



February 5, 2019

Dear Water Utility Board members:

Firstly, we would like to thank you for including PFAS on today's meeting agenda.

We also thank the City of Madison for requesting on Nov. 28, 2018, with the Water Utility's input, that Truax Air National Guard more fully assess the extent of the PFAS plume emanating offsite from the base and investigate PFAS contamination in ditches leading to Starkweather Creek as well as in surface water and sediments in the creek. We are grateful that city funds were allocated to test PFAS in fish from the creek.

Further, we strongly commend the Water Utility's recent decision, just publicly announced on January 25, to test a larger number of PFAS compounds in Well 15, as we have recommended in the past. This is a wise decision that will help the Water Utility better understand the range and levels of PFAS in this well, make the most informed decisions about public health risks from drinking this water, and choose the best mitigation strategy for this well and other Madison wells in the future.

However, the Madison Water Utility can take further steps to establish itself as a leader in the country in taking the most protective, precautionary actions to protect all of its citizens—especially the most vulnerable people, such as infants and children—from the serious health effects related to PFAS and other contaminant exposures from drinking water.

### **Precautionary Principle**

While there are many scientific, social, methodological, regulatory, economic and other uncertainties and unknowns about PFAS health and environmental risks, there is also a large and growing body of scientific research on PFAS, as well as policy and regulatory knowledge in other states, to guide Madison officials in making proactive decisions to protect public and environmental health.

Moreover, uncertainties and unknowns should not be barriers to taking aggressive actions to protect public health, especially the most vulnerable among us (infants, children). We believe that Madison agencies, policymakers and risk assessors should follow the precautionary principle in regards to PFAS. The core of the precautionary principle is that decisionmakers have social and ethical responsibilities to protect the public from harm even when there are unknowns and uncertainties. Key concepts underlining the principle are very familiar to most of us: "better safe than sorry," "look before you leap," and "first, do no harm."

In addition to assessing the fullest range of PFAS possible at all wells and using the most protective standards, the Water Utility should reduce unknowns and uncertainties by aggressively working to identify sources of PFAS and other contaminants to its wells and taking steps to mitigate them.

The precautionary principle also advocates for as much public participation in decision making as possible in situations involving environmental and public health risks that affect everyone. The Water Utility should initiate and facilitate comprehensive public engagement on PFAS issues, especially with the most at-risk communities, in line with the City of Madison's Racial Equity and Social Justice Initiative.

In this light, thank you for considering our recommendations below:

**We ask the Water Utility Board to:**

1. Direct the Water Utility to test all Madison drinking water wells as soon as possible for at least 30 PFAS using the lowest available detection limits.
2. Ask the Common Council to create a city (or joint city-county) PFAS Task Force comprised of a wide array of participants, including citizens, to investigate the extent of PFAS problems in our city and county and develop proactive strategies to address them, including setting a local PFAS "action level" for drinking water that would trigger actions to protect residents, especially the most vulnerable people.
3. Direct the Water Utility to facilitate comprehensive public engagement on the PFAS drinking water issues in Madison, including creating a City Resident Advisory Panel for Well 15 and prioritizing targeted engagement with the most at-risk neighborhoods, especially low-income neighborhoods such as Truax.

**We also ask the Water Utility Board to formally request in writing that:**

4. Madison Metropolitan Sewerage District (MMSD) test PFAS discharged from Truax Air National Guard (ANG) and other sites potentially leaching the compound into city sanitary sewers, as well as PFAS levels in MMSD's wastewater influents/effluents and sewage sludge spread on Dane County farmlands.
5. WI Dept. of Natural Resources (DNR) and Dept. of Health Services prioritize the development of PFAS standards for groundwater/drinking water (and other media) without delay, including a summed-total standard for PFAS compounds.
6. Dane County and the City test groundwater, as well as Starkweather Creek water and sediments, at the two fire-training burn pits on Dane County land for PFAS, VOCs and other contaminants.
7. Truax Air National Guard test volatile organic compounds (VOCs) in addition to PFAS when investigating the groundwater contaminant plume emanating from the base, and if the base is found to be a source, ask the ANG to reimburse the Utility for the costs of the air-stripper currently on the well.
8. Dane County leaders participate openly and publicly in discussions and decisions about what will be done to address PFAS problems, especially on county-owned land (Truax Field).

