Clean Water Action Council

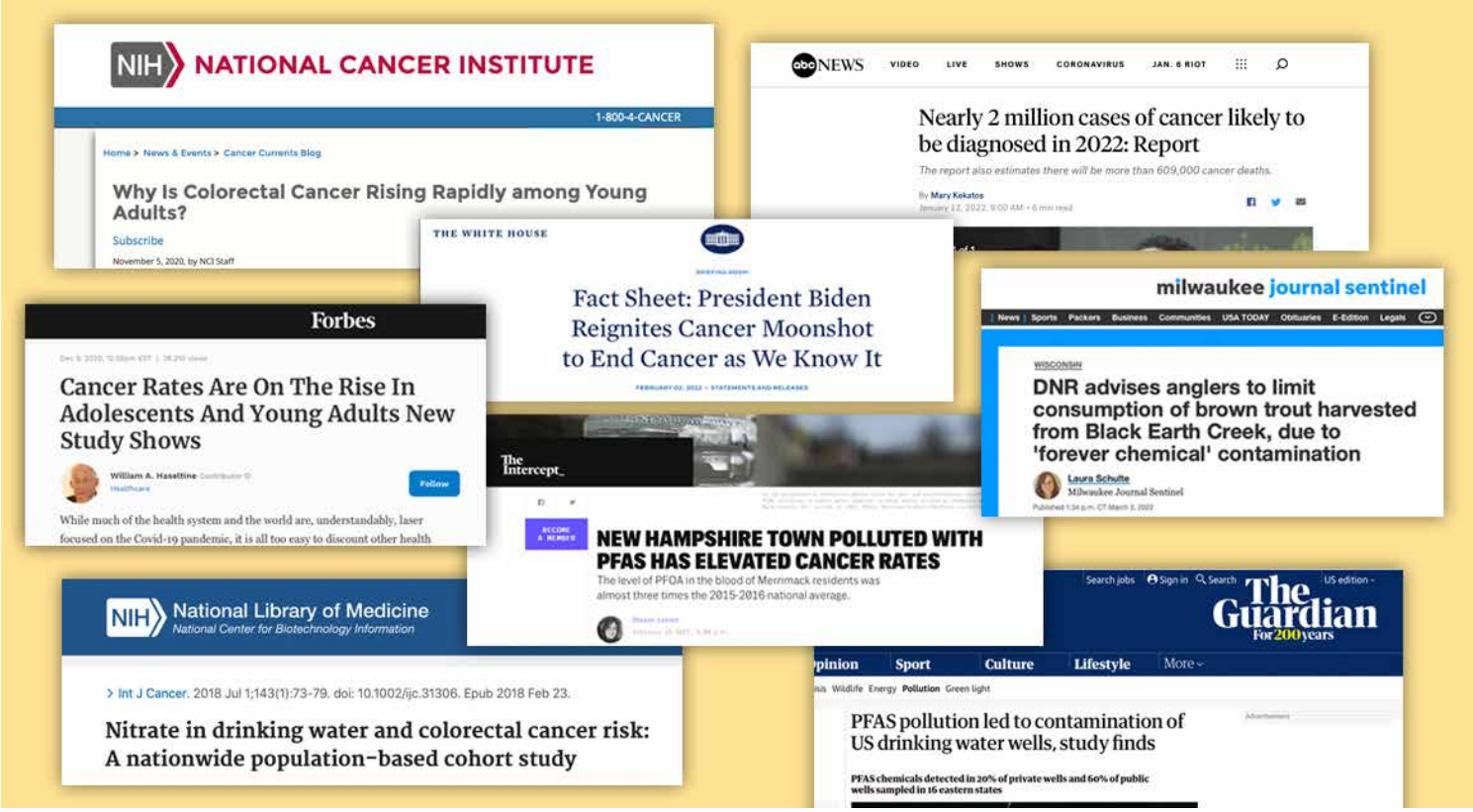
OF NORTHEAST WISCONSIN

Celebrating 37 years of working to protect public health and the environment in Northeast Wisconsin

SPRING 2022

Cancer and the Environment

Understanding and reducing the risk from toxins in the environment.



Introduction by CWAC President Dean Hoegger

In the spring of 2014, Clean Water Action Council published a newsletter with a focus on cancer rates and chemicals known to cause cancer in northeast Wisconsin. The issue was published to introduce a presentation by noted researcher and author Sandra Steingraber who wrote, *Living Downstream, An Ecologist's Personal Investigation of Cancer and the Environment*.

Living Downstream has some parallels to the movie, *Dark Waters*, based on Robert Bilott's effort to hold DuPont and other chemical companies responsible for putting tremendous amounts of PFOA and other polyfluoroalkylated substances known as "forever chemicals into the environment. Bilott also published *Exposure* which chronicles his personal and professional journey of winning litigation worth $4 billion for thousands of clients impacted by exposure to the chemicals.

Steingraber's book and talk illustrated many cases of the hidden exposure of chemicals in our environment and the impact of long-term exposure to humans, and even the effects on the next generation. In her talk she discussed the impact on human health and the environment from our dependence on petrochemicals.

Since that time, tremendous improvements have been made in early detection, diagnosis, and treatment for many kinds of cancer. We can see that cancer treatment is big business as area hospitals have expanded facilities for cancer treatment. Yet the American Cancer Society reported that nearly 2 million new cases of cancer

are expected to be diagnosed and some 609,000 people will likely die from cancer in the U.S. in 2022.

If prevention was given the same investment as treatment, there would be far fewer lives lost and far less suffering for cancer survivors. There is growing scientific evidence that environmental contamination of our air, water, and food are responsible for increasing the risk of cancer to the current and as well as future generations. For instance, we are finding that groundwater contamination by "forever chemicals" is not in a few isolated instances in Wisconsin as first thought; they are now being found throughout the state.

Yet our state government has been unresponsive to the need to protect citizens from PFAS chemicals and nitrates in well water, both known carcinogens. In a recent hearing by the Wisconsin Natural Resources Board (NRB), which considered setting standards for PFAS in drinking water, the Board seemed to be influenced more by the Wisconsin Manufacturers and Commerce than the Wisconsin Department of Natural Resources and the Wisconsin Department of Health Services. These state agencies recommended a 20 parts per trillion (ppt) standard. However, the NRB voted to weaken the standard to 70 ppt. How much further the legislature will weaken the standard remains to be seen?

Clean Wisconsin estimates that about 80,000 private wells in Wisconsin are contaminated by nitrates primarily from agricultural sources. They also note that more needs to be done to mitigate manure and fertilizer from entering the groundwater. The rule making process for regulating nitrogen application is underway, but it typically is a two-year process, which ultimately requires approval by the legislature. Will the powerful Dairy Business Association thwart efforts to protect citizens by opposing these changes?

Read this issue to learn more about cancer and the environment in northeast Wisconsin, ways to protect your family, and how politics plays a role in the risks we face from toxic chemicals. See the Spring 2014 CWAC Newsletter for information on the risks from dioxin, PCBs, and atrazine and area cancer rates for 2005-2010.

A Look at Cancer Rates in NE WI from 2014 - 2018

By Bricken Brown and Dean Hoegger

The National Cancer Institute, as well as other organizations, provide data from states with cancer registries. Wisconsin has a registry and has provided the data for each Wisconsin county. Here is brief look at aspects of the data that may be a concern to residents in northeast Wisconsin. Some of the data suggests a cause for a more in-depth study.

The following incidence rates are averaged based on cases per 100,000 people per year for the years 2014-2018. The statistics include statistics for both for males and females (unless noted), all ages, (unless noted), and all races, and they will be used throughout this article.

Compared to the U.S. rate, Wisconsin rates were considerably higher for the summary of all invasive cancers. The U.S. rate was 448.6 compared to 468.5 in Wisconsin. However, when we look at individual counties in northeast Wisconsin, the data suggests the need for further research as to why incidence rates are so high for NE WI counties.

Of the 72 counties in Wisconsin, 14 from northeast Wisconsin often appear as one of the top-ten counties recorded for frequency of the 21 cancer types. In fact, for all of Wisconsin counties, Oneida ranked second at 521.7, Forest ranked fourth at 510.2, and Marinette ranked sixth at 508 for the incidence of all types of cancer.

Below is the number of times a northeast Wisconsin county ranked in the top ten of 72 Wisconsin counties for cancer occurrence. Also included is the type of cancer. For all childhood cancers, <15 means less than 15 years old, <20 means less than 20 years old.

7 times - Oconto including bladder, brain, female breast, esophagus, leukemia, non-Hodgkin lymphoma, and stomach.

5 times - Marinette including brain, esophagus, kidney, non-Hodgkin lymphoma, and ovary.

5 times - Sheboygan including cervix, childhood <15, childhood <20, ovary, and uterus.

4 times - Oneida including colon, female breast, ovary, and thyroid.

4 times - Waupaca including bladder, esophagus, melanoma of the skin, and stomach.

4 times - Forest including female breast, kidney, lung, and non-Hodgkin lymphoma.

3 times - Door including bladder, brain, and non-Hodgkin lymphoma.

3 times - Fond du Lac including cervix, childhood <15, and prostate.

3 times - Manitowoc including childhood <15, childhood <20, and melanoma of the skin.

2 times - Calumet including bladder and ovary.

2 times - Kewaunee including colon and kidney.

2 times- Langlade including colon and kidney.

1 time - Brown for cervical cancer.

1 time - Outagamie for ovarian.

There are large statistical differences for types of cancer between the northeast Wisconsin county rates and the U.S. rates per 100,000. **Below, the type of cancer is listed first, followed by the [U.S. rate], then the county rank in the state and rate per 100,000.**

Bladder: [19.7] Waupaca ranked 2nd at 29.8, Door ranked 4th at 27.8, Oconto 6th at 26.7, and Calumet 8th at 26.2.

Brain: [6.5] Marinette ranked 5th at 9.7, Door 7th at 9.1, and Oconto ranked 10th at 8.

Cervix: 7.7; Fond du Lac ranked 4th at 7.9, Brown 5th at 7.8, and Sheboygan 9th at 6.

