Drinking Water in Schools

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- BS & MS in Occupational Safety from the University of Wisconsin-Whitewater.
- Certified Hazardous Materials Manger (CHMM)
- Certified Indoor Air Quality Professional (CIAQP)
- Served on the Board of Directors for the Wisconsin School Safety Coordinators Association (WSSCA) in the capacity of president and currently acts as an advisor to the board.
- Served as a Board of Directors for the Wisconsin Association of School Business Officials (WASBO).

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- Field staff at Safety/Environmental consulting firm of Environmental Management Consulting, Inc. (EMC) since 2018.
- BS in Environmental Science from Carroll University.
- Wisconsin DNR Certified Small Water System Operator (OTM/NN)
- Certified Asbestos Inspector and Supervisor
- Lead Beekeeper at Abees Honey Supply.

SDWA Background

Safe Drinking Water Act (SDWA)

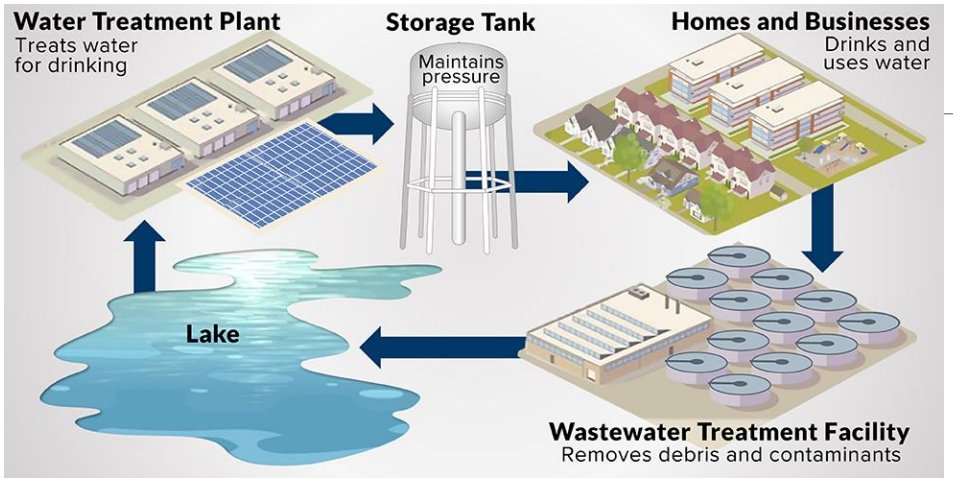
- Created in 1974 & emended and reauthorized in 1986 & 1996.
- Ensures safety of Americans' drinking water.
- Authorized EPA to set national standards to protect health effects from contaminants.
- Only applies to public water systems (NOT private wells).
- Wis. DNR enforces these rules in WI.

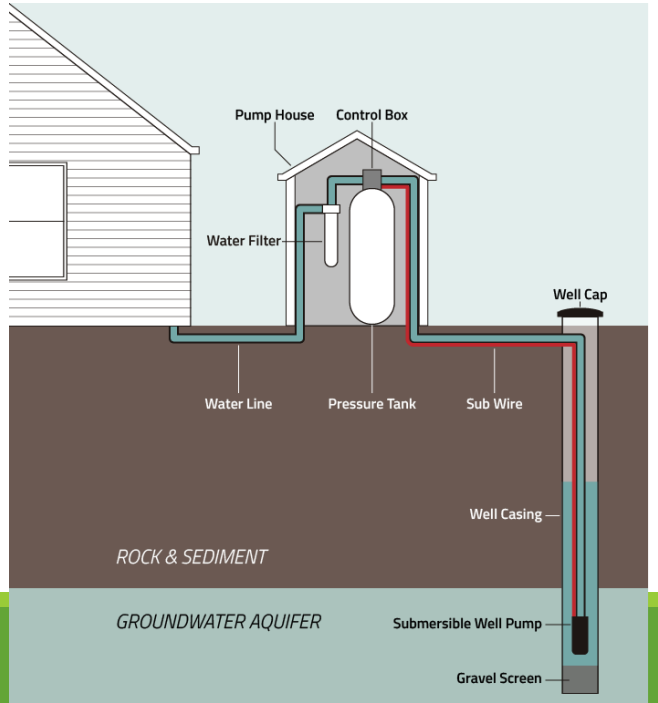
SDWA In Wisconsin

Department of Natural Resource (DNR)

