge Walk w/Signs to Demonstration Site

6:00pm:
Return to Stephenson Island to Adjourn

Sponsored by: Sponsored by The Western Mining Action Network, Menominee Nation, and the Coalition to SAVE the Menominee River, Inc.

Website: www.jointherivercoalition.org Email: jointherivercoalition@gmail.com

HEARINGS:

July 15, 1:00 PM – 4:00 PM

Wisconsin PFAS Action Council Meeting

Virtual

The Wisconsin PFAS Action Council (WisPAC) was created in response to Governor Evers' Executive Order #40, which directed that the DNR would lead a coordinating council of state agencies to address PFAS in Wisconsin. WisPAC meets regularly to discuss and put forth initiatives toward addressing PFAS contamination, including the implementation of the PFAS Action Plan released in December 2020.

There will be time allotted at the end of this meeting for the public to provide comments or ask questions. Written comments also may be submitted by e-mailing DNRPFASInquiries@wisconsin.gov. Questions in advance of the meeting may also be submitted to DNRPFASInquiries@Wisconsin.gov.

DNR Hearings

For a list of public hearings and meetings go to: https://dnr.wisconsin.gov/calendar

EVENTS:

Thursday Evenings

Door County Environmental Council SafeLawns Videos

Door County Environmental Council will feature short videos on their Facebook on Thursday evenings about maintaining safe lawns all summer long. The programs will focus on lawns and how important they are for animal habitats and humans as well as feature activities that are lawn friendly.

Link to DCEC Facebook: https://www.facebook.com/DCwiEnvironmentalcouncil

June 26, 9:30 AM – 10:00 PM

Midwest Renewable Energy Association Member Celebration

7558 Deer Rd, Custer

Outdoor, socially distanced event celebrating clean energy and sustainability! The Midwest Renewable Energy Association promotes renewable energy, energy efficiency, and sustainable living through education and demonstration. The day will be packed full of 10+ hours of live music, inspiring keynote speakers, local food and beer, and family-friendly activities. Not a member? Not a problem! This event is open to the general public. Everyone is welcome. Tickets to this event are limited and must be purchased in advance here: https://www.midwestrenew.org/mctickets/

July 16, 12:00 PM – 6:00 PM

Opposition to the Back Forty Mine: A Water Celebration.

Stephenson Island, Marinette

Sponsored by: Western Mining Action Network, Menominee Nation, and the Coalition to SAVE the Menominee River, Inc., https://jointherivercoalition.org/

Join the Coalition to Save the Menominee River to show your support against the Back Forty Mine. Featuring a special Menominee Indian blessing of the River, special guest speaker Professor Al Gedicks on pollution threats to the water, music, and raffle of custom-built guitars.

July 16 or July 17, 9:00 AM – 5:00 PM

A one-day, in-person session at the Field Station.

Fishes of Wisconsin

Wisconsin is home to 147 native species of fishes, ranging from parasitic lampreys to colorful darters to majestic pikes and prehistoric sturgeons. This workshop will present the breadth of fish diversity in southeast Wisconsin, with an emphasis on the taxonomy and ecology of our native fishes, as well as how to identify them. The class will cover the basics of fish taxonomy and anatomy, as well as some basic fish biology. The field session will offer opportunities to learnhow to capture fishes safely and effectively in the wild; to learn "on-site" identification of fishes in the field; and opportunities for further discussions about the ecology and evolution of fishes. Students should come prepared to get wet and/or muddy!

Register: https://uwm.edu/field-station/fishes-of-wisconsin/

July 26, 7:00 PM – 8:30 PM

Food Waste Composting Workshop

Crossroads at Big Creek, 2041 Michigan St., Sturgeon Bay

Join us for a composting workshop with Clean Water Action Council President Dean Hoegger. Learn how to compost food waste at home and how it benefits the environment! A limited number of composters will be available for purchase at the event for $54. Free registration.

To register, email: contact@cleanwateractioncouncil.org or leave a message at 920-421-8885.

July 21 – Aug 4, Wednesdays, 3:00 PM to 5:00 PM

Synchronous, online sessions, Plant-Insect Interactions

Plants have both beneficial and antagonistic relationships with insects: they rely on insects for pollination but also must contend with the numerous insects trying to eat them. This course will examine the interactions between plants and their insect pollinators and herbivores. We will survey the major groups of pollinators and herbivores and discuss plant strategies for attracting pollinators and coping with herbivory. We will also cover carnivorous plants – a case where the tables are turned on herbivorous insects! The in-person field session will include time in the field observing plants and insects. Register here: https://uwm.edu/field-station/plant-insect-interactions/

August 5, 7:00 PM – 8:00 PM

Clean Water Action Council Health Forum "Protecting Your Family from Toxic Air Exposure in the Home," with Martine Davis, Certified Building Biologist

Online presentation, join via Zoom on computer or telephone.

MARK YOUR CALENDAR!

Register in advance for this presentation:
https://us02web.zoom.us/meeting/register/tZIpceygqTMiHNGUK8hixbzbJXuV4i4kz9Jn
Or email us for the link at contact@cleanwateractioncouncil.org
After registering, you will receive a confirmation email containing information about joining the meeting.

Learn how to reduce your family risks to toxic exposures in your home. Identify pollutants in your home from:

- Construction Materials
- Household Chemicals
- Environmental Contaminants
- PAHs from Driveway Sealants
- Electromagnetic Fields (EMFs)
- Clothing & Furniture with emphasis on PFAS exposure

Learn how to minimize exposure for yourself, children, and pets. Submit questions for Martine to answer at: contact@cleanwateractioncouncil.org

August 19
Farm to Table Sunset Dinner
Mahler Park, Neenah

Local chefs will prepare cuisine featuring farm fresh produce sourced from the Future Neenah Farmers Market certified local growers.