Childhood <15: 17.5; Manitowoc ranked 2nd at 32.3, Sheboygan 6th at 21.2, Fond du Lac 10th at 18.8.

Childhood <20: 19.1; Manitowoc ranked 1st at 33.7 and Sheboygan ranked 6th at 24.1.

Colon or rectum: 38; Langlade ranked 2nd at 50.3, Oneida 5th at 48.7, and Kewaunee 10th at 42.6.

Esophagus: 4.5; Oconto ranked 1st at 10.4, Waupaca 4th at 7.5, Shawano 6th at 7.3, and Marinette 8th at 6.9.

Female Breast: 126.8; Forest ranked 4th at 161.4, Oneida 5th at 159.6, Oconto 10th and 147.1 (rising), and Shawano 11th at 142.9 (rising).

Kidney and Renal Pelvis: 17.1; Forest ranked 2nd at 27.8, Marinette 4th at 25.8, Kewaunee 5th at 23.7, and Langlade 10th at 22.7.

Leukemia: 14.2; Oconto 4th at 21.4.

Lung and Bronchus: 57.3; Menominee ranked 1st at 86.3 and Forest 8th at 64.1.

Melanoma of the skin: 22.6; Manitowoc ranked 5th at 32.4 and Waupaca 8th at 29.9.

Non-Hodgkin Lymphoma: 19.1; Forest ranked 1st at 32.2, Door 2nd at 26.8, Oconto 4th at 24.8, Marinette 9th at 23.8.

Ovary: 10.7; Oneida ranked 2nd at 15.8, Outagamie 4th at 14.4, Calumet 5th at 14.1, Sheboygan 7th at 13.2, and Marinette ranked 9th at 12.6.

Prostate: 106.2; Fond du Lac ranked 9th at 128.3.

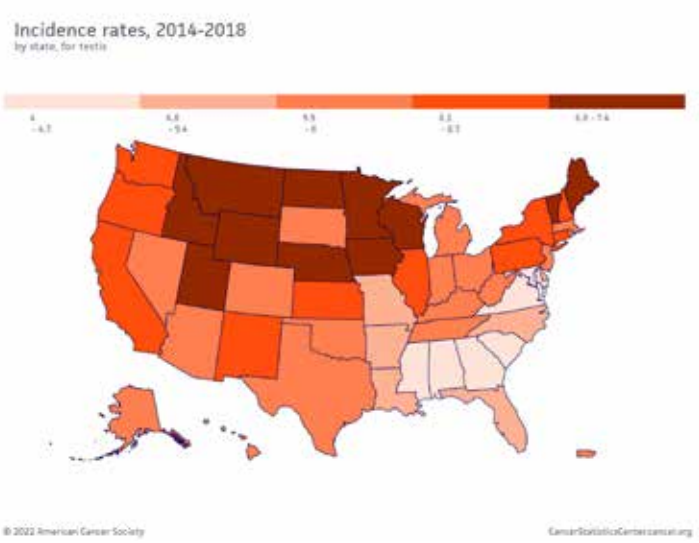
Stomach: 6.0; Shawano ranked 1st at 9.9, Oconto 7th at 7.5, and Waupaca 10th at 6.8.

Thyroid: 14.1; Oneida ranked 11th at 17.4.

Uterus: 27.4; Sheboygan ranked 8th at 37.1.

Rates for all cancers combined: 448.6 per 100,000 in the U.S., Oneida Co. ranked 2nd in the state at 521.7 per 100,000, Forest Co. ranked 4th in the state at 510.2 per 100,000, and Marinette Co. ranked 6th in the state at 508 per 100,000.

No data could be found for testicular cancer rates in Wisconsin by county. However, the rates were 5.7 per 100,000 for U.S. men and 7.2 per 100,000 for all of Wisconsin men. It is estimated by the American Cancer Society that Wisconsin will see 210 new cases in 2022. See: https://cancerstatisticscenter.cancer.org/#!/state/Wisconsin



Rates for testicular cancer are higher in Wisconsin than many other states. Courtesy of the American Cancer Society. https://cancerstatisticscenter.cancer.org/#!/cancer-site/Testis

Discussion

The good news for northeast Wisconsin is that for overall cancer rates, many northeast Wisconsin county rates are falling including Fond du Lac, Door, Brown, Winnebago, Sheboygan, Outagamie, and Menominee counties. In 2014, we noted that Sheboygan County ranked in the top ten in the state eight times for types of cancer, which has now decreased to five times. However, the county is still much higher for childhood cancer rates than the national average.

Another positive note is that leukemia, thyroid, and uterine cancers have decreased in northeast Wisconsin counties since 2014, and there are fewer counties in the top 10 for these cancer types. Oconto County ranked 1st for thyroid in 2014, however the current data shows that it has been removed from the top ten list.

Brown County's ranking went from five times to one time in the top ten with a decrease in childhood cancers, but now is noted as being slightly higher than the national average for cancer of the cervix.

Unfortunately, breast cancer rates are climbing in northeast Wisconsin and the U.S. as well. Incidence rates are much higher in Forest, Oneida, Oconto, and Shawano counties than they were in 2014. There are more northeast Wisconsin counties in the top 10 with extremely high

incidence rates, which are significantly higher than the national average. The following article on breast cancer, and the article "**PFAS is a serious health threat in Wisconsin,**" may suggest some possible causes for the higher averages.

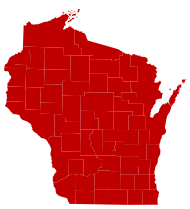
Lung and bronchus cancer rates in Wisconsin and in the U.S. have fallen since 2014, except for Menominee County. Lung and bronchus cancers are strongly linked to lifestyle influences such as smoking. While smoking rates have decreased across the country, Menominee County still ranks first in Wisconsin for smoking at 33.6% of the population 18 and over, while the total Wisconsin rate is 17.2%. Menominee County also has the 6th highest smoking rate in the country, which is extremely alarming and correlates with the very high lung cancer rates.

Of concern for Oconto County residents is the rise in rates for many types of cancer including a continued high incidence of non-Hodgkin lymphoma with a rate of 24.8 compared the national average of 19.1 per 100,000. Even more concerning is that the rate for cancer of the esophagus is more than double the national rate.

Oconto's neighbor to the north, Marinette, continues to rank high in the state for brain, esophagus, kidney, non-Hodgkin lymphoma, and ovarian cancer at rates all much higher than the national average. Has the release of PFAS chemicals in Marinette raised the incidence of cancer there?

For a look at the cancer rates for northeast Wisconsin from 2006-2010, see page 3 of the *CWAC Spring 2014* newsletter: https://www.cleanwateractioncouncil.org/newsletter/archives/2014/CWAC_Spring_14_web.pdf

Be sure to read the related PFAS articles in this issue as well as other chemicals of concern to reduce your risk of cancer from environmental exposures.



Breast Cancer and the Environment: Understanding and Reducing the Risks

By Dean Hoegger

According to the National Cancer Institute, breast cancer is the second leading cause of cancer deaths in American women today. Sadly, 1 out of every 8 women will develop breast cancer during her lifetime and about 40,000 women will die of breast cancer in the U.S. every year.

While it is true that risk factors for breast cancer are affected by genetics, including menstrual and reproductive history and race, these factors can be negatively influenced by chemical exposures throughout a woman's life, even before birth. In this article, we will primarily focus on the research concerning cancer risks from exposure to chemicals in our water, air, food, and homes, and how we can limit exposure to these chemicals.

Before birth, endocrine disrupting chemicals can enter a baby's bloodstream before birth or after through breast feeding. This is a concern because there is evidence that exposure to endocrine disruptors such as phthalates and BPA (bisphenol A) may change the timing of when a girl gets her first period. When a female reaches puberty at an earlier age, she faces a greater risk of developing breast cancer as an adult.

From the Breast Cancer and the Environment Research Program, https://bcerp.org/: Phthalates (THAL-ates) are chemicals in some detergents; personal care products, like fragrances, nail polish, deodorant, hair care products, and body lotions; food and beverage containers; and toys. They may enter a girl's body through the skin, the air she breathes, the food she eats, and the water she drinks. Plastic food and drink containers and plastic or vinyl toys with the number 3 in the recycling triangle contain phthalates.

Products with BPA (Compiled by Sadie Hunter)

Type	Products
Coatings	• Marine protection to shield ships • Offshore oil drilling • Water ballast tanks • Cargo tank lining • To protect metal roofing, garage doors, gardening tools
Food containers	• Metal cans lined with sealant (canned food) • Baby bottles • Sippy cups • Water cooler bottles • Tupperware
Electronic equipment	• Cell phones • Laptops • Tablets • Gaming consoles • CDs/DVDs
Other	• Cash register receipts • Other hard, clear plastic containers with a #7 recycling label such as food containers, water bottles, etc
Safety equipment	• Goggles • Shin guards • Helmets • Protective & corrective eye ware

BPA (or bisphenol A) is a chemical in some plastic bottles, food and beverage containers, and the lining of cans. It can leak into food and drinks. Plastic food and drink containers with the number 7 in the recycling triangle often contain BPA.

See the follow-up article, **"Phthalates in the Personal Care Industry."**

There is likely a lifestyle connection between earlier menstruation and diet. There is evidence that a girl who is overweight or has obesity is more likely to get her first period at an earlier age. Approximately one in three children in the U.S. are considered overweight or to have obesity. Girls in this category may be at a higher risk of developing breast cancer as adults due to the earlier onset of puberty.

Fast food is often high in fat and low in nutrition. CWAC photo.

Toxicological evidence has found links between eating a diet high in animal fat with changes in mammary gland development. This may predispose the gland toward cancer as well as increasing the risk of obesity and thereby further increasing the risk for breast cancer. It may be worth considering that grass-fed beef, gram for gram contains fewer calories than grain-fed beef.

Choosing grass-fed certified organic could also reduce exposure to chemicals including those that disrupt the function of hormones in a girl's body. Growth hormones found in meat could be one more factor for earlier onset of puberty for females. Choosing healthier options such as fruits and vegetables and grass-fed organic meats can limit exposure to these harmful chemicals and help reduce the chance of childhood obesity.

