OFFICIAL NOTICE AND AGENDA
of a meeting of a City Board, Commission, Department Committee, Agency, Corporation, Quasi-Municipal Corporation, or Sub-unit thereof.

A Meeting of **Wausau Water Works Commission** will be held in the **Council Chambers, 1st Floor City Hall, Wausau, WI 54403** at **10 : 30 a.m.** on **Tuesday, April 13, 2021.**

Members: Katie Rosenberg (President), Dawn Herbst, Jim Force, Joe Gehin, John Robinson

AGENDA

1. Approve Minutes of March 2, 2021 Meeting.
2. Director's Report on Utility Operations
   - DWTF Update
   - Spring Hydrant Flushing
   - Unidirectional Flushing
   - Spring Service Renewals
   - Lead and Copper Rule Updates
   - Private side Lead Line Replacement Funding Update
   - Wastewater Treatment Plant Permit Limits
   - Monthly Mercury Sample Result
   - WWTF Update
   - New Wastewater Plant Mechanic and Open Position for Sewer Maintainer
3. Presentation and Update on Proposed Solar Array at The New Water Treat Facility.
4. Update on Solar Partnership with WPS.
5. Discussion and Possible Action Subsidizing the Rain Barrel Program for 2021.
6. Discussion and Possible Action of Water Distribution Maintainer and Relief Operator.
7. Discussion on PFAS/PFOS Compounds in Wisconsin.
8. Discussion and Possible Action on Completing Smoke Testing as the Next Phase of the I&I Study.

Adjourn.

Next meeting scheduled for **May 4th 2021.*

THIS NOTICE POSTED AT CITY HALL AND EMAILED TO CITY PAGES AND DAILY HERALD: April 8, 2021 at 2:30 p.m.

Due to the COVID-19 pandemic, this meeting is being held in person and via teleconference. Members of the media and the public may attend in person, subject to the social distancing rules of maintaining at least 6 feet apart from other individuals, or by calling 1-408-418-9388. The Access Code is 187 931 9948 and the password is v6EJMbE9UV2. Individuals appearing in person will either be seated in the Council Chambers or an overfill room, subject to the social distancing rules. Space available will be on a first come, first served basis. All public participants' phones will be muted during the meeting. Members of the public who do not wish to appear in person may view the meeting live over the internet at https://tinyurl.com/wausaucitycouncil on the City of Wausau's YouTube Channel https://www.youtube.com/channel/UC-Nigpdco_i8sq5FbbJD_aw and live by cable TV, Channel 981. Any person wishing to offer public comment who does not appear in person to do so, may e-mail michelle.weasler@ci.wausau.wi.us with "Water Commission public comment" in the subject line prior to the meeting start. All public comment, either by email or in person, will be limited to items on the agenda at this time. The messages related to agenda items received prior to the start of the meeting will be provided to the Chair.

In accordance with the requirements of Title II of the Americans with Disabilities Act of 1990 (ADA), the City of Wausau will not discriminate against qualified individuals with disabilities on the basis of disability in its services, programs or activities. If you need assistance or reasonable accommodations in participating in this meeting or event due to a disability as defined under the ADA, please call the ADA Coordinator at (715) 261-6590 or ADAServices@ci.wausau.wi.us to discuss your accessibility needs. We ask your request be provided a minimum of 72 hours before the scheduled event or meeting. If a request is made less than 72 hours before the event the City of Wausau will make a good faith effort to accommodate your request.

Minutes of March 2, 2021

A meeting of the Wausau Water Works Commission was called to order at 1:35 p.m. in City Hall on Tuesday, March 2, 2021. In compliance with Wisconsin Statutes, this meeting was posted and receipted for by the Wausau Daily Herald on February 25, 2021.

Members Present: President Rosenberg, Commissioners Robinson-via Webex, Herbst, Force, Gehin.
Others Present: Eric Lindman, Dave Erickson, Scott Boers, Valerie Swanborg, MaryAnne Groat, Steve Opatik/Becher Hoppe, Ryan Yentz/Strand & Associates, Andrew Craven/Strand & Associates, Patrick Peckham/Alderman

1) **Approve Minutes of February 2, 2021 Meeting.**

Herbst moved to approve the minutes of the February 2, 2021 meeting. Seconded by Gehin.

Force questioned the lead service line issue as he does not see it on the agenda; will we be discussing that? Lindman advised he didn't have anything prepared for today. Gehin under item 2 last line, he thinks he asked the question about an update on well 3 and a pending letter from EPA. He certainly didn't offer that a pending letter was coming through as he wouldn't have had knowledge of that. It's just an administrative thing.

Motion to approve the minutes carried 5-0.