The attached background document elaborates further on each of the above points.

I'm happy to discuss individual points further and receive input and corrections on them or the background information. PFAS scientific and technical issues are extremely complex and confusing. New and conflicting scientific studies and other relevant information are released nearly every day. We are all learning.

Sincerely,

/s/Maria Powell

Maria Powell, PhD  
President, Midwest Environmental Justice Organization

## **RATIONALE/BACKGROUND FOR MEJO RECOMMENDATIONS**

### **1. All Madison wells should be tested as soon as possible for at least 30 PFAS using the lowest available detection limits.**

To date, only five Madison wells (7, 15, 16, 18 and 29) have been tested for PFAS using the lower detection limits. There are a number of other potential PFAS sources throughout the city (e.g., landfills, industries, sewerage treatment, etc.) that could have leached into other Madison wells. PFAS is very mobile and has likely spread from Truax ANG and other sources to wells in addition to Well 15.

Having comprehensive PFAS data from all Madison wells is critical to protecting all Madison residents, especially the most vulnerable (infants, children). This data is also important for making decisions about the appropriate uses, water mixing, and mitigation strategies at various wells. Further, it will help the Water Utility, MMSD, DNR, DHS, and other relevant agencies develop appropriate standards, identify possible sources of PFAS in Madison, and take steps to assure that these sources are mitigated.

### **2. The Water Utility Board should ask the Common Council to create a city (or joint city-county) PFAS Task Force comprised of a wide array of participants, including citizens, to investigate the extent of PFAS problems in our city and county, identify PFAS sources and develop strategies to address them, including setting a local PFAS “action level” for drinking water that would trigger actions to protect residents, especially the most vulnerable people—infants, children, most at-risk neighborhoods.**

The PFAS issues are bigger than the Water Utility’s capacities and authority. A city (or joint city-county) PFAS Task Force would be a more appropriate mechanisms to investigate them and develop solutions. A key task of this group would be to develop a local PFAS drinking water “action level” that would serve as a trigger point for decisions to mitigate wells with levels exceeding it or take a range of other actions to prevent harmful exposures, especially to the most vulnerable groups. The level could be revisited and adjusted if deemed appropriate by the Task Force, as new scientific information comes in or state and/or federal PFAS standards are developed.

### **Why we should not accept EPA’s 70 ppt PFOA/PFOS standard for Madison (or wait indefinitely for other standards to be developed by the EPA or Wisconsin):**

In developing the 70 ppt standard (for only PFOA and PFOS), EPA was heavily influenced by the Trump Administration, U.S. Department of Defense, as well as [industries such as Dupont that produce and use PFAS compounds](#). The Wisconsin DNR and DHS have also been lagging in addressing PFAS or setting standards for groundwater and other media, and though they have now started to work on developing standards, this will take many months if not years—and after standards are developed it will take years for rules to go through the Legislature and be officially promulgated.

Some states are far ahead of Wisconsin and have chosen not to wait for federal standards. Based on biomonitoring and a growing body of scientific research, a number of scientists and state agencies have concluded that this level is not protective, especially for infants and children, and are taking steps to develop more appropriate standards.

In Minnesota, where agencies have been testing PFAS contaminated groundwater and measuring levels of PFAS in people who drink the water, studies have shown that a pregnant mother can transfer up to 200%

of the PFAS she ingests in drinking water to her developing fetus via the placenta—and that infants take up much higher concentrations from drinking water than adults. Minnesota’s biomonitoring and other studies have also shown that when people drink PFAS contaminated water, the levels that build up in their blood serum can be orders of magnitude higher (even thousands of times higher) than levels in water they ingested. Once in the body, PFAS levels increase as the compounds build up in blood and tissues—where they remain for a very long time. An Interstate Technology Regulatory Council (ITRC) [fact sheet](#) states that “long-term ingestion of low levels of PFAS (including those below health values) in drinking water may result in exposures substantially higher than in the general population not consuming contaminated drinking water” (highlights added, see citations in the ITRC article).