A diet that leads to an unhealthy weight in a child, such as consumption of snacks and prepared foods, may also lead to exposure to harmful chemicals that are used in its packaging. While BPA and phthalates are thought to be endocrine disrupting chemicals and could be present in this packaging, PFAS chemicals are used extensively in food packaging and are known carcinogens. The Silent Spring Institute reports that they can cause altered mammary gland development. PFAS chemicals are used as grease-proofing agents in fast food wrappers and microwave popcorn bags, which are typically high caloric foods that contribute to a child's weight and therefore their cancer risk.

In 2017, the Center for Environmental Health found that of 27 microwave popcorn bags tested, 100% were PFAS treated. CNN reported in 2017 that researchers found PFAS in one third of the fast-food packaging they tested, and similar findings were reported in a study conducted by Toxic-Free Future in February 2020. PFAS are known to transfer to food from the packaging especially when heated, and some forms can become airborne when being heated in a microwave.

The Counter, an independent nonprofit, nonpartisan newsroom investigating how America eats, reported that compostable bowls from 14 New York City restaurants likely contained PFAS based on their fluorine content. Reheating the food in the bowls would pose an even greater risk. It is recommended that food be removed from packaging and take out containers and heated in stainless steel pots on the stove or in ceramic or glass containers in a microwave.

Since PFAS is a forever chemical, and packaging does not indicate its presence, treated compostable bowls should not be placed in food waste compost units meant for garden use. Until the compostable units can be identified as PFAS free, it would be best to place them in the general trash.

A Silent Spring Institute study of the general U.S. population from 2003-2014 found that eating more meals at home was linked to lower blood levels of five PFAS chemicals. Researchers hypothesized that restaurant food may have higher levels of PFAS from packaging. They also found that daily consumption of microwave popcorn led to a 63% higher blood level of one form of PFAS.

PFAS exposure can also occur from drinking well water and surface water from sources such as Green Bay and Lake Michigan. There are areas in the state known to have high levels of PFAS in community well water (see **"PFAS is a serious health threat in Wisconsin"**). However, little is known about the levels in private well water.

Physicians for Social Responsibility has found evidence that chemicals used in drilling for oil and gas can break down into PFAS related substances. It is likely that similar chemicals were used in exploratory drilling for mining in northern Wisconsin. It has been proven that PFAS contaminated biosolids from one or more municipal sewage plants were spread on farm fields in Marinette County. These chemicals can leach into groundwater and come out the faucets of citizens with private wells.

Private wells need to be tested for PFAS. Fresh Water Future was offering testing for $75 but is temporarily not taking orders for kits. However, Pace Analytical in Green Bay is offering tests. The good news is that activated carbon treatment can remove PFAS from drinking water. According to the EPA, granular activated carbon has been shown to effectively remove PFAS from drinking water when it is used in a flow through filter mode after particulates have already been removed.

While benzene is primarily known as a carcinogen that is strongly linked to an increased risk of acute myeloid leukemia, an increase in mammary tumors was also observed in both rats and mice from both inhalation and oral exposure routes. Studies of human exposure of both males and females to benzene provide suggestive evidence for a link to breast cancer. Used in gasoline and for

industrial purposes, and present in cigarette smoke, benzene exposure should be avoided.

A report from the California Environmental Protection Agency Air Resources Board sites research that indicates that secondhand cigarette smoke can increase a woman's risk of breast cancer by 90%. As early as 2005 it called for listing secondhand smoke as a carcinogen. Women who lived in areas with higher levels of lead, mercury, and cadmium in air pollution had a greater chance of developing postmenopausal breast cancer according to the National Institute of Environmental Health Services.

When searching for a causative effect of other industrial and agricultural chemicals to breast cancer, there are insufficient studies or conflicting results. While some of these chemicals have been labeled as probable human carcinogens, such as polycyclic aromatic hydrocarbons (PAHs), it is not known what role they may play in contributing to breast cancer rates when there are multiple exposures to chemicals.

In conclusion, we must reduce risks where possible and err on the side of caution when the risk is less certain. Reducing the risk for breast cancer begins by protecting our children while still in the womb and as infants. Helping girls and all children make healthy lifestyle choices, providing them with nutritious, home-cooked foods with fresh organic ingredients, providing them with the least contaminated drinking water possible, and raising them in homes with air free of tobacco smoke, are all factors within our control. As parents, we need to give them the healthiest start possible as well as reduce our own risk factors.

Resources:

The National Institute of Environment Health Services has a useful list of risk reduction strategies based on referenced studies. https://www.niehs.nih.gov/health/topics/conditions/breast-cancer/index.cfm

A useful handout on phthalates: https://www.niehs.nih.gov/research/supported/assets/docs/j_q/phthalates_the_everywhere_chemical_handout_508.pdf

The Breast Cancer and the Environment Research Program has resources for parents and health care professionals and links to research at https://bcerp.org/

Breast Cancer and the Environment, A Life Course Approach (2012)
Download the free PDF at http://nap.edu/13263

Sign up for the "Keep Your Kids Safe" alerts from DATCP.
The March alert, for instance, includes a recall for children's handbags for lead violations. Wisconsin Department of Agriculture, Trade and Consumer Protection govdelivery.com

Phthalates in Personal Care Products

By Sadie Hunter, CWAC Intern

Phthalates, a group of chemicals used in the plastic making process, are used to make plastics more durable and to dissolve other substances. According to the Centers for Disease Control and Prevention, this type of chemical is used in a variety of products including flooring, personal care products, and a variety of plastics to name a few.

Through its vast usage in everyday products, individuals are constantly exposed to phthalates. This is concerning when looking at the links between this chemical and medical issues such as asthma, breast cancer, type II diabetes, autism disorders, and male fertility. In addition, according to the Breast Cancer Prevention Partners (BCPP), the age at exposure and the period for which individuals are exposed is extremely crucial when determining the risk of developing medical issues related to phthalates exposure.

According to BCPP, Diethyl Phthalate (DEP), a class of phthalates used in fragrances to extend the strength of scents, are used at levels that are not safe. The highest exposure risk to phthalates is for children ages 6-11, due to their undeveloped bodies and low body weight.

There are regulations put in place in many industries for the purpose of keeping people safe from these chemicals at toxic levels. However, when these products are combined with other chemicals, even at low concentrations, the risks are greatly increased. A recent study in Environmental Health Perspectives identified a relationship between cancer development and high exposure to compounds of chemicals such as phthalates, parabens, and phenols.

These compounds are frequently seen in the fragrance aspects of personal care products such as shampoo, nail polish, and hairspray. According to the Fair Packaging and Labeling Act (FLPA) of 1966, the Food and Drug Administration (FDA) requires producers to declare ingredients on their products. However, companies only must list "fragrance" and may refrain from listing the chemical components that make up its scent. So, under FLPA, unless it is specified, a consumer may never know that phthalates are in the products they use every day.

This information is alarming when looking at how individuals can be exposed to phthalates. Exposure comes from either eating food that has absorbed the chemicals or through vapor. The U.S. monitors these two exposure types through the FDA and the Environmental Protection Agency which conducts large scale testing. In addition, in 2008 there was a federal bill passed which prohibited more than 0.1% of three types of phthalates in children's toy or childcare articles.

However, there has been no government restrictions of phthalates in the cosmetic or personal care product industry. This means that although there are proven links to medical issues, there are still no restrictions on their use. There have been other intergovernmental organizations and countries that have restricted phthalates in the personal care industry including the European Union and Canada.

So, what does this mean for you? Well, experts give one main way to avoid phthalates in the products you use every day. Become a label reader! Read the ingredient list on the products you use. If you find that phthalates are listed, do not use the product. If you see fragrance listed, but it does not specify what its fragrance is comprised of, contact the company or refrain from use. In doing this, you can reduce your risk of serious medical conditions and feel confident knowing that your products are safe.

Common Products with Phthalates

- Solvents
- Vinyl flooring
- Lubricating oils
- Shampoo
- Perfume
- Nail polish
- Hairspray
- Sanitary pads
- Plastic packaging
- Garden hoses
- Medical tubing
- ...and hundreds more

PFAS is a serious health threat in Wisconsin.

By Jim Wagner

Despite a long history of cancer-causing chemicals in the U.S. and around the world, the relatively recent emergence of per- and polyfluoroalkyl substances (PFAS) and its attendant health risks has dominated mainstream conversations.

The scope of these "forever chemicals" is vast. PFAS is presented as one chemical, yet it is an umbrella term for a class of carbon-fluorine chained chemicals that number around 9,000 and counting. Their use in everything from firefighting foam to non-stick cooking pans to microwaveable popcorn bags has embedded itself into our consumer lifestyle.

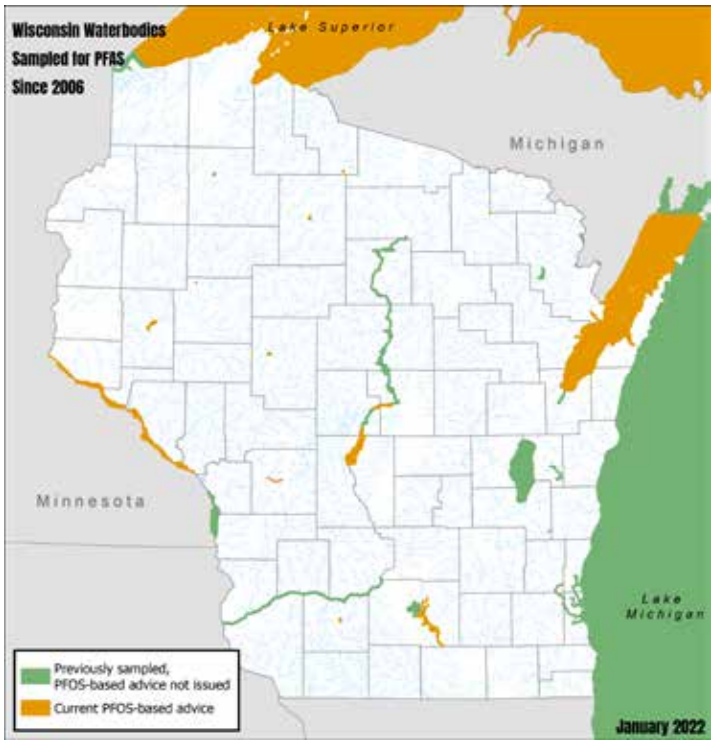
The dangers posed by PFAS have been known for decades. As presented in the compelling movie, *Dark Waters,* chemical manufacturer DuPont had been dumping perfluorooctanoic acid (PFOA) — used to make Teflon — into a West Virginia river, resulting in significantly increased cancer rates for residents living around that waterway.