2) **Director's Report on Utility Operations.**

Lindman welcomed two new hires. Force asked for status at the wastewater plant and if we are completely cleaned up? Erickson advised they made great progress the first week getting the water and sludge pushed out. There are still corners and back rooms that need to be cleaned. We had issues with the insurance company and questions on whether or not the contractor was responsible for their equipment. It is my understanding now that they are and are now removing that equipment out. Force asked; they were responsible for what? Erickson stated we flooded our basements when a seal failed, 770 basement floor is lower than the other building and connected by a tunnel, we filled that to a height of 4 feet. The contractor had 6 scissor lifts, all flooded in sludge and everyone was waiting for their insurance company to approve removal. Gehin asked; so they weren't responsible for the leak? Erickson stated no, they were not responsible for the leak. Force asked if there were any odor problems in the neighborhood associated with that. Erickson responded no but there was some odor at the wastewater plant. We were more concerned about safety, gases and potential electrical issues but there weren't any other issues.

Gehin asked if we were able to get the screening conveyor auger fixed. Erickson stated we did, Brad drove to Minnesota and picked up a replacements auger. It had to be configured and we aren't guaranteeing it for a certain number of years but it is back in operation.

Force asked about the status of our request for funding for lateral line replacements. Lindman advised they're working through some last documents for the environmental review. Boers responded that no date has been set. The last email from the DNR stated they had more issues than what they had considered initially with rolling out the funds and implementing the program.

They did indicate we would be receiving the $450,000 that we had requested, but didn't know when and what was all required to receive the funds. Force stated at least we know what the number is.

Force had one more question, in lieu of what happened in Texas with the water plants, how prepared are we for complete electrical washout like they had there as far as our water plant is concerned? Boers responded that we are a lot better situated than what they were. There are a couple items we are still working on and will be addressing with the new facility. There are a couple short falls that are budgeted beyond that. We should be sitting well with not much reliance on the grid and probably no reliance within 3 years. Force stated today we would still have some reliance. Boers explained we would have issues as far as taking temporary portable generators to sites to sustain operations. Force asked if those were on hand. Boers confirmed they are. Erickson explained that the wastewater plant could be challenged if we have no electricity across the whole city, especially if trees are down and roads are icy etc. We've got two larger backup generators with the wastewater plant upgrade, we have a plan but in my experience if we lose a number of lift stations it would be a challenge. Force asked if that has ever happened. Erickson advised we had an incident 8-10 years ago. The northeast side of town lost several lift stations. Keeping up with those was a challenge with crew we had available on hand. Since then we've acquired a second portable generator and we have also added some staff. Force asked how much portable generators cost? Erickson responded that we have a big one that can basically run anything and a small that can run 75% of the lift stations. The smaller one was in the $30k-$35k range. Force asked if we've ever done any type of risk analysis on what we would do if certain events took place. Erickson explained that we may have done that to some extent with our facilities plan but does think we could spend more time on that. Lindman advised we started working with the county this year. The mayor initiated an emergency response plan that incorporates water and wastewater and it is being looked at. Boers advised on the water side we are working with Clark Dietz updating the EPA mandated risk and resilience plan. We are three quarters of the way through that. Robinson asked if we participate in any table top exercises for emergency planning. Rosenberg stated that is part of the planning of the emergency contract/agreement that we had with the county, expect that to happen at some point

Director's report placed on file.

3) Presentation and Project Update for the Inflow/Infiltration Study by Strand & Associates

Please refer to attached documents in the packet of the presentation by Strand & Associates.

Craven presented the conclusions and results of the I&I study this past year and half. This explains the infiltration and inflow analysis of the City's baseline for dry and wet weather sanitary sewer flows. A few specific investigations that result in opportunities for I&I removal was the 1st Street access hatch assessment, this sanitary sewer is located inside the storm sewer. The city hired an outside contractor to enter the sewer and observe access hatches to see the condition of them.

Gehin asked if the sanitary sewer on 1st street had been inspected previously. Erickson responded they did some inspections and made sure some of the covers were secured on the storm sewers that were on top of the sanitary sewers. Yentz advised there were six, they were able to open four but the other two were grouted shut by either city staff or a contractor in the past. We talked with Erickson and Dwelly whether to seal the rest of them or not, it appeared having access to that sewer was critical. Gehin advised we rarely go in them. Sherman St. has a similar situation, was that inspected too? Yentz responded that one was not inspected. Gehin stated that is the one district we're concerned about. Yentz advised that is correct

Force asked Erickson what kind of flows we get during wet weather from a volume standpoint compared to the average daily flow. Erickson responded that the average flow is 5 mgd and that has decreased a bit as it used to be approximately 5½ mgd, peak flows can go up to 20mgd range. Force asked Yentz about the desirable range being 2 ½ -4, we have 2 basins that are way over that. I can recall diverting my roof drain, do we still have a lot of that where roof drains are connected to the sewer system? Yentz advised it is possible. Smoke testing is where you'd be able to pinpoint those. Force suspects there are still a lot out there

Force stated that it seems like for new construction we're requiring storm water capture, is this true? Lindman responded that is correct. Force asked if this would have any impact on this or is that strictly a storm water issue.

