

Poisoned Waters

PFAS Surface Water Criteria Stakeholders Meeting Wisconsin Department of Natural Resources

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WISCONSIN

There are 5.8 Million Stakeholders in Wisconsin on the issue of water quality. PFAS is a poison. PFAS is in the blood serum of every living person. PFAS can make you sick. PFAS can kill you. We must do everything we can to protect our health and safety. We must protect our drinking water, our environment, our agricultural resources, our food, and our property values from the scourge of PFAS contamination.

POISONING

“ A substance that causes injury, illness, or death, especially by chemical means”

The American Heritage Dictionary

PFAS = POISON



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- Wisconsin Department of Health has recommended a combined 20 PPT PFOA/PFOS for Groundwater
- For comparison, the allowable limits for Arsenic in drinking water is 500 times higher than PFAS. In other words, drinking small amounts of rat poison is safer than drinking extremely smaller amounts of PFAS.

PFAS HEALTH RISKS

- **affect growth, learning, and behavior of infants and older children**
- **lower a woman's chance of getting pregnant**
- **interfere with the body's natural hormones**
- **increase cholesterol levels**
- **affect the immune system**
- **increase the risk of cancer(for PFOA)**
- **thyroid hormone disruption (for PFOS)**
- **testicular cancer**

WATER INGESTION

- ***Drinking water* is a source of exposure in communities where these chemicals have contaminated water supplies. Such contamination is typically associated with a specific facility. (Tyco/JCI)**
- **1.9 million Wisconsin residents obtain their drinking water from municipal water systems that use surface water as their source.**

1/3 of Wisconsin's Population

- **“...56 systems use surface water from Wisconsin lakes to provide drinking water to their customers. These surface water systems serve some of the state's largest communities, including Milwaukee and Green Bay. So, while more than 99 percent of the state's public water systems use groundwater sources, surface water systems serve almost one-third of the state's population.”** (DNR 2019 Annual Drinking Water Report)

AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY (ATSDR)

How long do PFAS remain in the body?

Some PFAS remain in the body for a long time. However, biological half-life varies by chemical species. The half-life of chemical is the amount of time it takes for 50% of the substance to be metabolized and/or eliminated from the body. A few examples are: ^{2,3,4,5,6}

PFBA: 72 to 81 hours **PFOA:** 2.1 to 10.1 years

PFOS: 3.3 to 27 years **PFHxS:** 4.7 to 35 years

Note: PFAS compounds like pentafluorobenzoic acid (PFBA) with shorter carbon chains may have a shorter half-life

Note: Because some PFAS are persistent in the human body, blood PFOS and PFOA levels can be a surrogate for total PFAS body burden and provide a better indication of the PFAS dose to a target organ than an externally measured dose like PFAS water concentration.

Agency for Toxic Substances and Disease Registry (ATSDR 12-6-2019)

AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY (ATSDR)

What are PFAS levels in the U.S. population?

Most people in the United States and in other industrialized countries have measurable amounts of protein-bound and free PFAS in their blood.

The National Health and Nutrition Examination Survey (NHANES) is a survey of the health and nutritional status of U.S. adults and children that has been conducted by the National Center for Health Statistics.⁷ Since 1999, NHANES has measured the concentrations of PFAS in the blood of a representative sample of the U.S. population (12 years of age and older). The average blood levels found in 2015-16 were as follows:⁸

(1,000 x 1 ppb = 1 ppt)

- **PFOA:** 1.56 parts per billion, with 95% of the general population at or below 4.17 parts per billion
- **PFOS:** 4.72 parts per billion, with 95% of the general population at or below 18.3 parts per billion
- **PFHxS:** 1.18 parts per billion, with 95% of the general population at or below 4.90 parts per billion