A study of 26 PFAS chemicals found compelling evidence of the carcinogenic effects caused by the chemicals, but to date the U.S. Environmental Protection Agency (EPA) has announced they will focus on regulating just two types of PFAS: PFAS-PFOA and perfluorooctane sulfonate (PFOS).

Despite a large community of research on the chemicals, state and federal agencies have been hesitant to directly connect PFAS chemicals to human health. They acknowledge there are links, and that animal testing shows they may have an adverse effect on reproduction, thyroid function, the immune system, and the liver. According to the Center for Disease Control and Prevention (CDC), PFAS has been found in nearly every American tested since 1999.

There is a dearth of scientific research on PFAS chemicals contamination in Wisconsin specifically, outside water sampling conducted by the Wisconsin Department of Natural Resources (WDNR). Wisconsin Senate Bill 111 was introduced to set aside monies for sampling and testing of public water supplies, as well as grants for investigating PFAS contamination in the state, but that bill is currently tabled.

The WDNR has been sampling Wisconsin waterways since 2006 and has issued PFAS chemical advisories in 16 of them, including the bay of Green Bay, Lake Superior,



Map courtesy of WDNR.
https://dnr.wisconsin.gov/sites/default/files/topic/PFAS/WaterbodyMap20220118.pdf

Menominee River and Peshtigo River. As recently as last January 2022, the WDNR announced a fish consumption advisory for the bay of Green Bay and its tributaries.

Determining the amount of PFAS entering our bodies should be considered unsafe is unknown at this time. WDNR, based on the recommendation of the Wisconsin Department of Health Services, recommended setting a standard of 20 parts per trillion (ppt), while neighboring Minnesota puts it at 47 ppt and Michigan, 70 ppt. Currently the EPA has a health advisory level of 70 ppt, though it is an unenforceable standard. The Wisconsin Natural Resources Board voted to weaken the WDNR recommended standard for PFAS in drinking water to 70 ppt.

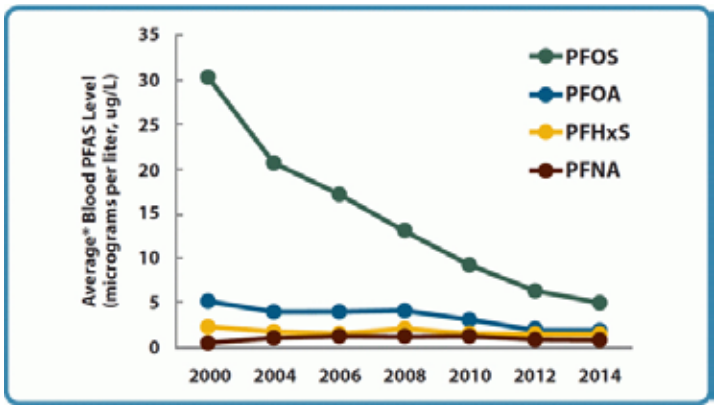
The need for a Wisconsin standard that protects human health could not be more important. Testing conducted last month in Wausau found PFAS levels exceeding 20 ppt in all six of their city wells. Last October, 164 private wells in the La Crosse area were determined to be unsafe drinking water sources. In Peshtigo, many residents have been drinking bottled water for years because of PFAS contamination of private wells from nearby firefighting foam testing by Tyco Fire Products.

What Can You Do?

Reducing the manufacture of PFAS chemicals will reduce exposure to all citizens. We must press our elected representatives to pass legislation to limit PFAS to 20 ppt as the WDNR has proposed, not the 70 ppt approved by the Natural Resources Board. The WDNR, while it can monitor PFAS levels throughout the state and issue advisories, it cannot bring enforcement against polluters until a state

standard has been established. By setting a standard that carries civil and even criminal penalties, it will discourage production of these dangerous chemicals.

When chemical manufacturers stopped production of PFOS and PFOA starting in the early 2000s, blood levels dropped in the U.S. According to the National Health and Nutrition Examination Survey, PFOS levels dropped in those surveyed by more than 80% from 1999 to 2014. Similarly, PFOA levels declined by more than 60% over the same period.



Graphic courtesy of the Agency for Toxic Substances and Disease Registry. Accessed https://www.atsdr.cdc.gov/pfas/health-effects/us-population.html

There are some things we can do immediately. The Environmental Working Group has a list of recommendations to reduce your family's exposure to products with likely PFAS chemicals:

- Cut back on fast food and carryout food containers
- Choose clothing that does not carry Gore-Tex or Teflon tags
- Avoid PTFE-based non-stick pans and utensils
- Do not use microwaveable popcorn bags
- Do not use stain-repellent sprays or treated carpets/ furniture
- Look at your personal care products and avoid those with "PTFE" or "fluoro" ingredients

You can find the EWGs full guide here: https://static.ewg.org/ewg-tip-sheets/EWG-AvoidingPFCs.pdf

Resources:

Application of the Key Characteristics of Carcinogens to Per and Polyfluoroalkyl Substances https://www.mdpi.com/1660-4601/17/5/1668/htm

WDNR Consumption Advisories and PFAS https://dnr.wisconsin.gov/topic/PFAS/Advisories.html

State-by-State Regulation of PFAS in Drinking Water https://www.jdsupra.com/legalnews/state-by-state-regulation-of-per-and-82542/

Wisconsin Natural Resources Board votes to weaken standard for PFAS in drinking water https://www.wpr.org/wisconsin-natural-resource-board-votes-weaken-standard-pfas-drinking-water

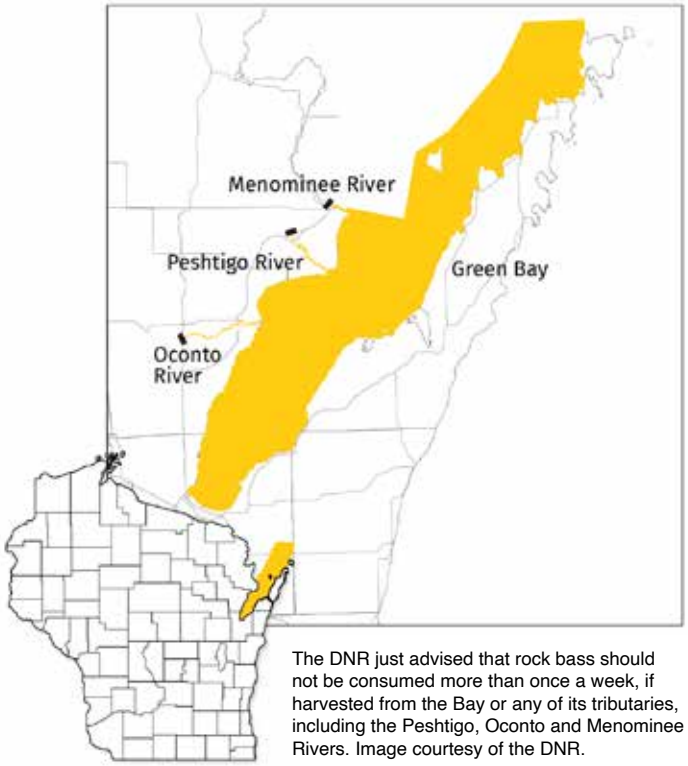
The Politics of PFAS: Human Health vs the Business Lobby

By Charlie Frisk

Tyco Fire Products, a subsidiary of Johnson Controls Inc., had been testing firefighting foams at its Marinette Facility since 1962. In 2013, Tyco found that its foam testing facility had been releasing PFAS into area groundwater but did not make that information available to the public until 2017. It is unknown how long the foam had been leaking into area groundwater, but it was probably for decades.

Firefighting foam. Courtesy of Pixabay

PFAS levels found in Marinette's and its neighbor Peshtigo's groundwater are truly incredible. The Wisconsin DNR is suggesting 20 parts per trillion (ppt) standard as hazardous to human health and the Federal EPA is proposing 70 ppt. The WDNR's groundwater testing in Marinette has found one PFAS compound, PFOA, at levels as high as 254,000 ppt and another, PFOS, at levels of 64,000 ppt in the groundwater.



The DNR just advised that rock bass should not be consumed more than once a week, if harvested from the Bay or any of its tributaries, including the Peshtigo, Oconto and Menominee Rivers. Image courtesy of the DNR.

PFAS contamination has now been found in widely scattered areas across the state. Madison, Eau Claire, LaCrosse and French Island have all shut down wells due to PFAS levels.

The City of Wausau has one of the worst horror stories. All six of the city's drinking water wells are over the 20 ppt standard. Wausau recently spent $120 million on upgrades to their drinking and wastewater treatment facilities, but has been informed that the upgraded facility will do nothing to reduce PFAS levels.

PFAS has been nicknamed "forever chemicals" because they do not break down naturally. They are linked to medical conditions such as low birth weights, increased risk of testicular and kidney cancer, altered hormone regulation, particularly thyroid hormones, and harm to immune and reproductive systems.

PFAS are a family of man-made chemicals used for their water and stain-resistant qualities in products like clothing and carpet, nonstick cookware and firefighting foam. The family includes over 5,000 compounds, which are persistent, remaining both in the environment and human body over time.

In 2020, the WDNR proposed setting a PFAS groundwater standard of 20 ppt, but industry lobbyists thwarted that regulation. At the behest of Wisconsin Manufacturers and Commerce (WMC), the state's largest business lobby, the proposed rule was tabled by the WDNR board, and the agency is unable to enforce PFAS contamination regulations.