- Responsible for implementing SDWA in Wisconsin
- SDWA is managed by the Bureau of Drinking Water and Groundwater.
  - **Approvals**
    - Well construction, pump installation & rehabilitation, chemical addition to water, water treatment and new system capacity.
  - **Technical Assistance**
    - Assist public well operators with SDWA compliance.
  - **Inspections**
    - Public wells & assesses vulnerability of water systems to contamination.
  - **Enforcement**
    - Enforces SDWA regulations – Notices of violation & legal action

WI - SDWA Background





Types of Public Water Systems:

- **Community**
  1. Municipal Water System (MC)
     - ≥25 of year-round residents or ≥15 service connections.
     - Example: Cities, Towns, Villages
  2. Other-Than-Municipal Water System (OTM)
     - ≥25 of year-round residents or ≥15 service connections.
     - Owned by entity that is NOT municipality
     - Example: Mobile Home Parks, Apartments, Condominiums
- **Noncommunity**
  3. Non-Transient Non-Community Water Systems (NTNC)
     - ≥25 of the same people for at least 6 months of the year.
     - Example: Schools, Daycare, Factories, Office Buildings
  4. Transient Non-Community Water System (TN)
     - ≥25 people, not the same people, for at least 60 days of the year.
     - Example: Motels, Gas Stations, Campgrounds, Restaurants

SDWA In WI Schools & Childcare Facilities

Non-Transient Non-Community Water Systems

- Required to have Certified Operator
  - May be an employee or a hired contractor.
  - Certificate issued by Wis. DNR.
    - High School Diploma or GE
    - Score of at least 75% on certification exam
    - Continuing education training & cert. renewal every 3 years.
  - Notify the DNR of change of Certified Operator.

Approx. 98,000 public schools & 500,000 childcare facilities not regulated under the SDWA in the US.

- Drinking water testing is completed by the municipality or water system.
- May or may not conduct voluntary drinking water testing.

Sampling Requirements for NTNC Wisconsin Schools

- The DNR will determine the sampling schedule for the calendar year.
- 9 year cycle for all contaminants
- DNR's vulnerability assessment may determine the contaminates to be monitored:
  - System type
  - Population served
  - Type of Source water
  - Location:
    - Example: Near a gas-station – VOCs
    - Example: Near a farm or golf course – Nitrates