Lindman advised it is true and the practices we are doing now prevents run off from getting into sanitary. With reconstruction on 2nd street in front of the church, we found drains going into the sanitary and so those were disconnected but when we redo streets and old areas of the city we will find more that we don't know about. If we can control the run off, the better we'll be as far as preventing that from getting into the sanitary. Robinson asked how do we tell or address issue of infiltration through contact with groundwater. Yentz responded that the city currently does annual televising and pipe rehabilitation program. They would recommend on the manhole side of things to work in conjunction with this program. The inflow sources of the roof drains, vented manhole covers is the lesser expensive of the two sources of I&I to remove.

Robinson asked how this might drive the capital planning and replacement schedules. Will we be paying a little more attention to that going forward? Will we be trying to accelerate some activities to avoid I&I? Lindman explained the first step would be smoke testing and identify those locations, identify what those costs will be, and then arrange that as a project in our capital plan and it may come as a higher priority.

4) Discussion on PFAS/PFOS Related Activities and Regulations.

Agenda item tabled until April.

5) Discussion and Possible Action on the Implementation of a Rain Barrel Program City Wide.

Force advised that he, Lindman and Robinson met in person and went over options. They also held a zoom call with the village trustee and public works director in Cottage Grove, Wisconsin outside of Madison. They are in the process of installing a rain barrel program. He thought he'd summarize their findings and seek direction as to what they should do between now and the next meeting. It's quite feasible that we could implement a program by summer. They have identified a couple vendors that are capable of handling most of the program, including marketing, payment, collections, the provision of barrels as well as the connecting devices. Most of the communities they've looked at offer some type of financial incentive to those who choose to install a rain barrel. Incentives such as a rebate on the individuals water bill on an annual basis of approximately $25 and $50 knocked off the water bill. City's responsibility is to manage the distribution if we go ahead and provide the barrels, citizens would pick up usually on a Saturday morning between 9-12 that we can distribute at a city park or a city facility where we can be at a safe distance or Covid friendly manner with minimal contact. We haven't selected any vendor or adopted any particular program yet. We are not quite ready to recommend a program.

Robinson asked if there is support for advancing the program. If there is, would this be an annual rebate on the water bill or a one-time subsidy. How much money would we have to apply toward subsidizing the purchase of the barrel? I think the easier approach is to subsidize the purchase going into it and it would be much easier to administer. Force added the scenario, if a barrel costs approximately $75 and we had 100 customers participate. The utility provides a $25 subsidy, bringing the cost to the homeowner to $50. The cost to the utility would be $2,500. I would doubt the first round would amount to a lot of money, it would be rather modest agree? Robinson agreed. Rosenberg stated she is in favor of moving in this direction and in favor of letting local foundations know this is the direction we are going and see if they'd like to participate. She is in favor of the one-time subsidy instead of having people walk around to see if these barrels are being hooked up. Force asked if the board was in favor of pursuing one of these vendors that would handle everything and the only thing we would have to handle is the distribution of the barrels. Rosenberg entertained a motion to have this one time purchase subsidy and work with vendor to get this done.

Motion by Herbst, Seconded by Gehin. Motion passed 5-0.

Robinson asked Groat about any purchasing restrictions we would have in pursuing a vendor, so we

follow the city's purchasing protocol, we can follow up with you. Groat stated yes that sounds good. Rosenberg stated we will follow all procurement policies.

6) Discussion and Possible Action on the Purchase of 1010 Bugbee Ave for the Purpose of Constructing a Solar Array.

Lindman advised that the purchase agreement had a couple of edits. The environmental phase assessment came back clear with no further action, so that contingency has been met. We would like to get out there and test that soil to make sure it's compatible with what we want to do. That would be the last contingency that we have with Mathy Construction. The cost of the property would be $125,000. Once we get through the last contingency, we'd like to set up the purchase of that property.

Robinson posed a question relative to Phase I as there was no interview done with previous ownership which would be the standard protocol of phase I. They referenced the berms. Were those berms created from the movement of soil on the property or associated with fill? Boers responded that the berms remaining on site was top soil moved off site for sand recovery underneath. Robinson asked if you're comfortable that all material on site is from this site historically. Boers confirmed that we believe the berms are material from the site historically. We have a staff member who worked for the previous owner and that is his thought as well, the material was topsoil that was moved for excavation of sand underneath.

Force asked if we do not pursue the solar array, what we will do with the property. Lindman advised we would retain it or we could sell it. The utility would manage it however they want to manage that. Force asked if that is on tax roll. Lindman advised it is. Water dept. pays a pilot determined by the PSC on annual basis to city, based on the property it owns.

Motion by Robinson to approve the purchase, Seconded by Gehin.