The Natural Resources Board, the policy setting board for the WDNR voted on their recommendation for PFAS at a meeting held Feb. 23rd. After heated debate the board voted 6-1 to approve a 70 ppt standard for PFOA and PFOS in drinking water, much weaker than the 20 ppt standard recommended by the WDNR and the WI Department of Health Services.

The major argument given for the weaker standards was the health advisory level of 70 ppt issued by the EPA in 2016. However, the EPA announced late last year that recent data indicates negative health effects "may occur at much lower levels" of exposure to the chemicals than previously known.

The standards still require approval from the Republican-controlled legislature. GOP legislators have previously weakened PFAS regulations and stripped most of Gov. Tony Evers' funding proposals to address PFAS from the budget.

The resistance to the stronger standards came primarily from Dr. Frederick Prehn, a Wausau dentist and gun shop owner. Prehn's term on the board expired in May of 2021, at which point he was expected to step down. He has refused to step down from the board on the grounds that the Republican majority Senate has not approved Governor Evers' appointment to replace him, Sandra Dee Nass. Evers nominated Dee Nass to the position April 30, 2021 but the Republican dominated Senate refuses to confirm her appointment.

Also testifying against the standards was Scott Manley, vice president of government regulations for Wisconsin Manufacturers and Commerce. Manley argued that the stronger standards would be too expensive, that the WDNR did not have the authority to set the stronger standards and he questioned the science that health officials used to arrive at their recommendation.

"(WMC) has morphed into a monument to greed and avarice, an organization unwilling to even consider legislation that benefits anyone other than its own narrow interests." - Dave Zweifel, Capital Times

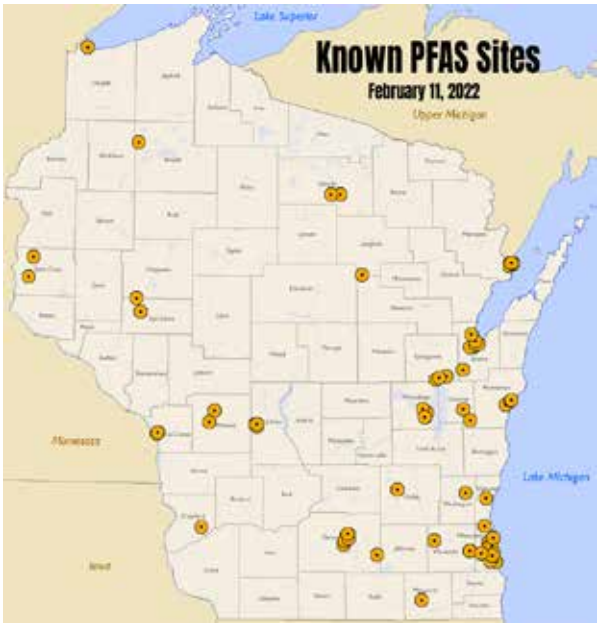
In addition to opposing standards, WMC has spent thousands of dollars to fight related WDNR authority granted in the Spills Law. Represented by Midwest Environmental Advocates, CWAC and others are exercising legal actions in the WMC vs the DNR case currently awaiting a decision scheduled for April. Losing the case could jeopardize the WDNR's authority over thousands of chemicals covered in the Spills Law. For details on the case, see https://midwestadvocates.org/issues-actions/actions/request-to-intervene-in-wmc-v-dnr.

Environmentalists and citizens living in communities with PFAS contamination are highly disappointed with the vote. Town of Peshtigo Chair Cindy Boyle became emotional as she urged the board to protect state residents, saying PFAS levels in her blood are five times the national average.

"I'm exhausted. I'm pissed off. I'm scared, but I am relentless," Boyle said. "I will not stop. Our community needs and deserves protection."

Wausau Mayor Katie Rosenberg told the board mothers are calling her office asking if their infants will die if they drink the water after testing has found PFAS in all the city's wells.

Even if the legislature votes to approve the standards and Gov. Evers signs them into law, the PFAS battles in Wisconsin are far from over. By recommending the weaker 70 ppt standard the Natural Resources Board has guaranteed future conflict as the scientific evidence continues to mount that those standards will not be sufficient to protect citizen's health.



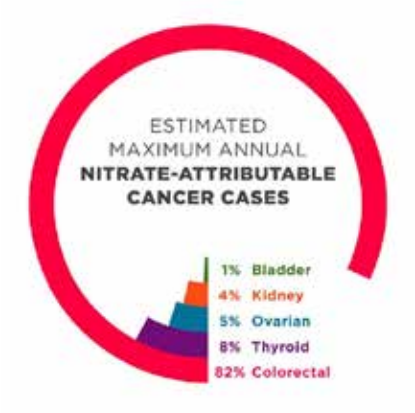
Map courtesy of the WDNR

Nitrates pose risks for cancer and other health problems.

By David Verhagen

The Wisconsin Dept. of Health Services advises that concentrations of nitrates more than ten parts per million (ppm) in potable water can cause birth defects, thyroid disease, and increase the likelihood of developing cancer. Cancers of the stomach, especially colon cancer, are most often found linked to nitrates in drinking water.

While Wisconsin and the U.S. EPA cite ten ppm as the "safe" standard in drinking water, the Environmental Working Group (EWG) and Clean Wisconsin report: "The federal drinking water standard for nitrate of 10 parts per million, or ppm, was set more than 50 years ago to protect against Blue Baby Syndrome, a potentially fatal condition that starves infants of oxygen if they ingest too much nitrate. But newer studies have linked an increased risk of cancer and changes in fetal development to drinking water contaminated with nitrate at just one-tenth of the federal standard."(see links at end of article)



Source: Environmental Working Group, from "Exposure-based assessment and economic valuation of adverse birth outcomes and cancer risk due to nitrate in United States drinking water," Environmental Research (https://www.sciencedirect.com/science/article/pii/S001393511930218X), June 11, 2019

Their study estimated between 96 and 262 nitrate-attributable cancers occur each year in our state, and over 12,500 cases nationwide. Medical costs alone exceed $1.5 billion a year, nationally. These cancers are appearing as clusters in areas of heavy agricultural activity and susceptible soils. The Wisconsin Department of Natural Resources in a 2021 Groundwater Report to the Legislature estimated that over 10% of the state's wells exceed the DHS safe standard of 10 ppm of nitrate. A 2012 survey found 47 municipal water systems also exceed the safe standard.

To be clear, some consumption of nitrate is beneficial. Nitrates are essential to all living organisms. We get all we need from eating green leafy vegetables and other produce. Nitrates from plants are stable compounds that are mostly inert. However, when chemically identical nitrates in meat combine with amine compounds at high-cooking temperatures, saliva in the mouth converts the nitrates to nitrites. In the stomach, bacteria and acids change them into nitrosamines, which is a well-known cancer-causing compound.

In small doses, nitrosamines are not consequential, and the number of cancers attributed only to diet remain very small. In fact, nitrosamines are used in a variety of medicines to effectively treat selective disorders. But in nitrate contaminated drinking water, the quantities and the effects are significantly greater. You drink water every single day, and over time, the accumulation takes its toll.

The strongest links have been established for nitrates and colon cancer. Other cancers have been linked to nitrates by statistical analysis but are awaiting further study for confirmation. Nonetheless, the Wisconsin Dept. of Health Services advises, "When nitrate levels are high, everyone should avoid long-term use of the water for drinking and preparing foods that use a lot of water."

The normal background amount of nitrates in well water is two to three parts per million. In a 2021 report to the legislature, the DNR cites overuse of inorganic nitrogen fertilizer and animal manures as the primary source of well water nitrate contamination. A February 2022 report from the Environmental Working Group and the Midwest Environmental Advocates found "that in nine Wisconsin counties, commercial fertilizer and animal manure are over-applied to farmland at rates that are causing a water pollution crisis…"

The report went on to cite data from four counties where nitrogen from fertilizers and manures were being applied at rates up to half again higher than recommended. This data included Kewaunee County, where thin layers of soil overlay fractured bedrock and groundwaters are especially vulnerable.

And it is not just nitrates. Phosphorus is also present in both fertilizers and manures and contributes to its own host of health and environmental issues.

The size and number of industrial farms, often referred to concentrated animal feeding operations, is growing each year. Legally there is no effective limit to their size or number. So, the threats to human health and our lakes and rivers are growing as these farms grow.

If you get your water from a municipal system that relies upon well water, you can call them and find out how much nitrate is in your water. They are required to test their water regularly.

If you have your own well, have it tested every three years to five years. Test more often if you are in an area with large farming operations. Almost half of Wisconsin homeowners never have their well water tested. It is not hard to do, and there are labs in most every county that are certified to perform the tests. Check with your county health department for well water testing resources and programs. Many will help you with collecting your water samples.

Finally, if your water does have elevated levels of nitrates, you don't have to worry about it for bathing and laundry. There is no risk from your skin being exposed to nitrates. But for cooking and drinking you need to consider a filter. Check labels carefully, as only some faucet mounted filters can reduce nitrates. Faucet mount filters are affordable and very easy to install. Higher levels of nitrate removal can be had with use of a reverse osmosis filter or a water distiller.

Resources:

EWG/Clean Wisconsin study: *Exposure-based assessment and economic valuation of adverse birth outcomes and cancer risk due to nitrate in United States drinking water.* https://www.sciencedirect.com/science/article/pii/S001393511930218X

Wisconsin Groundwater Coordinating Council Report to the Legislature - 2021 (WI DNR) https://www.dhs.wisconsin.gov/publications/p02559.pdf

Ag Chemicals: A Health Risk for Farm Families

By Andy Wallander

Pesticides (including herbicides, insecticides, and fungicides) have contributed to substantial increases in crop yields over the years. Properly applied, pesticides contribute to higher yields and improved product quality by controlling weeds, insects, and plant pathogens. In addition, herbicides reduce the amount of labor, machinery, and fuel used for mechanical weed and pest control. However, because pesticides possess toxic properties, their use often prompts valid concern about human health and environmental consequences.