Based on biomonitoring studies such as the above, along with toxicological and epidemiological studies, several agencies, states, and environmental organizations have proposed standards much lower than EPA’s 70 ppt, especially to protect infants/children. The Agency for Toxic Substances and Disease Registry (ATSDR) draft report released in June 2018 (and the agency’s November update) suggests limits of [14 ppt for PFOS and 21 ppt for PFOA to protect children](#). Several states have developed lower standards and more are in the process of doing so. In July 2018, the Vermont Department of Health developed an [interim health advisory level of 20 ppt](#) for a summed-total of five PFAS compounds. Last week, the New Jersey Department of Environmental Protection proposed [interim groundwater criteria of 10 ppt for PFOS and 10 ppt for PFOA](#).

Legislators in other states have proposed standards of as low as [5 ppt](#) each for one or both compounds, and Boston University and Harvard scientists have proposed a 1ppt PFOS limit based on their findings of immune system effects in children that affect their responses to vaccines—see [here](#) and [here](#). A [Natural Resources Defense Council \(NRDC\)](#) analysis of the ATSDR recommendations proposed levels as low as 3 ppt and 1 ppt for PFOS to prevent immune system effects.

### **Why would the Water Utility wait? Decisions delayed are health protections denied**

At the April 26, 2018 Technical Advisory Committee (TAC) meeting, Dr. Henry Anderson, former Chief Medical Officer for the Wis. Department of Health Services, told Joe Grande that the 70 ppt level would likely drop by at least 50% in the future—but then oddly, at the next meeting, minimized the relevance of ATSDR’s draft lower standards for children and advised the Water Utility to “stay the course”—e.g., stick with the 70 ppt EPA standard until agencies develop different standards, which will likely take many years. As I understand it, the committee agreed to this.

If we believe now that the PFAS health advisory levels are likely to go down significantly, and we have abundant evidence that levels much lower than 70 ppt are harmful to infants and children, why would Madison agencies and decisionmakers allow our most vulnerable people to be exposed while we wait indefinitely for EPA to lower the standards or our state to develop state-specific standards? As [NRDC stated](#), in its Sept. 6 comments to the ATSDR, “*Decisions delayed are health protections denied.*”

As I wrote to Joe Grande and Tom Heikkinen on October 8, 2018, after the TAC recommended sticking with the EPA’s unprotective 70 ppt health advisory level: “*I would like to live in a city and state that are taking the most proactive, protective approaches to PFAS and other emerging chemicals.*” I would prefer not to have to move elsewhere for this protection. I think most Madison residents would agree.

### **3. The Water Utility Board should direct the Water Utility to initiate and facilitate comprehensive public engagement on the PFAS drinking water issues, including creating a City Resident Advisory**

**Panel for Well 15 and prioritize targeted outreach to and engagement with the most at-risk neighborhoods, especially low-income neighborhoods such as the Truax neighborhood.**

The low-income Truax neighborhood gets nearly all of its drinking water from Well 15 and is also exposed to PFAS and other contaminants from the military base adjacent to it. People in the Truax neighborhood already live with multiple economic, environmental, cultural and social stressors in addition to exposure to contaminants from Truax Field. These factors act additively and synergistically to increase their risks. This is an important environmental justice issue that should be a priority for the City to address, given its [Racial Equity and Social Justice Initiative](#). To date there has been no engagement with this neighborhood on PFAS or other contamination issues related to Truax Field. People in the Truax apartments should not be expected to know about the Water Utility's websites, sign up for emails to get PFAS info, and to know about and have the ability to attend Water Utility meetings. The Water Utility should actively outreach to this neighborhood through East Madison Community Center leaders and arrange to hold at least one public meeting there about PFAS issues.