Sampling Requirements for NTNC Wisconsin Schools

Public Notification

LEAD AND COPPER ACTION LEVEL EXCEEDANCE NEXT STEPS

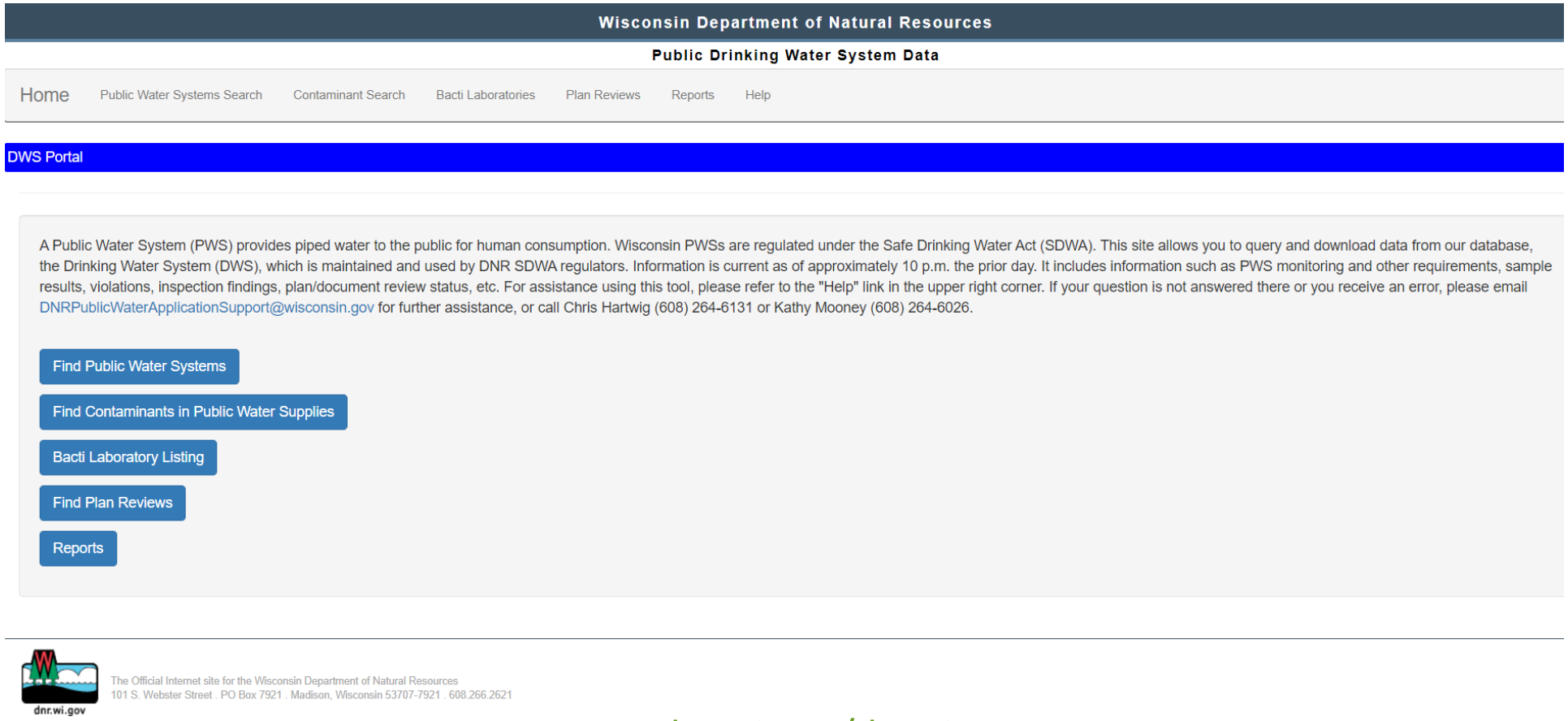
PART 1- INVESTIGATIVE SAMPLING, PUBLIC EDUCATION & CORROSION CONTROL TREATMENT (CCT) RECOMMENDATION WORKSHEET

	REQUIREMENTS	DUE BY
WATER QUALITY PARAMETER (WQP) SAMPLING	Collect a set of WQP samples and submit them to a drinking water certified lab. Collect WQP samples from both of the following: • one (1) site within your distribution system; and • each entry point. Collect a **second set** of WQP samples **4-14 days after** collecting your first set - from each entry point and from one site within your distribution system - and submit them to the lab.	Both sets of samples must be completed by **June 30, 2023.**
LEAD & COPPER SOURCE WATER SAMPLING	Collect a single sample from each entry point and have it analyzed for lead and copper at a drinking water certified lab.	Samples must be completed by **June 30, 2023.**
PUBLIC EDUCATION[1]	Deliver Public Education (PE) materials to water consumers according to the instructions in the enclosed *Lead/Copper Public Education Program* sheets. Submit a report documenting the completion of the Public Education requirements. A *Verification of Public Education* form is included with the	PE must be delivered no later than **August 31, 2023.** PWS must submit a report documenting completion of PE requirements **within**

When Maximum Contaminate Level (MCL) exceeded:

- Notify the public of the condition.
  - Contaminant found & its level
  - Health effects of exposure
  - Measures being taken to alleviate the problem
  - Name & telephone number of person who can provide more info.
- Notice must be posed at all drinking water outlets
- Type of notification will depend on:
  - Severity of the contamination
  - Type of population being served
  - Urgency of the situation

Website for DNR's Public Drinking Water System Data



www.dnr.wi.gov/dwsviewer

Lead in Drinking Water

- Lead can enter drinking water when plumbing materials contain lead.
- Common sources of lead in drinking water
  - Lead pipes
  - Faucets & fixtures
  - Lead service lines
  - *Most common problem is with brass or chrome-plated brass faucets with lead solder.*