Alderman Peckham asked if the additional property was needed to build an array of a certain size or why are we buying it. What is it going to allow the utility to do? Lindman responded that we've hired Clark Dietz to review the property we own to the north. The space we need is on the very north side of that property. We had a lot of additional construction costs to get the conductor's and additional equipment back to the treatment facility. While we were doing that, Mathy Construction approached us as they were getting ready to put this property up on market. We had Clark Dietz do an analysis to see what we could do. This is much closer to the treatment facility as far as conductor's and bringing the power to the facility. This is also a property that I think will help with the well protection plan as well. This is a 7 acre piece of property and we may need a little bit more property to the north to get it to the size we want. We will look at the varying sizes to provide enough power for the treatment facility once it's up and running. We are planning to bring Clark Dietz back to look at alternatives, paybacks, size and space. If we're looking at a 40% power generation or 60% or 90% of what the plant is using to offset power usage.

Motion passed 5-0

Adjourn.

There being no further business to discuss, the meeting is adjourned.

Gina Vang, Recording Secretary
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WAUSAU WATER WORKS
FOR YOU!

MEMORANDUM

TO: President Rosenberg
Commissioner Herbst
Commissioner Force
Commissioner Gehin
Commissioner Robinson

FROM: Eric Lindman, P.E.
Director of Public Works & Utilities

SUBJECT: Director's Report – March 2021

WATER DIVISION

1. Drinking Water Treatment Plant Update.

2. Spring Hydrant Flushing is scheduled from May 10th to the 21st.

3. Weather Permitting, uni-directional flushing should begin end of April, early May.

4. Staff will be very busy with the on-set of spring. There are already 31 service renewals that will need to be completed, now that the frost recently left.

5. Lead and Copper Rule Updates, Article from the WI Section AWWA Spring Newsletter.

6. Private Side Lead Line Replacement Funding Update: 89 letters were sent out to customers within this years' planned street reconstruction areas. Of those, 22 have called in expressing interest and have been verified eligible for funding. We have four replacements that have been carried over from last fall. And another 109 letters have gone out to past reconstruction projects, to which we are waiting for response.

WASTEWATER DIVISION

1. The Wastewater Treatment plant is on track to meet permit limits for March.

2. In February, our monthly mercury sample result was 3.83 ng/l, exceeding our daily max limit of 3.80 ng/l.

3. The wastewater plant upgrade is proceeding rapidly. The new administration building is almost ready for occupancy and we used the training room for confined space training on April 8th. The most recent Donohue status report is attached.

4. Joey Niewolny started as our new Plant Maintenance Mechanic on April 12th. Our most recently hired Sewer Maintainer declined the position so that job has been reposted.

Wausau Drinking Water Treatment Facility

Project Status

April 7, 2021

The contractor continues to take advantage of the mild spring weather. The anion exchange tanks have been lifted into the building and the roof is being installed. The mechanical contractor has taken delivery of much of the treatment equipment and begun installing it in the various tanks. Piping installation and electrical work continues in the lower level. Second floor masonry walls are being constructed and the tentative schedule is for the building to be enclosed by the end of May.

Underground piping between water plant and 500,000 gallon storage tanks is nearly complete and the contractor is working on installing piping out towards Bugbee Avenue. Currently, construction of the 500,000 gallon storage tanks is scheduled to begin in May, but has not been finalized.

Miron has begun to work on the administrative building and is in the process of pouring footings for the building. Weather permitting, foundations should be complete and wall construction should be under way by the end of the month.