In 2006, EPA enlisted major manufacturers of PFOA- and PFOS-related products to join in a global stewardship program to phase out production and reduce facility emissions of these agents by 2015. This facilitated significant reductions in PFOA and PFOS by all participating companies as measured by EPA PFOA Stewardship Program goals between 1999 and 2016. According to 1999–2000 NHANES data, blood levels of PFOA and PFOS in the general population were 5.2 and 30.4 parts per billion, respectively. NHANES data in 2015-2016 for the general population found that PFOA was 1.56 parts per billion and PFOS 4.72 parts per billion, indicating decreases of PFOA and PFOS by 70% and 84% respectively.⁸

FOOD INGESTION

People can be exposed to low levels of PFAS through *food*, which can become contaminated through:

- **Eating Fish living in Contaminated Water**
(PFAS Fish Consumption Advisories: Lake Monona 2019, Mississippi River 2007)
- **Eating Food grown in Contaminated soil or watered with Contaminated water**

PFAS IS Man-Made

- **PFAS is a man-made chemical compound. It isn't derived from something that already exists in nature. It isn't like gasoline that's been refined from oil. It isn't like lead that's been dug out of the ground and was once used to make pipes. PFAS is 100% unnatural, and 100% manufactured by industry for use by industry. It's not a consumer product that we buy and add to our food and water directly.**

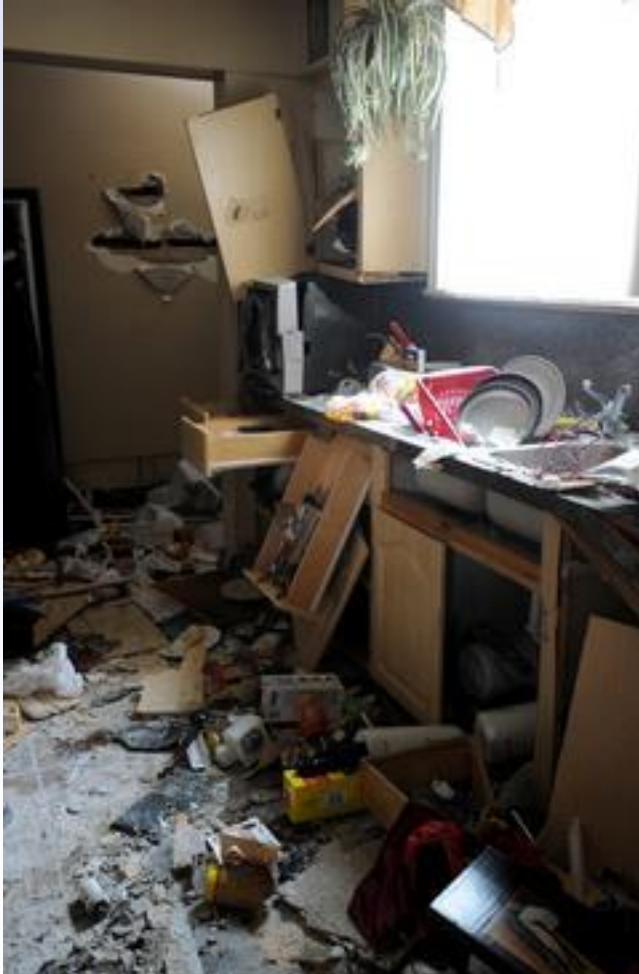
PFAS is Industry's Fault

- **When PFAS has been “found” in groundwater or drinking water, or “found” in lakes and rivers, or “found” in a wastewater treatment plant, it was “found” there because industry put it there.**
- **Whether intentional discharges or just careless practices, PFAS is in our environment because industry released it into our environment.**

PFAS is Industry's Responsibility

- It is industry's responsibility to stop the careless use of PFAS in its products and manufacturing processes. Responsible corporations do not stall and delay, or use their influence to stop meaningful safety regulations for PFAS standards in Wisconsin. It is particularly offensive to see these arguments from some industry groups when we in Marinette and Peshtigo have been the victims of the careless and reckless use of PFAS in the environment by a local industry. It has endangered our health, ruined our property values, and degraded our quality of life.**