Lead in Drinking Water

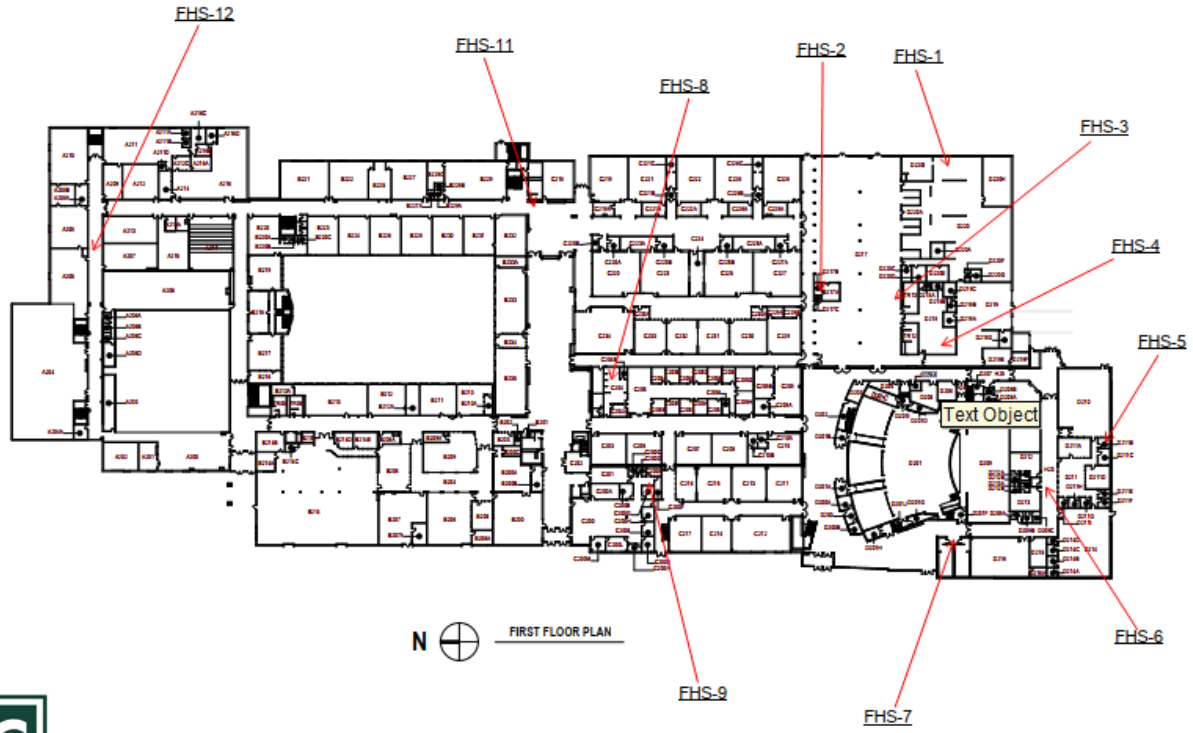
Corrosion - Dissolving of metal caused by chemical reaction between water and plumbing.

Factors for the lead “leaching” into drinking water:

- Acidity/Alkalinity
- Types & amounts of minerals in the water
- Amount of lead the water contacts
- Temperature of the water
- Wear in the pipes
- Presence of protective scales or coating inside plumbing

Proactive Lead and Copper Sampling

- Recommended for schools on municipal systems
- Sampling based on SDWA procedures



Proactive Water Sampling

April 2023

ug/L : Micrograms per Liter
ND: Not Detected
MCL: Max Contaminant Level for Drinking Water Samples
WDNR Lead MCL: <15 ug/L

School District: _____

School: High School

Site #	Sample #	Sample Location	Floor	Sink/Drinking Fountain	DW	Lead Results	Copper Results
1	FHS-1	D220 Kitchen – against back wall next to fridge (Inc. Source)	1	Stainless Steel Goosneck Sink	X		
2	FHS-2	D217A – a-la-cart cafeteria concessions window sink	1	Stainless Steel Goosneck Sink	X		
3	FHS-3	Cafeteria Bottle Fill Station – Left Side (east)	1	Bottle Fill Station	X		
4	FHS-4	Staff Lounge @ Cafeteria Sink	1	Stainless Steel Goosneck Sink	X		
5	FHS-5	Band Area Kitchenette - Room D211B	1	Stainless Steel Goosneck Sink	X		
6	FHS-6	Band Area Bottle Fill Drinking Fountain – between D213 & Bathroom	1	Bottle Fill Drinking Fountain	X		
7	FHS-7	Bubbler at Band Trophy Case – between bathrooms near D216	1	Drinking Fountain	X		
8	FHS-8	Health Room Sink – Room C204	1	Stainless Steel Goosneck Sink	X		
9	FHS-9	Main Office Kitchenette – at bathrooms in C200	1	Stainless Steel Goosneck Sink	X		
10	FHS-10	Drinking Fountain at C301 – at top of stairs and elevator	2	Bottle Fill Drinking Fountain	X		

Lead Drinking Water – Sample Procedures

Sampling DO'S

Schools should develop a program to routinely flush plumbing fixtures after extended school closings.