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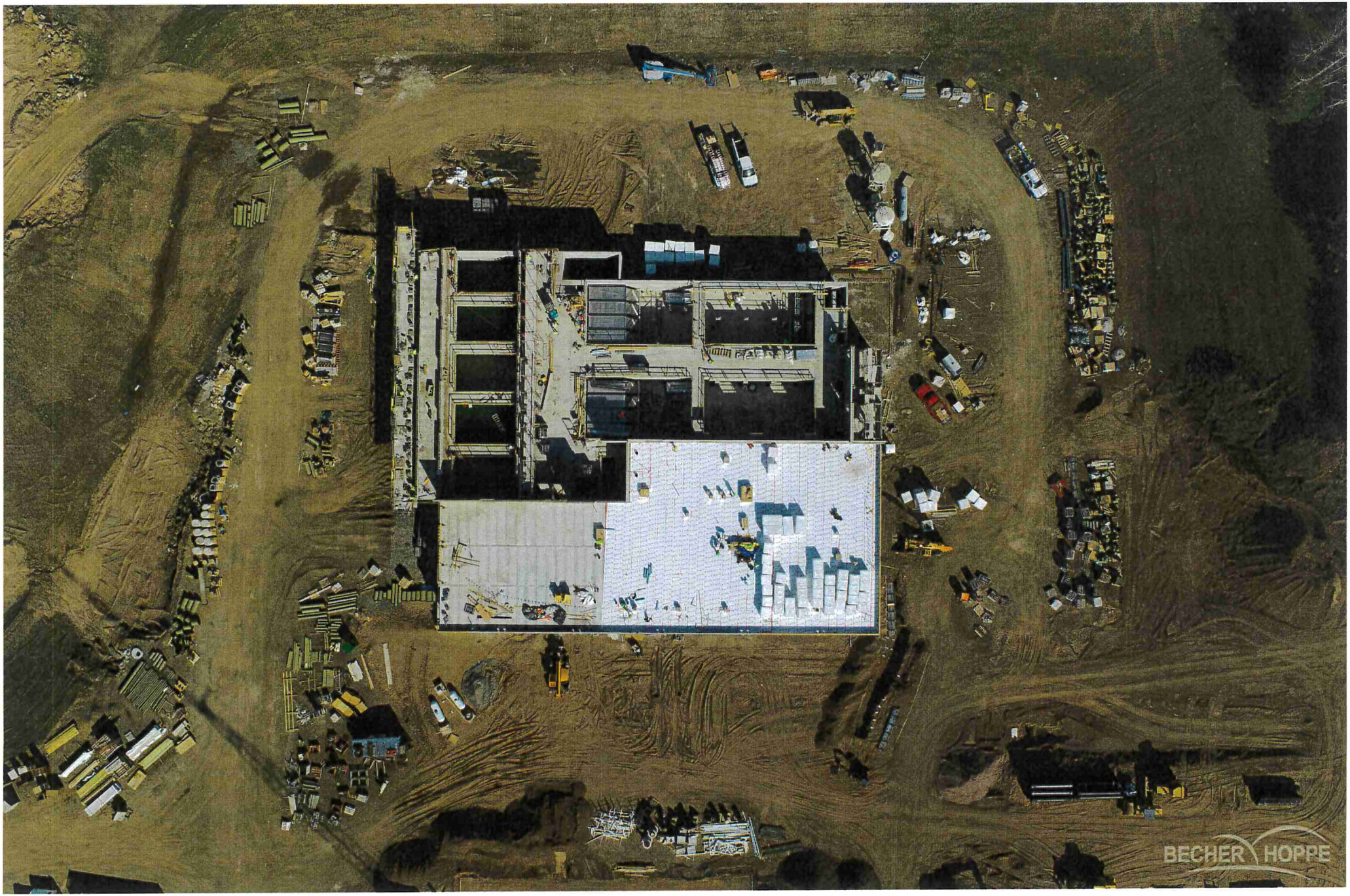

BECHER HOPPE

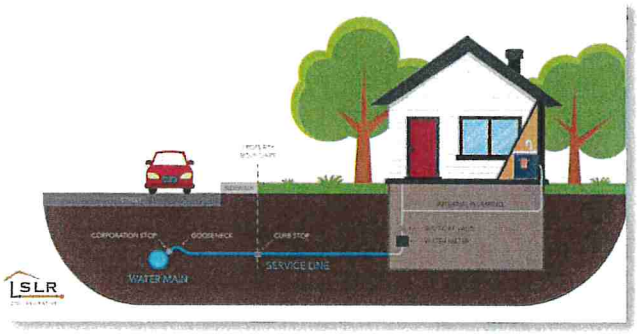

BECHER HOPPE

Lead and Copper Rule Updates

By Nancy Quirk and Karen Dettmer

As you may be aware, the National Primary Drinking Water regulations regarding lead and copper are changing. This article aims to explain those changes, and we wanted to present some of the updates from the major areas of this rule so that you can start preparing. Karen Dettmer, Milwaukee Water Superintendent, currently serves on American Water Works Association's Water Utility Council. Both Nancy Quirk, Green Bay Water General Manager and Karen are members of the Regulatory Committee for Association of Metropolitan Water Agencies and have been meeting with them and getting some details of the 115-page rule revision. This rule will likely take effect in three years, and drinking water utilities will need all of that time to get ready.

Definition of Lead Service is Modified



Defining Lead Services on the Lead and Copper Rule update

Category	Components between water main and interior plumbing	Include in LSL Inventory	Count as a replacement	Requires Public Education when disturbed	Included in Tier 1 Sample Pool
Lead Service Line (LSL)	Unknown pipe material anywhere between connector and interior plumbing	Yes	When all lead is removed	Yes	Yes
Lead Status Unknown	Galvanized service line downstream of a LSL at any time or is currently downstream of a lead status unknown service line	Yes	Where lead pipe is found and all fed is removed	Yes	No
Galvanized Requiring Replacement	Galvanized service line downstream of a LSL at any time or is currently downstream of a lead status unknown service line	Yes	When replaced along with any remaining preceding lead pipe	Yes	No
Lead Connectors	Lead gooseneck, pigtail, etc. with non-lead or galvanized pipe between connector and interior plumbing	No	No*	Yes	No

* Must replace if utility-owned when encountered during planned or emergency work. Must offer to replace, but not pay, if customer-owned.