Toxicity to humans is usually characterized as acute or chronic. The effects of acute toxicity can result from a one-time exposure to relatively large amounts and range from skin irritation to death. The effects of chronic toxicity can result from long-term exposure to small amounts, such as routine exposure while mixing, loading, or applying pesticides, or working in fields after application. Additional concerns include pesticide residues in food or drinking water and non-occupational exposure (such as homeowner use), including risks to children. Potential chronic effects include benign or malignant tumors, birth defects, genetic changes, reproductive effects, blood disorders, and endocrine disruption.

Pesticide application. Photo courtesy of Wikimedia Commons.

Some widely used herbicides, with relatively low acute toxicities, came under regulatory scrutiny in the 1980s and 1990s. These included triazines (atrazine, cyanazine, and simazine) and acetanilides (alachlor and metolachlor). The primary concern with these herbicides is the dietary and drinking water carcinogenic or oncogenic (tumor causing) in addition to worker exposure. The scrutiny resulted in use restrictions, advisories, and drinking water monitoring, which encouraged changes in herbicide use.

However, this did not fix the cancer problem associated with these herbicides. The American Cancer Society, in its 2022 Facts and Figures Report, estimates that 1,900,000 people in the United States will be diagnosed with some type of cancer this year. Although cancer treatments and patient survival rates continue to improve, the incidence of some deadly cancers are still on the rise — including childhood cancers, leukemia, and testicular cancer.

Even after America's long war on cancer, the country is still experiencing a cancer epidemic, and evidence is growing ever stronger that pesticide exposure is a key contributor to this disturbing trend. It is unclear exactly how many of the cancer cases in the U.S. is the result of exposure to cancer-causing chemicals, but according to a recent report from the President's Cancer Panel, the linkage has been significantly underestimated and decisive action is long overdue.

Farmers, farmworkers, and their families tend to be exposed to more pesticides than the general population. They also experience higher rates of certain cancers. Farmers and pesticide applicators have higher rates of prostate cancer as well as non-Hodgkin's Lymphoma. Women who work on farms with pesticides suffer more often from higher rates of breast and ovarian cancers. Crop duster pilots and farmers have higher rates of skin cancer.

Studies of agricultural workers have shown that they have elevated risks for lymphatic cancer as well as hematopoietic cancers relating to blood and blood plasma such as melanoma, lip cancer, prostate cancer, and brain tumors. This is associated with the exposure to chemicals found in pesticides, solvents, dusts, and biological agents such as bacteria, fungi, and viruses, as well as cancers caused by exposure to harmful levels of UV sunlight.

Pesticide use and exposure to farmers and farm workers is a common occurrence on farms. Agricultural activities include many tasks that can contribute to exposure. Some of these day-to-day tasks include the mixing and loading of chemicals, treating seeds, applying chemicals before and during cultivation, re-entry to already chemically treated crop fields, cleaning and repairing spray equipment, applying chemicals to crops during storage, and controlling parasites and diseases within the animal population.

Children are especially at risk of developing cancer from pesticide exposure, with childhood cancer rates continuing to rise. Studies show that pesticide exposure during pregnancy and throughout childhood increase the risk of cancer among children. In fact, when either parent is exposed to pesticides before a child is even conceived, that child's risk of cancer goes up as well. Farmers need to be especially vigilant with the use of farm chemicals around children and pregnant family members, and women of childbearing age. The Purdue University Extension offers a chapter on reducing exposure of farm children to chemicals in this document, *Farm Family Exposure to Pesticides* at https://www.extension.purdue.edu/extmedia/ppp/ppp-72.pdf

A huge industry has grown to help patients and their families cope with the side effects of cancer treatment. However, despite the growing scientific consensus that environmental contaminants are causing cancer in humans, research continues to focus mainly on improving treatments and finding a cure, rather than prevention in the first place. This is primarily due to a free-market system that is not designed to encourage investment in disease prevention.

Major corporations, along with our individual retirement accounts, are currently profiting from both the products that cause cancer and the products that treat it. Although it is not fair to say anyone intends to profit from cancer, that is just the way the system works. However, we can all help make a difference by urging our local, state, and federal elected lawmakers to enact stricter regulations of pesticides, including more use restrictions, advisories, and drinking water monitoring.

For Further Reference:

https://www.cancer.org/content/dam/cancer-org/research/cancer-facts-and-statistics/annual-cancer-facts-and-figures/2022/2022-cancer-facts-and-figures.pdf

https://prescancerpanel.cancer.gov/

https://journals.lww.com/environepidem/Fulltext/2019/10001/Pesticide_use_and_breast_cancer_risk_among.339.aspx

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5437486/

https://academic.oup.com/ije/article/48/5/1519/5382278

Cleaning Agents and Cancer

By Bricken Brown, CWAC Intern

Dish soaps, laundry detergents, disinfectants, spot removers, air fresheners, all-purpose cleaners, and other cleaning products are all things used in homes and workplaces every day, but are they truly safe? When we inhale a pleasant aroma, most of us are unaware, and the labels won't tell us, that chemicals found in most common cleaning products have been connected to serious health issues such as breast cancer, asthma, and birth defects.

There are no laws mandating companies to disclose the ingredients in their cleaning products at the federal level. In 2017 California passed the Cleaning Product Right to Know Act which requires companies to disclose the chemicals in cleaning products. However, the rest of the nation is not following suit in requiring the disclosure of cleaning compounds. As a consequence, many consumers have no idea if a product contains chemicals linked to cancer or other long-term health problems.

Companies could opt to post ingredients on their websites. One could then determine which products cannot be trusted based on the chemicals they contain. These chemicals include triclosan, bisphenol A (BPA), phthalates, crystalline silica, dioxins, parabens, formaldehyde, ethanol, alkylphenols, volatile organic compounds, and benzophenone

These chemicals can mimic estrogen, contain endocrine disruptors, and mammary carcinogens. According to the American Lung Association, all of these chemicals in high doses can lead to irritation of the eyes, nose, and throat, difficulty breathing, damage to the central nervous system, and even cancer.

The journal, *Environmental Health*, published a study in 2010 showing that breast cancer risk increased two-fold for those who regularly used household cleaning products and air fresheners containing harmful chemicals such as the ones listed above. The lifetime risk of cancer from air pollutants, including those from indoor cleaning products, is estimated to be 0.06 to 0.1 (or 60 to 100 people for every 1,000).

Products that are labeled "green" do not necessarily mean that they are safer. Consumers should do their best to avoid fragrances, bleach, brighteners, rug cleaner, dry cleaning chemicals, aerosols, and oven cleaners. Common cleaning products that contain many of these damaging substances are Lysol, Air Wick, Scrubbing Bubbles, Finish, Resolve, and Comet.

For example, Lysol multi-surface cleaner contains ethanol, which is a reproductive toxicant, and two chemicals classified as carcinogens in the European Union (EU). Air Wick fragrance mist contains a toxic air pollutant as well as an EU carcinogen. Finish dishwashing detergent contains a variety of toxic air pollutants, as well as talc, a known carcinogen in the U.S. To research common items in your home visit http://rbnainfo.com/.

If using commercial cleaning products, the best way to avoid the most harmful ingredients is to check if the product is “free” of the ingredient. For example, “BPA-free” will normally be prominently displayed. This is more difficult for compounds used in manufacturing, such as crystalline silica. For these, the only way to avoid exposure is to use cleaning products with fewer, safer ingredients.

Another option is to see if the product has the EPA Safer Choice logo. According to the EPA, “it helps consumers find products that perform and contain ingredients that are safer for human health and the environment. Safer Choice is an EPA Pollution Prevention (P2) program, which includes practices that reduce, eliminate, or prevent pollution at its source, such as using safer ingredients in products.”

For an even healthier home, cleaning products can be made naturally, without the cancer-causing chemicals, and will still clean just as well. Vinegar, baking soda, and warm water can be used to clean just about anything. Add a drop of your favorite essential oils for a non-toxic fragrance. If you have pets, be sure to research if any natural ingredients could be toxic to their health.

Drain Cleaner	Use a plunger or plumber's snake
Glass Cleaner	Mix one tablespoon of vinegar or lemon juice in one quart of water. Spray on and use newspaper to dry.
Furniture Polish	Mix one teaspoon of lemon juice in one pint of mineral or vegetable oil and wipe furniture.
Rug Deodorizer	Liberally sprinkle carpets with baking soda. Wait at least 15 minutes and vacuum. Repeat if necessary.
Moth Balls	Use cedar chips, lavender flowers, rosemary, mints, or white peppercorns.

For more alternatives to conventional cleaning products visit: https://extension.usu.edu/waterquality/files-ou/Water-quality-tools/HomemadeCleaningProducts.pdf

Alert!
Avoid 2,4-D Products and Treated Foods

By Dean Hoegger

A recently released study has raised alarms about the widely used herbicide, 2,4-D. The study, "Association between increasing agricultural use of 2,4-D and population biomarkers of exposure: findings from the National Health and Nutrition Examination Survey, 2001–2014," found that the presence of the chemical in human urine has dramatically increased. The presence of 2,4-D in the number of participants' urine went from 17% at the start of the study to nearly 40% at the end.

The International Agency for Research on Cancer identified 2,4-D as a possible human carcinogen. It was found to damage cells, and it caused cancer in laboratory animals. Apparent links have been observed between exposure to 2,4-D and non-Hodgkin's lymphoma and sarcoma. More conclusive proof of harm is the research as a hormone disrupting chemical. The National Resources Defense Council (NRDC) has labeled 2,4-D as the "most dangerous pesticide you've never heard of."

This is especially alarming because it is regularly used in many lawn weed and feed supplements to achieve that weed-free super green look. Examining the product labeling is a must for homeowners purchasing lawn care products. They should avoid putting it on their lawns where children can be exposed. It can also be tracked into homes where it can be inhaled. Parents with children playing on sport fields must ask school and park authorities to identify the products used on those fields. If 2,4-D is used, parents must urge that it no longer be applied.

While the chemical has been detected in a small percentage of wells, it has been detected in over 60% of Minnesota surface waters and 100% of urban surface water and rainwater samples. Similar contamination can be expected in Wisconsin.

Photo courtesy of the Atlantic. "Agent Orange in Your Backyard: The Harmful Pesticide 2,4-D," by Gina Solomon.