Ensure water has been idle for at least 6 hrs, but not more than 18 hrs.

Sample water from cold water faucet.

Collect "First Draw" sample

Sampling DON'Ts

Do NOT pre-flush the tap prior to the 6-hr stagnation period.

Do not remove aerator.

Do NOT collect samples on Mondays or after extended breaks where water has remined motionless significantly longer than 6 hrs.

Do NOT use a tap that is downstream of a filter/softener unless all water is filtered/softened.

Per-and Polyfluoroalkyl Substances

- Large group of manmade chemicals that have been created and used in countless manufactured products since the 1940s
- By 2023, thousands of PFA variations have been created and widely distributed because of their unique and useful properties
  - Water resistant
  - Grease resistant
  - Long lasting

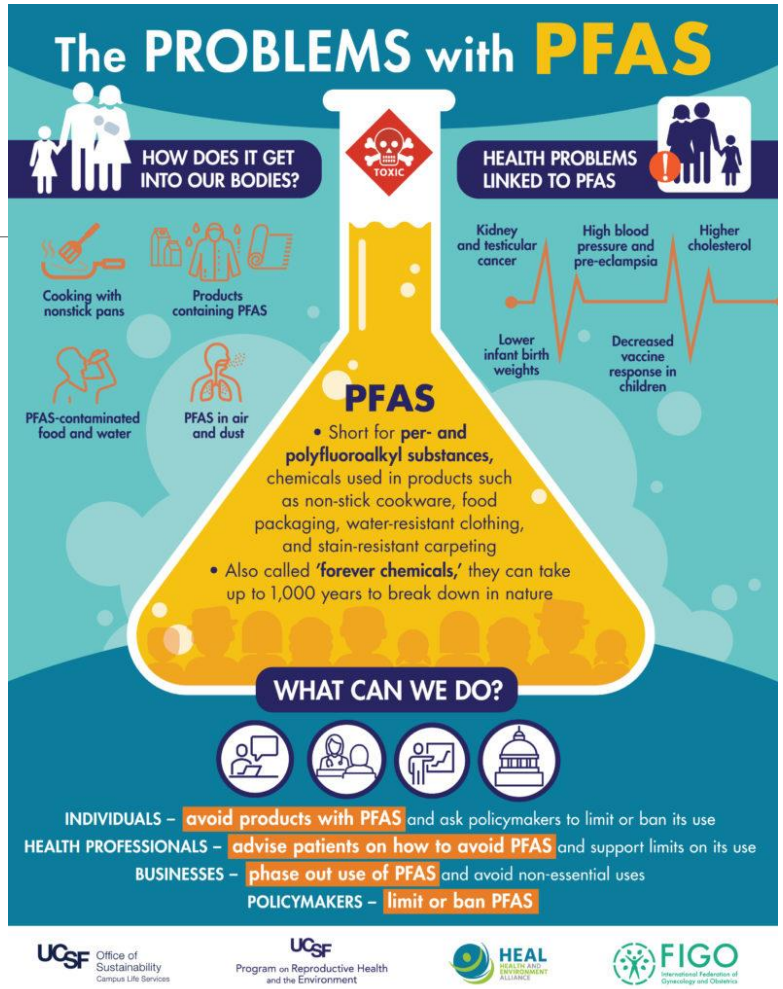
The Problem With PFAS

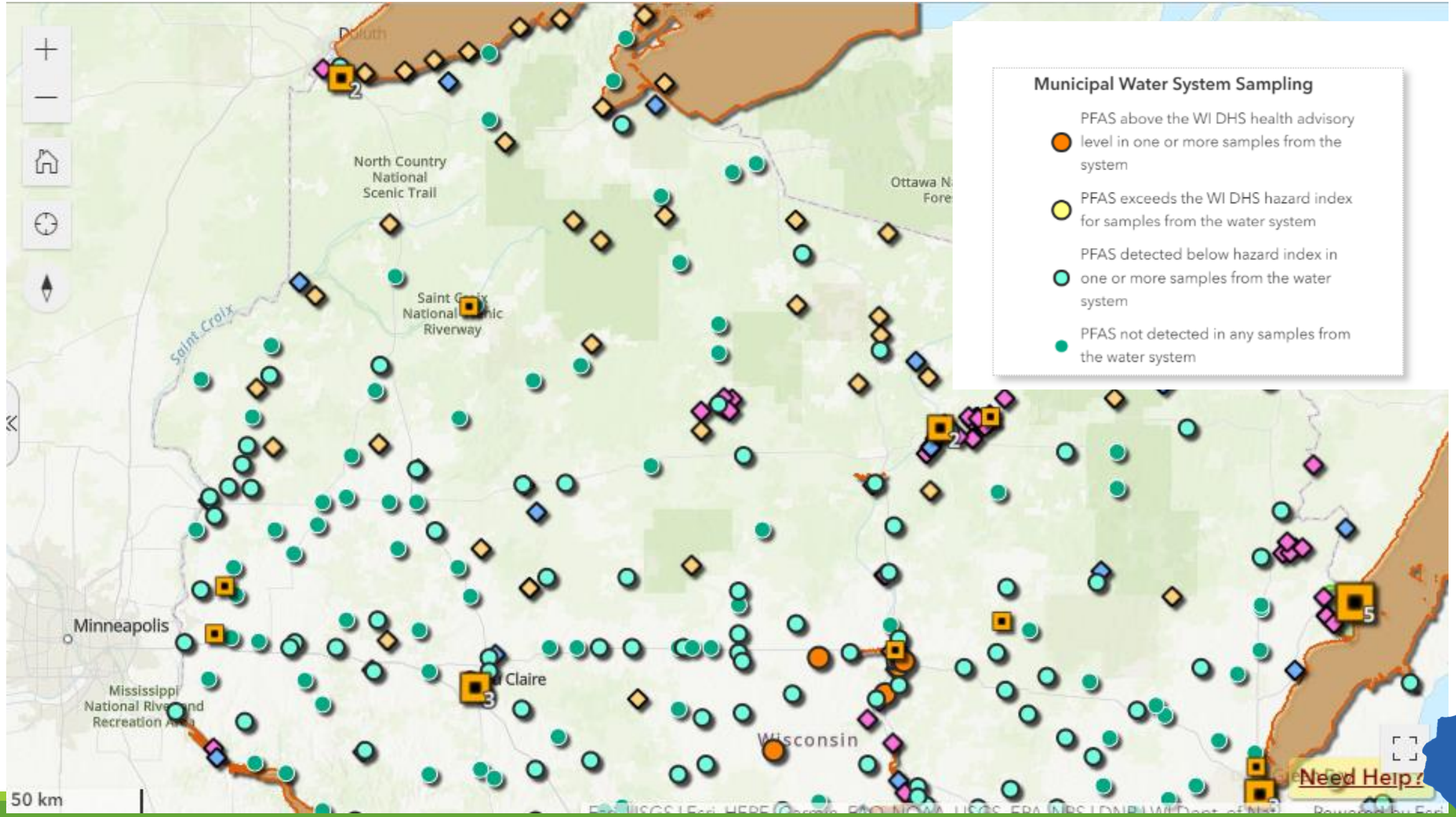
Make their way into our soil and waterways and do not break down naturally in the environment