The Environment is Everyone's Home

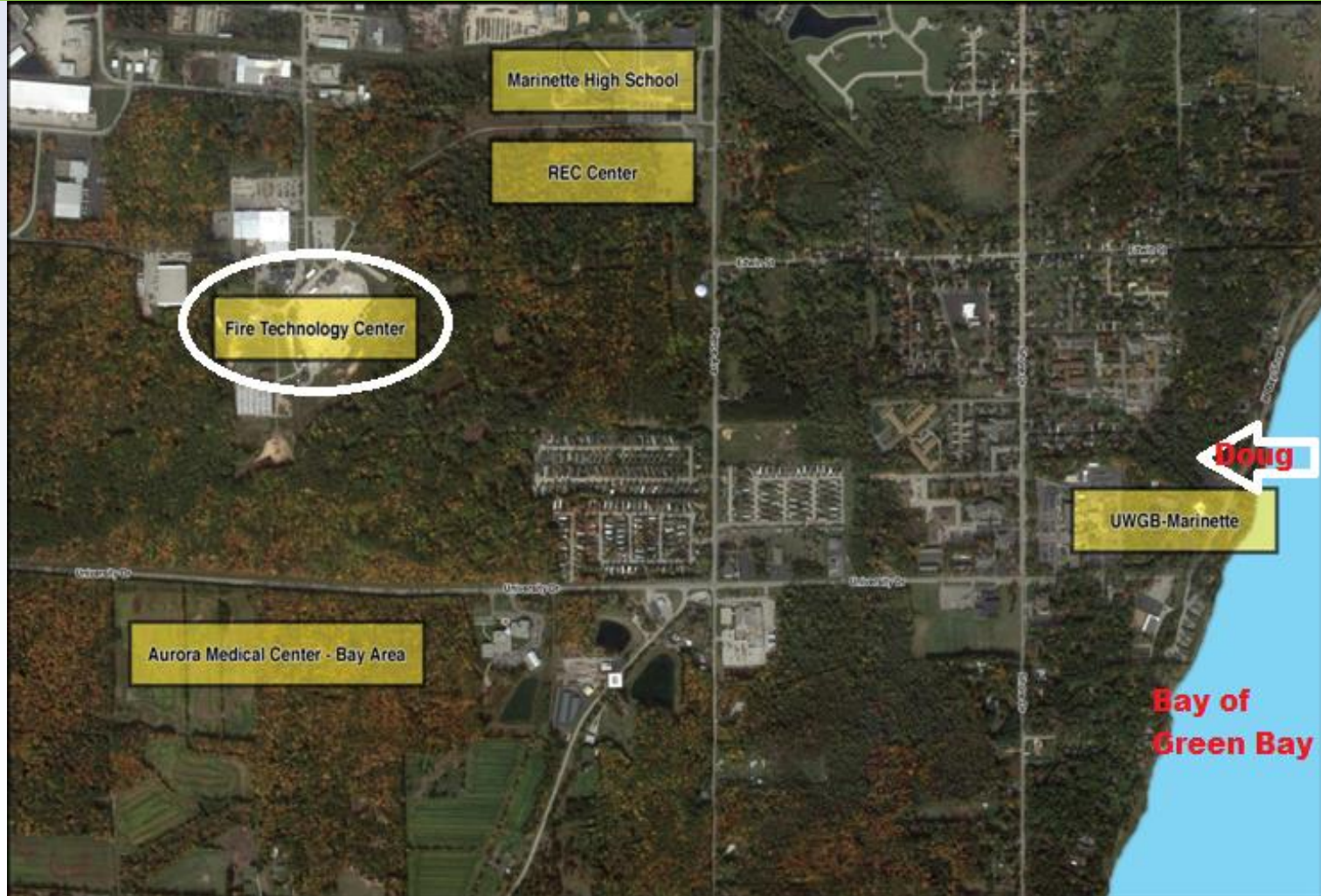


If vandals break into your home and have a party while destroying some of your most treasured possessions, what does the law and common decency demand? The answer is: “Restitution.”

No judge in their right mind would buy the argument that it will cost too much and might seriously harm the vandals’ income if they have to pay for the full cleanup of the mess they made and replace your prized possessions.