Over half of the 2,4-D use in the U. S. is used on crops, primarily soybeans, corn, wheat, and sugar cane. The NRDC reports that chemical companies are now adding the chemical to Roundup to make it more effective in controlling weeds that developed resistance to Roundup. The U.S. Department of Agriculture predicts the use of 2,4-D could rise as much as 600% in the near future.

Choosing safe lawn care products and organically grown foods, especially for the ones on the 2,4-D treated list, can significantly reduce exposure risks for your family.

Resources:

Paul Tukey is the national spokesperson for SafeLawns, a nonprofit advocacy group for chemical-free lawn care. *The Organic Lawn Care Manual. A Natural, Low-Maintenance System for a Beautiful, Safe Lawn* is available here: https://www.workman.com/authors/paul-tukey

Paul Tukey on Organic Lawns and Lawn Alternatives on YouTube: https://www.youtube.com/watch?v=6VrgWa5ZY_U

CWAC Health Forum presenter on Safe Lawns, John D Meredith of LAKESHORES Landscape & Design inc. is a resource for presentations on growing lawns with out chemicals. (920) 743-6005 www.landscapedoorcounty.com

Margaret Mary Gerhard is a resource for presentations about yards with out lawns she calls yardening. fullmoonbog@gmail.com

How Politics Should Not Work: An Ugly Reality of Government's Failure to Protect Citizens from Carcinogens

By Charlie Frisk

Back in February of 2020 Dean Hoegger and I traveled to Madison to testify in front of the Committee on Natural Resources and Energy in support of the CLEAR Act to combat PFAS contamination.

The CLEAR Act was introduced by Sen. Melissa Agard as one of the most comprehensive proposals in the nation to combat PFAS pollution. The bill directs state agencies to develop standards and protective measures to keep PFAS from polluting Wisconsin's water resources and putting families' health at risk.

The act would also require mechanisms to provide clean drinking water to families whose wells were already contaminated.

A majority of the speakers were from the Marinette/ Peshtigo area and they gave very powerful testimony on the

horrors of living at Ground Zero of PFAS contamination. Much of the testimony was truly heart-rending. Mothers talked about how they were afraid to let their kids swim in local ponds, lakes and rivers. People were afraid to drink their water, use the water for meal preparation and eat local fish and game.

The Marinette-Peshtigo area is a cancer hotspot, residents that are recent graduates of Marinette High School testified that they could go through their high school yearbooks and point out multiple individuals who had cancer. I was in my sixties before any of my high school classmates were diagnosed with cancer, which is the more normal circumstance.

The most riveting testimony came from a young man who had testicular cancer. He was taking his physical for the soccer team during his freshman year in college when the doctors discovered the cancer.

Despite the best efforts of his medical team, they could not eliminate the cancer and they had to remove the testicle. The young man had been so weakened by the chemotherapy and radiation treatment that playing soccer was out of the question, but he still had one testicle and he was optimistic for the future.

A few years later he had cancer in the remaining testicle and it was a different kind of testicular cancer. The odds of having one type of testicular cancer are approximately 1 in 270; the odds of having two different kinds of testicular cancer are 1 in 72,900.

This second bombshell dropped shortly after the young man was married and not yet 30 years old. Once again, despite the medical team's best efforts, the testicle had to be removed to save his life.

Testicular and kidney cancer are highly associated with PFAS intake. In my 68 years on this earth I have known one person who had testicular cancer; most residents from the Marinette area can name several.

The last three people to testify stood out from the previous speakers because they were all carrying briefcases and wearing expensive suits. Casey Hicks, the Organizing Director for Wisconsin Conservation Voters, recognized all of them. They were professional lobbyists for the Wisconsin Paper Council, Wisconsin Manufacturers and Commerce, and the American Chemical Council.

I had expected some compelling testimony from these high paid lobbyists, but they all just seemed to be going through the motions. After all, speaking out for the opposing side, following a young man who has been castrated due to probable contact with PFAS, is not an enviable speaking circumstance. All three sort of rambled on about not passing restrictions so tough that it would harm industries in Wisconsin.

When the hearing ended, I felt how a high school football coach must feel when his team is so far ahead and they have gone to a running clock midway through the second quarter. (In high school football when one team is ahead by 35 points they go to a running clock, to minimize running up the score.)

I thought it was a slam-dunk that the CLEAR Act would advance out of the Committee! That just goes to show how little I understood about how politics works in Madison.

A couple of days after the hearing I heard that the Committee voted against advancing the bill. Evidently what the lobbyists were toting in the briefcases was way more convincing than the testimony. The vote was along straight party lines.

The Action in Clean Water Action Council

By Dean Hoegger, CWAC President

Thank you to the many members who have renewed for 2022!

If you have not already done so, it is time to renew for 2022. Even if you did not renew in 2021, we kept your membership active. If renewal slipped your mind, you could make a more generous donation at this time. A monthly payment plan can also be set up using the link below. 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 many of our operations, and we offer the opportunity to sponsor a newsletter or an intern, beginning at the $250 level.

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

Read below about the 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. Here is an update on ongoing actions.

CWAC Seeks to Intervene in the WMC vs WDNR Waukesha Circuit Court Case

On June 14, 2021, CWAC, together with several other organizations and one individual filed for intervenor status in a Waukesha County circuit court case. We believed the Wisconsin Manufacturers and Commerce brought the suit to limit the Department of Natural Resources' (DNR) ability to investigate and remediate environmental contamination under the Spills Law.

At risk in this case is the DNR'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, such as the case with extensive PFAS contamination in Wisconsin.

At a September hearing, our motion for intervenor status was denied. Having this status would have made us a party to the case and therefore require our agreement with any out of court settlement. In the alternative, we submitted a Non-Party Amici Curiae Brief on October 1 stating the legal issues in the case. We await a decision by the court expected on April 7th.

Midwest Environmental Advocates is representing our group in the case. CWAC was able to raise $1000 for some of the legal costs and we are accepting additional donations to cover the ongoing expenses.

CWAC Alerts Readers about Pollution Permits and Other Permits

We monitor notices for new water pollution permits and renewals, and alert readers by way of our Weekly Update emailed to over 1,200 people. We commented on the Kinnard Farms CAFO expansion and the provided comment information to the public for that permit. Even after the Wisconsin Supreme Court ruled that the DNR has the authority to cap a CAFOs expansion, the agency is set to approve a cap of 21,450 animal units, about double its current herd size. The expansion was based on the CAFO's manure storage, not the impact on area water quality.

In addition to commenting on the permit, we attended the online Fox Valley Chapter of the Sierra Club meeting about this concern and wrote letters to Governor Evers and WDNR Secretary Cole. We also commented and provided information to the public on the Enbridge Line 5 Permit.

CWAC Alerts Readers about Proposed Legislation

We commented on the proposed DNR PFAS rules and provided our readers comment information for the Wisconsin Natural Resources Board hearing on those rules. Comment information was also provided for Assembly Bill 852 – a Bill to allow the sale of public land partially funded by Knowles-Nelson Stewardship Fund.

Other Comments

CWAC routinely comments on other issues of concern to our members that may not necessarily be a legal action, but nonetheless are important to our mission, such as commenting on the proposed Back 40 Mine to prospective investors and signing on to letters of opposition to waste-to-energy incinerator projects.

PAH and Coal Tar Sealant Ban

Letters offering a presentation along with supporting literature was sent to 48 municipalities about the hazards of coal tar-based pavement sealants and the need to ban this product at the local level. A presentation was given to the Village of Luxemburg on March 8.

The sealant is known to be a serious health threat because it contains polycyclic aromatic hydrocarbons or

Children playing on coal-tar treated playgrounds at schools and daycare centers are at high risk for exposure to PAH, a known carcinogen.

PAHs. According to the Army Corps of Engineers, children living near surfaces treated with this sealant have a 13-fold increased risk of developing certain cancers, and a lifetime exposure can result in a 38-fold higher risk of cancer.

Working with local governments to ban the use of the sealant is a top priority for CWAC this spring. It is imperative that we act to protect our children in schools, daycare centers, churches, and apartment complexes where there is asphalt pavement. Green Bay, De Pere, Sturgeon Bay, and other communities along the lakeshore have already done so.

Contact us to help get a ban passed in your community. Click this link for a slide presentation on the topic: https://www.youtube.com/watch?v=0xjvi-leDHg&feature=youtu.be

The Petitions to the EPA for Corrective Action for Administration of the Clean Water Act and The Safe Drinking Water Act.

These petitions are still active. A letter was just sent to the EPA from our attorney to request a meeting about the need for additional efforts in Kewaunee County by the EPA under the Safe Drinking Water Act.

Educational Efforts in the Community

Presentations regarding using local, state, and federal laws to protect the waters of NE WI.

A presentation is scheduled for April 5 for UW-Green Bay LLI members and April 24 at the Lakeshore Unitarian Church.

Presentation regarding the zero-waste movement and NE WI

A presentation is scheduled March 21 for the America Association of University Women in Green Bay.

Food Waste Composting Education

We ordered 36 composters for this year and received donations to place five at a school, daycare center, or community garden. Thank you, Maureen Davitt, Carol Sills, Mary Carlson, Julie Hoegger, and Maya Heardon, and matching board member donations from John Hermanson, Carla Martin, Andy Wallander, Dean Hoegger, Jim Wagner, and Charlie Frisk for donations to support this project.

Food waste composters will be available for purchase in April. See the ad in this newsletter.

Presentations Available

Here is a list of current presentations that can be given in-person or via Zoom. 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
- Using Local, State, and Federal Laws 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
- Food Waste Composting Made Easy

Newsletter Outreach

The winter newsletter, *Using Local, State, and Federal Laws to Protect the Waters of Northeast Wisconsin* was sent to 550 members in December. There are a limited number of printed fall, winter and spring newsletters remaining if you would like to distribute them to a friend, group, or organization. Newsletters are also available on our website at: https://www.cleanwateractioncouncil.org/newsletter/

Get Our Weekly Update by Email

Each Tuesday we email the *CWAC Weekly Update* with Actions, Permits, Jobs, Events, In the News Updates, and Resources. Send your postings by Monday evening for posting the following day. 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 a member and getting more than one *Update*, let us know and we will fix that.