**4. The Water Utility Board should formally request that the Madison Metropolitan Sewerage District (MMSD) test PFAS discharged from the Truax Air National Guard site and other likely PFAS sources in the city into sanitary sewers, as well as PFAS levels in MMSD's wastewater influents/effluents and sewage sludge spread on Dane County farmlands.**

As a [January 27 article in the Wisconsin State Journal](#) described, the Marinette Wastewater Utility, using its wastewater permitting authorities, tested PFAS levels dumped into sanitary drains by industries in the city that produce and use fire-fighting foams with PFAS. Levels found in sanitary sewers draining from the industrial sites were significant, as were the influent/effluent levels at the wastewater plant and in sewage sludge from the plant spread on farmland.

If Marinette Wastewater Utility can do this, MMSD can as well. MMSD, like the Marinette Water Treatment plant, has authority to do this through the wastewater permitting program. The District could begin with investigating known PFAS sources such as the Truax Air National Guard base and then address other potential sources in the city as they are identified.

PFAS leaching from old sanitary sewers, sludge lagoons, sludge spread on farmlands, and in surface waters can eventually reach groundwater, so it is in the Water Utility's best interest to have this information. Among other things, it will help MMSD, the Water Utility, and other relevant government agencies identify and mitigate sources of PFAS in Madison.

**5. The Water Utility Board should write to the Wisconsin DNR and DHS formally requesting that they prioritize the development of groundwater, surface water, soil, air and other media PFAS standards without delay, including summed-total PFAS standards.**

Some Wisconsin residents have already been drinking PFAS for decades. It is imperative that Wisconsin regulatory standards for all media (groundwater/drinking water, surface water, soils, air) be developed without delay, as some other states already have. This is critical to guide Wisconsin municipalities and state agencies on key decisions about safe levels in drinking water and other media, develop appropriate effluent standards, access federal cleanup money, enforce laws, and to guide many other important regulatory and health risk assessments.

The development of summed-total PFAS standards is also critical. Residents are likely drinking many more than two types of PFAS compounds (PFOA and PFOS) right now. To protect people, especially the most vulnerable, it is critical that we develop PFAS standards that consider what people are actually drinking.

Many experts agree with the summed-total PFAS risk assessment approach. The 2014 [Helsingør](#) and 2015 [Madrid](#) Statements, based on extensive reviews of the scientific literature, provided consensus from more than 200 scientists on the potential for harm associated with the entire class of PFAS. In her [testimony](#) before a Senate Committee and Subcommittee on Sept. 26, 2018, Dr. Linda Birnbaum (Director of the National Institute of Environmental Health Sciences and National Toxicology Program of the National Institutes of Health) stated that “Approaching PFAS as a class for assessing exposure and biological impact is the best way to protect public health.”

In October 2018 the [Conservation Law Foundation sent a petition](#) to the Massachusetts Department of Environmental Protection (DEP) asking the state to adopt a summed-total PFAS standard and as an interim step (while waiting for such a standard to be developed) to adopt Vermont’s 20 ppt PFAS standard for five PFAS compounds totaled (see link above).

Here in Wisconsin, in August 2018 [Citizens for Safe Water Around Badger \(CSWAB\)](#) petitioned the DHS to develop a summed-total PFAS standard. In November 2018, Wisconsin’s [Senator Hansen wrote a letter to DNR](#) and DHS to develop such a standard as well.

**6. The Water Utility Board should request that Dane County and the City test groundwater and Starkweather Creek surface water and sediments at and near the two fire-training burn pits on Dane County land for PFAS, VOCs and other contaminants immediately (as soon as weather allows).**

[Analyses of fire-training burn pits elsewhere](#) have found total PFAS levels in groundwater in the millions of parts-per-trillion. The shallow groundwater at the two Dane County burn pit sites, both former wetlands, is just a few feet down. Starkweather Creek flows around both sites. There is little doubt that PFAS from the repeated use of fire-fighting foams at these sites has leached to the groundwater and creek.