Yet that is the argument that industry is making. They abused the environment, lowered our property values, and endangered our health while making a lot of money from their practices. But they don’t want to be held liable for the costs to fix the mess they made.

AFFF PFAS CONTAMINATION SOURCE #1 TYCO/JOHNSON CONTROLS FIRE TECHNOLOGY CENTER



Wisconsin Manufacturers and Commerce (WMC)

- *“Our goal is to educate Wisconsinites on the science-based research surrounding PFAS compounds and their risk to human health.” WMC/Water Quality Coalition website*
- **Opposition to State regulation of PFAS does not come from scientists, it comes from corporate lobbyists.**
- **The call for regulations that are “science based” made by a paid lobbying organization, is anything but “science based.” It is “profit based.”**
- **The corporate playbook is always the same: deny, delay, deflect, deceit and ultimately litigate.**

Balancing or Lobbying?

- **WMC reported it spent 11 percent of its time on the regulation of PFAS in 2019.** WisPolitics.com 2-7-2020
- **None of that time was spent helping the DNR, the State Legislature, or our communities deal with the consequences of PFAS contamination.**
- **“...we look forward to working with Department staff to set standards that balance environmental, economic, and public health concerns.”** WMC Scott Manley Testimony against AB 843 and AB 842 2-6-2020
- **How much “balancing” was done before industry decided PFAS was safe to use and carelessly discard?**