Lead Service Line Inventory

Utilities must submit a service line inventory to the primacy agency, the Wisconsin Department of Natural Resources, within three (3) years of the final rule publication (i.e., by January 16, 2024). This is a huge undertaking for many utilities.

• All systems must develop and maintain a service line inventory. This inventory must:

- Specify "lead," "galvanized requiring replacement," "non-lead," or "lead status unknown" material on EVERY service line connected to the distribution system, in both utility- and customer-owned portions
  Include all service lines in the system
- Be publicly available. For utilities serving greater than 50,000 lines, this must be electronic, e.g., on websites, cloud-based, etc.
- Be updated within 30 days of the end of the monitoring period (regularly) and submitted to the State annually or triennially (based on tap sampling frequency) unless all lines are "non-lead,"
- Be presented in a clear format. This may be a list, table, or map with location identifiers.

The utility must notify all persons served by affected connections. Those requiring notification include all lead and galvanized lines requiring replacement and lead status unknown service lines. These must be notified within 30 days of completion of the inventory by mail or other method approved by the State. After the initial notification, further communications should be annual until the customer no longer has a lead, galvanized requiring replacement, or lead status unknown service line. Notifications must include instructions for assessing inventory in Consumer Confidence Report (CCR).

Inventory updates can stop after the utility shows no LSLs, no galvanized lines that now or ever followed a lead line, and no service lines listed as unknown.

The EPA has decided not to require inventories to provide specific addresses, but this does not preclude systems from doing so of their own volition.

Monitoring Frequency

Initially, all systems with lead service lines and systems that have not already been sampled per the new regulation and have earned reduced monitoring are on 6-month monitoring. Reduced monitoring can be introduced under any of the following criteria:

- Any system that is Trigger Level (TL) of 10ppb for two consecutive 6 month periods can go to annual monitoring. It looks like this also applies if you are TL, but less than Action Level (AL) of 15 ppb as you must monitor no less frequently than annually.
- Any small or medium system that is TL for three years can go to triannual.
- Any water system that for two consecutive 6 month periods is 5 ppb 90th percentile.

There are several triggers for returning to 6 month monitoring, like new treatments or source changes.

Sampling Methods – General

Several changes to sampling methods have also been outlined. For sampling, utilities must:

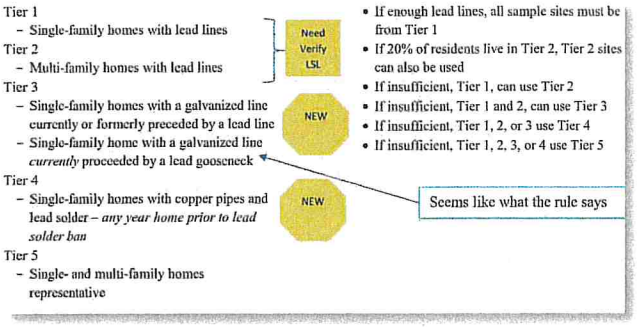
- Not direct pre-stagnation flushing,
- Not direct cleaning or removing aerators,
- Use wide mouth bottles (at least 55mm/~2"),
- Allow at least 6 hours stagnation,
- Continue to use the same sites for each monitoring period when possible.

New Tier Structure And New Tier Sample

Lead and Copper Rule Updates *continued on next page*

Structure

Sampling Collection For Analysis



For Tier 1 and Tier 2 sites, five consecutive numbered 1 Liter samples must be collected. The first liter should be analyzed for copper and the fifth for lead. The second, third, and fourth liters should be discarded. It is unclear as to whether any record of the discarded liters is required. Sampling in all other Tiers will remain the same, i.e., only the first liter needs to be analyzed.

Also, within 30 days of the end of the monitoring period, the utility must certify it has replaced all lead goosenecks they encountered during sampling and analysis.

After analyzing samples...

There will be significant changes to the notification requirements. Firstly, if the result is over the AL, all persons served by the sample tap must be notified within three days. This will be checked through the postmark. They must also be informed of any "find and fix" actions. There is more information regarding "find and fix" below.

Secondly, for all systems over AL of 15ppb for 90th percentile, there must be a public notification to the entire system within 24 hours. This follows the guidelines for E. coli contamination. Further, there must be more robust CCR language, annual service line notices (within 30 days if over the trigger level), notification of service line disturbances (before returned to service) and service line notices to persons served by the service connection.

BE PREPARED!!!

Systems can prepare to provide the notice by creating a notification template in advance. They may choose from several options to distribute a public notification, making it feasible to give 24 hours' notice to all persons served by the system after identifying the exceedance.

These options are specified in § 141.202(c) of the rule. They include broadcast media such as radio and television, posting the notice in conspicuous locations throughout the area served by the water system, hand delivery of the notice to persons served by the water system, or another delivery method approved by the primacy agency.