Handing the burn pit investigations off to the National Guard Bureau, as the Mayor and DCRA engineer did on [July 31, 2019](#) is totally unacceptable. This is County-owned land, and the county has authority to test there. The City and County both have authorities to test stormwater drainage from these burn pits.

Further, the City and County both used these burn pits for decades. [Both entities have known about the contamination there for at least 30 years](#) but have done nothing to remediate it. Handing this important task to the U.S. military means a long delay in testing and leaves citizens and local decisionmakers in the dark about what is happening, since there appears to be no requirement with this arrangement for public access to the data, public input on the timeline, nature and extent of investigations or options for remedial strategies

**7. The Water Utility Board should request that Truax Air National Guard test volatile organic compounds (VOCs) in addition to PFAS when investigating the groundwater contaminant plume emanating from the base. If the base is found to be a source, ask the ANG to reimburse the Utility for the costs of the air-stripper currently on the well.**

Well 15 is contaminated with VOCs (PCE levels are near the enforcement standard). After receiving input from the Well 15 Citizen Advisory Panel (CAP) several years ago, a very expensive air-stripper was placed on the well to remove these VOCs. The air-stripper was paid for by the Water Utility (ratepayers). At that time, Truax ANG (which has used VOC solvents including PCE and TCE for decades, and continues to do so), was not considered a source of the VOCs, based on older groundwater modeling.

[Updated groundwater modeling](#) done by consultants hired by the Water Utility shows that PFAS can get to Well 15 from the base, and Well 15 PFAS testing to date confirms that it most likely has. If PFAS can get to Well 15 from the base, VOCs can as well.

If further groundwater testing shows that the VOCs from Truax ANG have made it to Well 15, the Air National Guard should be asked to reimburse the Water Utility for the costs of the air stripper (as well as any costs required for PFAS mitigation). Given the financial hardships the Water Utility is facing currently, it seems like the Water Utility would want the responsible party to cover this significant cost. We (the ratepayers) should not be asked to cover mitigation for contamination in our drinking water caused by the U.S. military.

**8. The Water Utility Board should formally ask Dane County officials, especially County Executive Joe Parisi, to participate openly and publicly in discussions and decisions about what will be done to address the PFAS problems throughout the county, especially on the land the county owns (such as Truax Field).**

Dane County owns most of Truax Field, including the airport, Truax Air National Guard site, fire-training burn pits, former Truax landfill and former Burke Sewage Treatment Plant—all of which are known (or likely) sources of PFAS and other toxic contaminants that are leaching to surface water, Starkweather Creek, and groundwater. We assume the county is engaging in private communications and meetings with city officials about the significant contamination at these sites and their respective liabilities. However, with the exception of a few county supervisors, County Executive Joe Parisi and other county leaders have been totally missing in public discussions to date about the PFAS problem.

In July 2018, MEJO members and interns asked the Lakes & Watershed Commission to create a working group to investigate PFAS and other toxic pollution from Truax Field and its impacts on Starkweather Creek. See MEJO testimonies [here](#) (supporting map [here](#)), [here](#), [here](#), and [here](#). We requested that this issue be placed on a future Lakes & Watershed agenda, and also asked for more funding in the budget for Starkweather Creek contaminant testing. Along with Laura Olah Executive Director of Citizens for Safe Water Around Badger (CSWAB), we asked the county to help facilitate public meetings on the Truax Field PFAS and other contamination issues.

The Commission dismissed or ignored all of our requests. Our questions and queries to Dane County Executive Joe Parisi have also been met with silence.

This needs to change. Dane County owns most of the highly contaminated Truax Field land including the Air National Guard site. Executive Parisi must publicly take responsibility for addressing the huge, long-term environmental and public health challenges now facing our city and county related to PFAS—and actively engage with the citizens he serves in discussions and decisions about them.