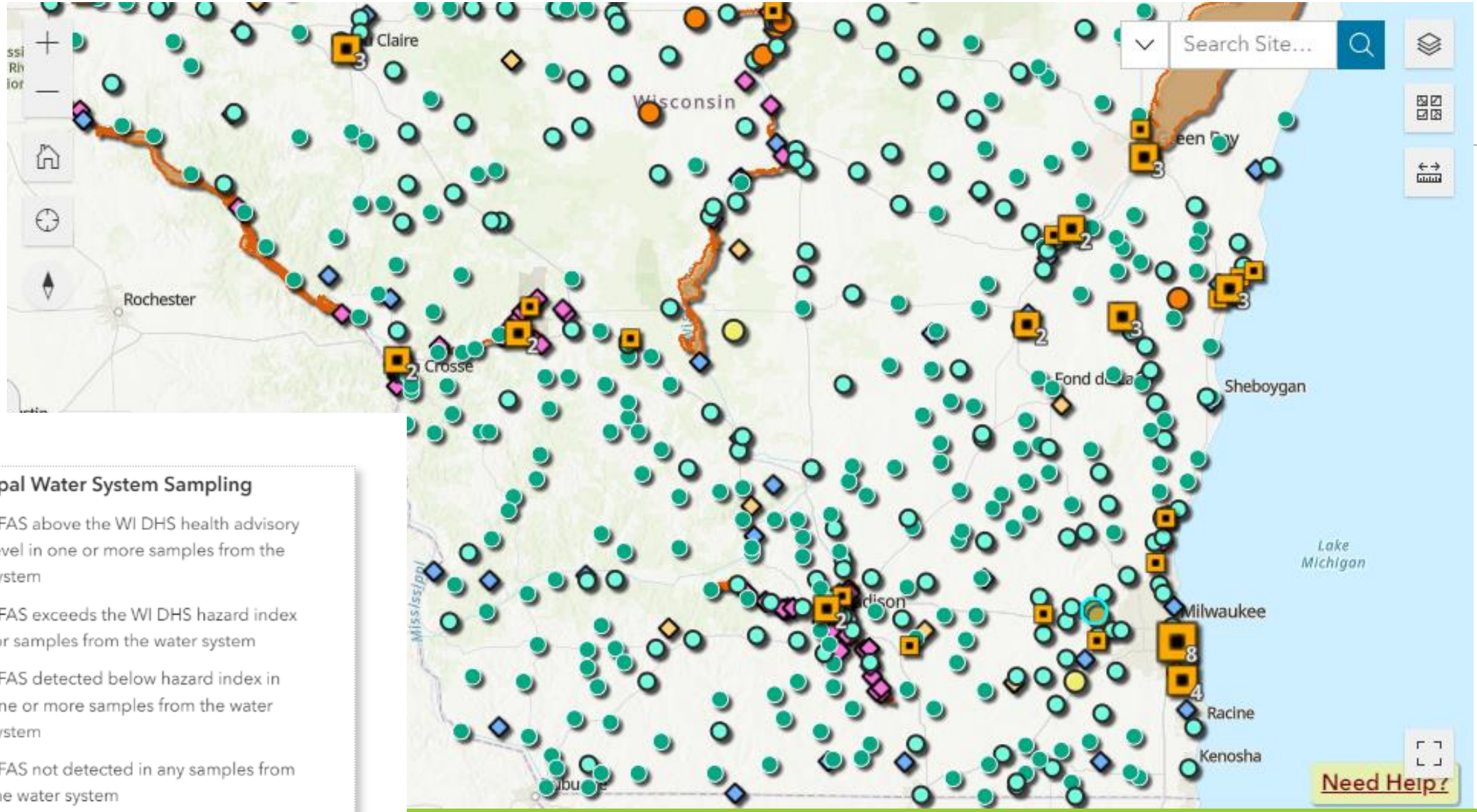
- Fire Training/Fire Response Sites
- Industrial and Manufacturing Sites
- Landfills
- Wastewater Treatment Plants

This means humans and animals are continuing to consume these chemicals.

- Dangerous to human health




Municipal Water System Sampling
PFAS above the WI DHS health advisory level in one or more samples from the system
PFAS exceeds the WI DHS hazard index for samples from the water system
PFAS detected below hazard index in one or more samples from the water system
PFAS not detected in any samples from the water system
Duluth
North Country National Scenic Trail
Saint Croix
Minneapolis
Mississippi National River and Recreation Area
Claire
Wisconsin
50 km
Need Help?


Search Site...
Wisconsin
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Need Help?
Municipal Water System Sampling
PFAS above the WI DHS health advisory level in one or more samples from the system
PFAS exceeds the WI DHS hazard index for samples from the water system
PFAS detected below hazard index in one or more samples from the water system
PFAS not detected in any samples from the water system

What if my municipal system has an exceedance?

- You should be notified!
- Who is responsible?
- Look up Consumer Confidence Report (CCR)

Takeaways:

- Flush your faucets!
  - All of them
- Investigate your water results
  - Wisconsin PFAS Interactive Data Viewer
  - Annual CCR Report
- PFAs Sampling – Do I need to?
- PFAs Treatment Options?