If you are reading this newsletter as a non-member, email us at contact@cleanwateractioncouncil.org to be placed on the free *Weekly Update* mailing list. Emails are sent via BCC to protect your privacy.

Again, not receiving the Update. Send us an email request. It is sent out once a week via BCC email.

Health Forums

We are seeking presenters and funding to host one or more presentations regarding how environmental factors can negatively influence genetic risk factors for breast cancer. We have reached out to many health care providers and research centers in Wisconsin. Our search is now widening to nearby states.

Contact us if you have suggestions for other topics or speakers for health forums. **We are seeking business or member sponsors for individual health forums beginning at the $200 level.**

Outreach through Newspaper and Radio

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

Website Updates

Past newsletter issues can be found on the website as well as updated articles and additional resources at https://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 are pleased to have Sadie Hunter and Bricken Brown as our spring semester interns.

We are thankful for the 2022 intern sponsorships by Marge and Ken Bukowski and Carl Hardtke of Windows of Wisconsin. Contact us if you would like to learn more about sponsoring a student intern.

Attendance at Conferences and Meetings with Other Environmental Groups

We attended the Climate Change Coalition presentation titled "Soil Health and the Benefits of Regenerative Agriculture" in January. We were there along with many other area residents knowledgeable about the harm caused by CAFOs in Kewaunee County. Many of us were dismayed that the Coalition invited CAFO owner Lee Kinnard to speak about regenerative agriculture and found he had nothing to offer on the topic.

Kinnard Farms was ordered by a judge in 2014 to complete some minor groundwater monitoring and herd size management. Rather than comply, the CAFO was able to drag the case through the court system where it reached the Wisconsin Supreme Court for the second time. In June of 2021, the court confirmed the DNR had authority to order the farm to do the water quality monitoring and limit herd expansion.

We also attended many of the biweekly meetings with the No Back 40 Mine group and monthly meetings with directors of other state environmental groups.

May 5 Banquet Preparation

We have begun preparations for the spring banquet and fundraiser. We are pleased to report that the renowned Wisconsin author of Wisconsin's Wild Lakes, John Bates, will be our speaker and will be available for book signings for all his natural history books. See the banquet information page in this newsletter for more information and to purchase tickets.

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 (https://www.wdfi.org/ice/berg/Registration/Financials.aspx?chid=933009&h=1122515367)

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, and our support is needed.

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

MARK YOUR CALENDAR! Meetings, Events and Happenings

HEARINGS:

Open April 11, 7 PM through April 14, 7 PM
Annual Spring Public Hearing and County Meeting Wisconsin Conservation Congress
Online

Citizens will be able to provide input on Wisconsin's natural resource issues through the 2022 Spring Hearings. Information on the questions being asked, how to participate, and how citizens can introduce a resolution will be posted on the DNR website as it becomes available.

With the Spring Hearings online, elections for delegates will not be held this year, but the WCC is taking applications through March 11 to fill current and future vacancies. Visit the local delegate page for more information.

This year there are 16 advisory questions from the DNR related to Fisheries and Wildlife Management. There are also two advisory questions from the NRB and 45 advisory questions from the WCC.

For more information visit:
https://dnr.wisconsin.gov/about/wcc/springhearing

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

EVENTS

April 24, 12 PM - 4 PM
Bay Beach Wildlife Sanctuary Earth Day Celebration

Many activities, like Critter Counter open, Animal Release, Otter Odyssey, Cool Corvids, Fox Trots, Wolf viewing, Question and Answer, Bird of Prey Tour, and more.
No registration is needed, and all activities are free.
More information at www.baybeachwildlife.com

April 5, 6 PM, April 26, 7 PM
New Leaf Urban Food Forest Guide Classes
Virtual

Food forests are plantings of edible landscape plants like raspberries, blackberries, elderberries, apple trees, hazelnuts and currants that not only enhance the beauty of any yard, but they also provide growers with yummy, healthy options that grow year after year. If you are purchasing perennial plants from the New Leaf Garden Blitz you may have some questions about the best ways to plan, plant and take care of these special food producers. Order your plants on their website:
www.newleaffoods.org

April 7 and 8
Brown County Community Gardens Mentor Sessions

Be a garden mentor for a new gardener who has received a New Leaf Garden Blitz garden box or rented a plot through the Brown County Community Gardens Program. Fill out the following form to be contacted to learn more about being a garden mentor. All mentors are required to complete an orientation and a background check to become an official volunteer of Brown County. Volunteer form: https://docs.google.com/forms/d/e/1FAIpQLSfFxPCxGL3oJ_edaT3wrJP_-HP3DAXPMTRGXreeIdoZknznKw/viewform

April 24, 10 AM
Using Local, Federal, and State Laws to Protect the Waters of NE Wisconsin
Lakeshore UU Fellowship, 620 Park St., Manitowoc

Dean Hoegger will be speaking on Citizen Action to Protect the Waters of NE Wisconsin. This is a 25-minute presentation during the service. All are welcome to attend the service and hear the presentation.

April 30, 8 AM - 12 PM
Triangle Hill Annual Earth Day Cleanup
Triangle Hill, Green Bay (500 Beverly Road)

Volunteer to complete various projects within the Baird Creek Greenway. Parking at Triangle Hill for registration and check in, as well as our Lower Parking Lot and along the road at the various locations where work will be taking place. Bring warm clothes, gloves, and boots or clothes that can get wet and muddy.

May 1, 7 PM
iPat Environmental Film Series: *Screening of SoLa*
Brown County Central Library

The UW-Green Bay iPat environmental film series continues with a screening of "SoLa: Louisiana Water Stories". The documentary explores the relationship between man and water, from the rich culture of Cajun Country to environmental disasters that have tested the region. SoLa investigates how the exploitation of Southern Louisiana's abundant natural resources compromised the resiliency of its ecology and culture, multiplying the devastating impact of the BP oil spill and Hurricane Katrina.
Contact Ashley Heath at heatha@uwgb.edu with any questions.

May 12-15
New Leaf Garden Blitz
1220 Bay Beach Rd. Green Bay

Since 2014, volunteers have installed 800 raised bed garden boxes in Green Bay schools, homes, pantries, and organizations. You can become a part of the annual Garden Blitz tradition by volunteering, donating, purchasing a garden box, or becoming a garden mentor.
More information at: www.newleaffoods.org/garden-blitz

May 15 (Ongoing)
New Leaf Foods Urban Food Forest Project Launch

You can start your own food forest in your yard today. Food forests are plantings of edible landscape plants like raspberries, blackberries, elderberries, plum trees, apple trees, black chokeberries, and hazelnuts that not only enhance the beauty of any yard, but they also provide growers with yummy, healthy options that grow year after year.
Order your plants on their website:
www.newleaffoods.org

Meet Our Interns

Bricken Brown is a sophomore at the University of Wisconsin-Green Bay. She is majoring in political science, public administration with an emphasis in public and nonprofit management, and environmental policy and planning with an emphasis in environmental policy. After graduation, Bricken hopes to continue working with nonprofit groups that are working toward a clean environment and utilize the skills she learned with CWAC. In her spare time, she enjoys skiing, kayaking, and crocheting.

Sadie Hunter has always had a passion for water quality issues through her exposure to them by living near Lake Superior in northwest Wisconsin her whole life. She is currently a junior at UW-Green Bay working toward undergraduate degrees in environmental policy & planning, political science, and global studies. She is thrilled to be interning for the organization for spring 2022 to further her knowledge about water issues in northeast Wisconsin as well as her passion for environmental issues. In her free time, she enjoys dancing, reading, researching family history, and traveling!

Thank you!

Thank you 2022 Intern Sponsors
Marge and Ken Bukowski and
Zoomie and Carl Hardtke.

Contact us if you would like to be an intern sponsor.

This newsletter sponsored by
Dean and Kathy Debroux

Contact us if you would like to be a newsletter sponsor.

Have you renewed your membership?

See your newsletter label or email notice which indicates the last year that you donated.

* JOB POSTING *

CWAC Seeks New Executive Director
Applications Being Accepted

The Clean Water Action Council of NE Wisconsin is seeking a new Executive Director beginning June 1, 2022. The current director will be stepping down to accept the position of Director of Community Education and will provide guidance to the new hire.

This half-time position with flexible hours offers the opportunity to guide the organization, founded in 1985, into the next decade. Work at the UW-Green Bay office with college interns, board members, and volunteer members to carry out the mission of protecting human health and the environment in NE Wisconsin. Help determine priority issues and actions with this well-established organization.

For a complete job description, salary, and application instructions, send an email to contact@cleanwateractioncouncil.org with Director's Job Description in the subject line.

Applications received by April 1 will be given priority.

Food and Yard Waste Composters Available

The composter features a locking lid, two doors for removing compost, and comes in two sections plus the lid for easy transport, set up, and take down. It can easily be moved to a new garden location. Made from a sturdy sun absorbing plastic, they have been in operation in Northeast Wisconsin for over a decade.

A limited number of composters will be available from CWAC this spring. Help the environment and produce your own soil amendment by composting your food and yard waste.

ORDER NOW to reserve your composter and pick it up at New Leaf's Garden Blitz on Saturday, May 14th.

The units are $60 and can be purchased with a credit card at: Donate (paypal.com) You will receive a receipt and confirmation by email.

Any composter questions?
Email: contact@cleanwateractioncouncil.org
Or call 920-421-8885.

Join or Renew Your Membership to Clean Water Action Council for 2022!

☐ Renewal ☐ New Member Date_____

( ) $25 Individual ( ) $35 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.

CONTACT US

By phone: 920-421-8885
If you leave us a message, we will try to get back to you within 24 hours.

By mail:
Clean Water Action Council
P.O. Box 9144, Green Bay, WI 54308

By e-mail:
contact@cleanwateractioncouncil.org

Clean Water Action Council
of Northeast Wisconsin
P. O. Box 9144
Green Bay, WI 54308

Order your tickets today!
CWAC BANQUET
May 5, 2022

in this issue...

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