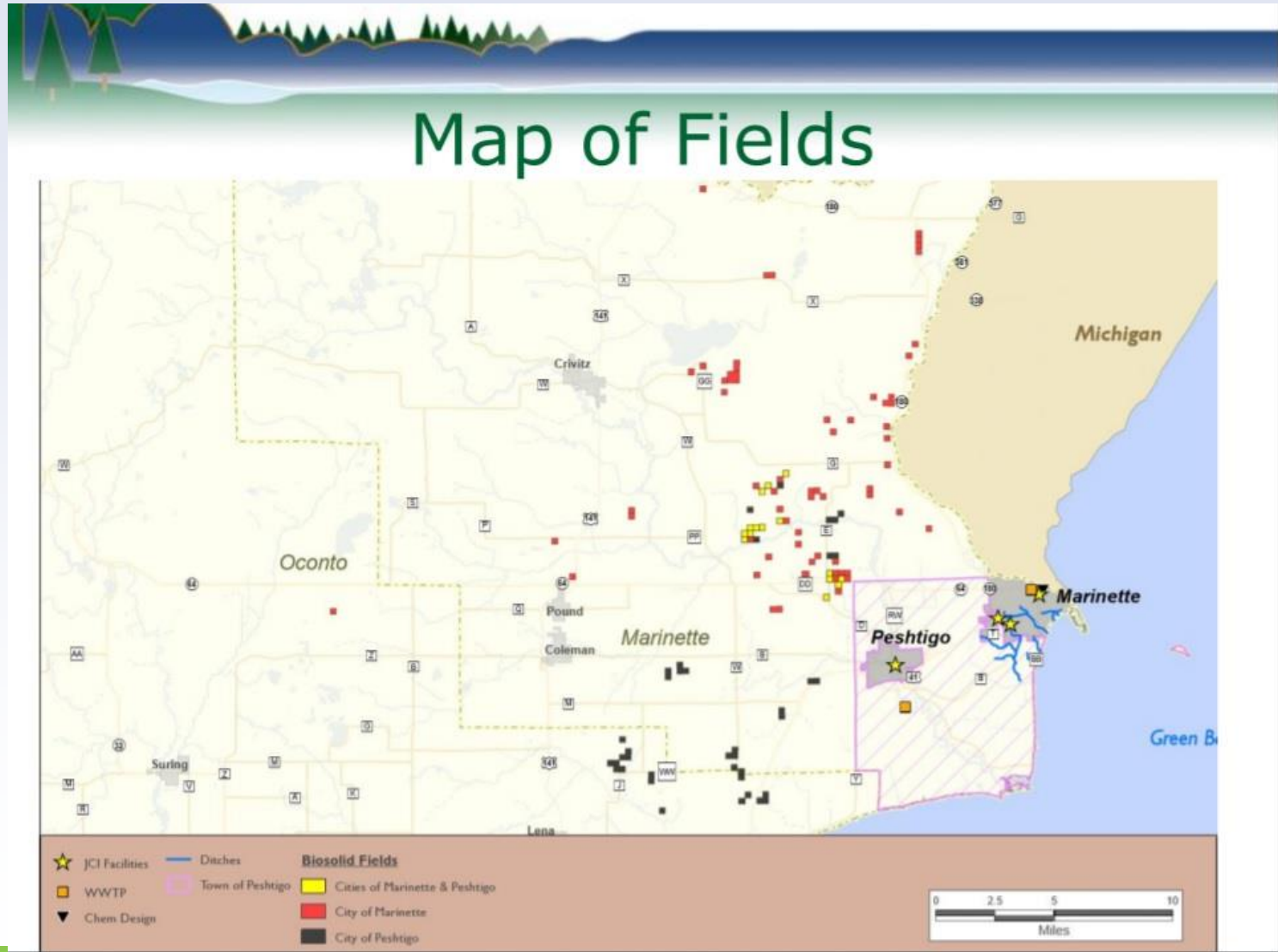
High Costs of Doing Nothing

- **Johnson Controls Incorporated told its stockholders they had set aside \$140 million to deal with the costs of cleaning up the contamination from their Marinette firefighting foam liability.** (MJS 8-5-2019)
- **The Menominee River in Marinette was just delisted from the EPA Areas of Concern after thirty years of clean up of arsenic and over \$178 million in costs, much of it taxpayer funded.** (MJS 8-11-2020)

BIOSOLIDS

- A bi-product of the wastewater treatment process is biosolids or sludge. Marinette's sludge was tested in 2018 and found to have significant PFAS concentrations of 210,000 PPT PFOS, and 10,000 PPT PFOA. This sludge, which would have normally been spread on agricultural land, was held at the plant over a year because of its contamination.
- It was finally sent at a cost of \$3 million to a landfill in Oregon.

BIOSOLIDS DISPOSAL LOCATIONS



Cost Avoidance

- **There is no known technological solution to remove PFAS from surface waters, from Lake Michigan or Lake Superior.**
- **Yes, you can treat the water for drinking purposes at great cost, but the fish and wildlife will live in it and drink that contaminated water.**
- **Should your kids swim it? Pets drink from it?**
- **How much additional healthcare costs will be incurred because people have elevated levels of PFAS in their blood serum?**

“COST vs BENEFIT ANALYSIS”

- **What cost is too high to protect our families from cancer?**
- **What cost is too high to protect young children from life-long immune deficiencies, learning disabilities, and behavioral problems?**
- **How much poison should your family be forced to consume so industry can avoid the costs of regulation?**

Property Values Destroyed

- If 70 residential properties each worth \$300,000 lose 20% of their value, that equals \$4.2 million dollars of lost personal wealth.
- The Marinette and Peshtigo area has well over 70 properties affected by Tyco/JCI's PFAS contamination. What if we were talking a 1,000 homes in Wisconsin? (\$60 million dollars)
- Local realtors have been experiencing lost sales and suppressed pricing because of the PFAS contamination.
- How much property value loss is acceptable to avoid regulation of PFAS exposure?

Recreational Economy Threatened by Fish Advisories



Wisconsin receives nearly 1.5 billion dollars annually from direct expenditures for fishing trip-related equipment and almost 2.3 billion from fishing related economic activity. The fishing industry provides over 21,500 people with fishing related jobs. Wisconsin ranks No. 3 as a nonresident fishing destination. (DNR Website)

The Only Solution

- **The only way to avoid these costs is to prevent PFAS from entering Wisconsin's waters in the first place.**
- **Delaying action will cost industry more money in the long run and is not in their own best interests.**
- **It is certainly not in the best interests of the 5.8 million stakeholders who live in Wisconsin.**