For more information visit: http://www.neenah.org/sunset-dinner/

August 21 8:00 AM – 12:00 PM
Baird Creek Clean Up
1546 Main St. Green Bay

Help with trash pickup on the banks of the creek and hauling away larger items found in the water. Wear work gloves, boots/shoes, waders, wetsuit, shorts, or anything that can get wet and muddy. Also bring rope, grabbling hooks, or a kayak/canoe, if you have any, to assist in dragging out heavier items found in the creek.

For more information/RSVP contact lexi@bairdcreek.org or call 920-328-3505.

September 16 5:30 PM-7:30 PM *may be moved to the 23
Brew at the Zoo
NEW Zoo, 4378 Reforestation Rd, Green Bay

Designated Driver tickets are $9 and Unlimited (Beer/Wine) Tasting tickets sell for only $35 – both tickets include popcorn and pretzel samples. This is a limited-ticket event with only 1200 tickets available for sale - so buy your tickets early! Tickets are available NOW in the NEW Zoo Gift Shop and online at newzoo.org! Besides the unlimited opportunity to taste many outstanding selections, we'll also have the Dog House's famous fresh cheese curds, as well as their full menu, a silent auction, animal encounters, and games like Carousel Races and a Stein-Hoisting Competition (16 oz. & 32 oz. divisions this year), plus there will be other special opportunities to support conservation.

MARK YOUR CALENDAR!

CWAC
Annual Banquet and Silent Auction

SAVE THE DATE!
Thursday, October 7, 2021

Please save the date, Thursday, October 7, 2021 for the banquet. (The previously published date had a conflict with a Packers home game.) Tickets will be available on our website beginning July 29 at https://www.cleanwateractioncouncil.org/events/

Please consider making a donation for the silent auction. We are accepting works by local artists, gift certificates from local businesses, and gift certificates from our members with special talents to share such as time in the studio with artist, canoe and kayaking adventures, and lessons for arts, sports, music, writing, etc. **What can you contribute?**

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

Oh, Those Were the Good Old Days

By Charlie Frisk

From the mid-1900s until the passage of the Federal Clean Water Act of 1972 (CWA), the Fox River was one of the most polluted rivers in the Midwest. Several major cities, along with over 30 pulp and paper mills, were dumping raw sewage into the Fox. For major periods every year the Fox had absolutely no oxygen, and the only fish that could live in the river were carp and bullheads.

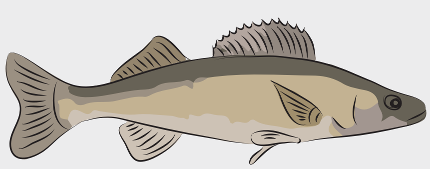
With the passage of the CWA, the Fox underwent a gradual cleanup; by the late 70s walleye and other game-fish could survive in the river. However, those game-fish were still living in a highly polluted environment. Walleye from the Fox, a species considered by many anglers to be the finest eating fish in Wisconsin, had a strong sulphite odor and the belly fat had a dark color. For those of us old enough to remember, the sulphite odor was that rotten cabbage smell that hung over Green Bay. The belly fat on a fish is the primary area for concentration of toxics such as PCBs.

Dave Otto, the hunting and fishing writer for the Press-Gazette, wrote a column featuring a treatment that would remove the foul smell and some of the dark color from walleye fillets so that people could eat them. It is interesting that in none of Dave's columns did he ever suggest that anglers should be lobbying for less pollution in the Fox, or that eating those walleye might not be the best idea for a person's long term health.

Following is Dave's suggestions for sprucing up those stinky walleye. ***Bon Appetite!***

From Otto's column Feb. 20, 1983.

Walleye fishing on the Fox River below the dam at De Pere continues to provide plenty of sport, both for open water fishermen and ice anglers. But some fishermen still have doubts about the eating quality of the river walleyes, especially the larger specimens. Steve Prue, of Riverside Bait and Tackle, has a helpful hint for fishermen bringing home Fox River walleyes for the pan. He suggests filleting and skinning the walleyes and then soaking the fillets for 24 hours in the refrigerator in a solution of one quart of water, two tablespoons of lemon juice, one teaspoon of salt and half a teaspoon of baking soda. Prue has had excellent success cooking walleyes up to 27 inches long using this treatment. The biggest fish, he said, had a dark belly and a sulphite odor when he caught it, but still turned out to be good eating.



Thank you!

Thank you to Carol Wood for paying our office rent for January through May. Our office location allows easy access for UW-Green Bay students and the public. The use of campus conference rooms and the theater enhances our education and outreach programs.

Publication of this newsletter was made possible by the generous donation by the Paul, Barry & Tanner Family Fund of the Greater Green Bay Community Foundation.

Contact us to sponsor a future newsletter.

Donations for the newsletter, office rent, intern scholarships and other programming are greatly appreciated. **We are currently seeking support for the purchase of a drone** to monitor plowing setbacks from streams.

Have you renewed your membership?

See your newsletter label or e-mail notice which indicates the last year that you donated.

Join or Renew Your Membership to Clean Water Action Council for 2021!

☐ Renewal ☐ New Member Date ______________

( ) $25 Individual ( ) $35 Family **(this amount would really help)**

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

( ) Non-member donation of $ __________for_______________

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

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(BE SURE TO PROVIDE PHONE NUMBER ABOVE)

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☐ 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!***

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www.cleanwateractioncouncil.org

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

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Save the date!
CWAC BANQUET
October 7, 2021
Bring a friend!

in this issue...

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