However, the notification required by the CCR could confuse consumers. The required statement notes the utility is responsible for "…removing lead pipes but cannot control the variety of material used in plumbing components in your home." The language as included could be misleading to consumers in areas where the property owner is responsible for removing at least a portion of the LSL, not only the plumbing components in the home. The language also implies the utility will test for lead in water at the tap of a consumer's home upon request.

Required Consumer Confidence Report Statement

"Lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. [Insert utility name] is responsible for providing high quality drinking water and removing lead pipes, but cannot control the variety of materials used in plumbing components in your home. You share the responsibility for protecting yourself and your family from the lead in your home plumbing. You can take responsibility by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Before drinking tap water, flush your pipes for several minutes by running your tap, taking a shower, doing laundry or a load of dishes. You can also use a filter certified by an American National Standards Institute accredited certifier to reduce lead in drinking water. If you are concerned about lead in your water and wish to have your water tested, contact [insert utility contact information]. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at https://www.epa.gov/safetwater/lead."

Find-and-Fix (Section 141.82(j))

A public water system is required to investigate any home sampled in the compliance pool that lead exceeds the action AL. The revisions clarified this only pertains to homes in the compliance pool. Required steps include sampling a new water quality parameter (WQP) site on the same water-main size and pressure zone located within 0.5 miles of the exceedance site. Also, sampling needs to be done within five days of receiving the lab result. Small systems without corrosion control treatment have fourteen days. WQPs must include pH, alkalinity, and orthophosphate and/or silica (as applicable).

The EPA agreed with commenters who suggested a limit on the number of WQP locations that may be added. The EPA has determined the maximum number of sites should be two times the standard number of WQP sites. The EPA decided this is a sufficient number of sites to ensure water quality. When a system exceeds this upper threshold for the number of sites, the State has the discretion to switch out sites that have been added if the newer site can better assess the effectiveness of the corrosion control treatment. The State can also remove sites during sanitary survey evaluations of optimized corrosion control treatment.

The regulations also require new WQP sites to become permanent and added to the minimum required number of WQP sites until you have twice the minimum number of sites—with State discretion. Further steps for "find and fix" include:

1. Collecting a follow-up tap sample within 30 days (different sample collection procedures are allowed to assess problems, and follow-up samples are not included in compliance sampling),
2. Mandatory determination as to whether the high result is a

Lead and Copper Rule Updates *continued on next page*

local or centralized issue,

3. Compulsory reporting of elevated lead causes, if known (site-specific issues rather than changes to corrosion control treatments or other system actions may need further action),

4. Possibly making changes to Corrosion Control Treatment (CCT), or other actions like system flushing,

5. The State approving or recommending different approaches, including requiring an adjustment to CCT (perhaps including a Corrosion Control Study (CCS) requirement),

6.Mandatory sending "find and fix" information to local health agencies.

The definition of optimal CCT won't really change but will be extended to all systems regardless of size. It reads: "the corrosion control treatment that minimizes the lead and copper concentrations at users' taps while ensuring that the treatment does not cause the water system to violate any national primary drinking water regulations." A system can therefore be deemed optimal without tests to "prove it." Specifically:

A. A medium or small system without CCT < AL for 2 6-month monitoring periods
B. A medium or small system with CCT if < TL for 2 6-month monitoring periods
C. Any system if the 90th percentile < 5 ppb for 2 6-month monitoring periods

Small systems may be most impacted by rule since, nationally, approximately 75% do not currently have corrosion control treatment. It is uncertain how many systems will be able to meet AL and/or TL since the 90th percentile will be based on the fifth-liter sample.

Any Size System With CCt And Lead Lines

If these systems go over the AL, they must do a harvested lead pipe flow-through study. This applies to any large, medium and small systems using treatment (CCT). The specific guidelines for each size of the system are as follows:

Systems >50,000

- A corrosion control study must be completed where there is CCT and the lead trigger level or copper action level is exceeded. The type of study depends on whether the system has lead service lines or not.
- In systems with CCT and >5 ppb but less than trigger level, a corrosion control study may be required by the State.
- Where there is no CCT and lead exceeds > 5 ppb, CCT must be recommended. If the utility has lead lines, they must do a CCS using a loop study. It is unclear if a large system can be considered to be optimized even after a CCS if the 90th percentile remains >5 ppb.
- Without CCT and > TL and < AL up to State.
- With or Without CCT and exceed AL must do studies.

Systems 10-50,000

- If > AL and no lead lines and no CCT, State can require a Corrosion Control Study (CCS) but must implement CCT.
- If > TL and with CCT, State can require a CCS.
- If > AL and have CCT must do a CCS (medium systems with lead lines and > AL must do a loop study).

Systems < 10,000

- If using CCS, the procedure is basically the same as for a medium system.
- CCS is not required. One can be designated by using POU devices or removing all lead lines. Please consult the rule details, or I can give you a summary if you are a small system.

How To Do A CCs

Rule revisions include specific sections related to whether a utility has CCT in place. They are nearly identical and include the following:

1. Systems required to do a CCS with lead lines must do a harvested lead pipe loop study. Coupons can be used to screen alternatives.

2. The CCS must consider:
   a. Alkalinity /pH CCT (if you already use it test adjustment),
   b. Orthophosphate or silicate sufficient to maintain optimized CCT (OCCT),
   c. Orthophosphate at residuals of 1 and 3 mg/L PO4 (unless already met).

3. If a loop study is not required, the CCS can be done by loop tests, coupon tests, partial-system tests, or analogous system.

4. There is a list of parameters that must be measured in the tests.

5. There are ways to show a particular method is not feasible, but getting out of orthophosphate testing is very unlikely considering how it is written.

Some Notes On Coupons And Loop Studies

For coupon studies, they recommend using a procedure developed and published in Journal AWWA October 2019 Corrosion Control Protocol (CCP). This is not the traditional metal-loss procedure. Researchers have had excellent success with the CCP method.

Loop testing is not defined other than it must be a flow-through harvested pipe study. Traditionally this means a pilot type study located at the water treatment plant or in the system somewhere. They can take upwards of 24 months plus to complete, and costs can run into seven figures. Currently, Milwaukee is undergoing a pipe loop study, and consultant and subcontractor (labs) fees are close to $500,000, in addition to internal personnel costs for harvesting the lead pipe, maintaining the pipe loop, and project management. Pipe loop studies are appropriate in many cases. Green Bay has been developing a laboratory-scale harvested pipe flow-through test. It is much quicker and less expensive. Green Bay has been getting good results when compared to the traditional method. It has now been approved to use in about five utilities. Once there is enough comparative data, the researchers will try to publish the method.

Lead and Copper Rule Updates *continued on next page*

Source Or Treatment Change

The rule requires that if you are making a source or long-term treatment change, you must notify the State. The State will decide if you need to do a study. This is really the same as always, and there isn't a lot of new information. There is a WRF project where they are developing State and Utility guidance on when such a study is needed and how to decide that it is required. The guidance will assist systems in making these decisions. The draft report is due in spring 2021.

Lead Service Line Replacement Plan

All systems with any LSLs, galvanized requiring replacement, or with unknown lead status service lines must develop a full LSL replacement (LSLR) plan that includes:

- A strategy for determining the composition of lead status unknown service lines in its inventory.
- Procedures to conduct full LSLRs.
- Strategies for notifying customers prior to full or partial LSLRs.
- Recommended LSLR goal rates in the event of trigger level exceedance (small systems are exempt), approved by the State.
- Procedures for customers to flush service lines and premises plumbing.
- A LSLR prioritization strategy.
- A funding strategy considering ways to accommodate customers who are unable to pay to replace the portion themselves.

Furthermore, all systems with LSLs or unknowns must create and submit a goal-based replacement plan within three years of rule publication. The plan must include lead line confirmation, procedures to conduct a Full LSLR (FLSLR), strategies to inform customers before replacement, and for systems >10,000, a goal replacement rate for when/if the TL is exceeded, flush procedures, replacement prioritization, funding strategy (nothing requires the water system to pay for customer side). In addition, lead goosenecks must be replaced whenever encountered.

Water systems must complete customer-initiated LSLRs within 45 days of notification by customers that they are replacing their section of the LSL with the possibility of extending this to 180 days. Customers must be given pitcher filters until the utility completes LSLR for the utility owned section or within 24 hours of learning of a partial customer replacement. It is important to note the language indicates timing starts from notification from the customer that they will be replacing their section of the LSL, not 45 days within the actual replacement.

Additionally, if the utility exceeds the TL, it must implement the goal-based plan. The State can specify the rate if the TL is exceeded until the system has been below the action level for two years. However, if AL is exceeded, there is a mandatory 3% annual replacement, which the State can increase. This is based on a rolling 2-year average. The number of LSLs requiring replacement is the number of LSLs plus the number of galvanized lines requiring replacement plus the number of unknowns multiplied by 3%.

Notably, only FLSLRs count toward the goal or mandated replacement, but the language is somewhat confusing. AWWA is asking for clarification.

A pitcher filter must also be provided to customers after a full or partial LSLR for six months. The utility must also provide flushing information and collect a lead tap sample within 3-6 months following LSLR. Regarding flushing, Water Research Foundation study 4713 evaluates home flushing procedures. Two different procedures were evaluated, and recommendations were made for flushing after a partial LSLR (PLSLR) and after a FLSLR.

The final rule includes a provision to allow up to 180 days after notification to the State, citing public comments laying out concerns regarding seasonal work limitations.

Post-Replacement Steps & Filter Requirements

Following any replacement, the utility must provide education around the potential for elevated lead, risk mitigation, and flushing procedures to remove particulate lead. They must also provide pitcher filters or point-of-use devices and replacement cartridges with use instructions for six months. The utility must also offer to collect a follow-up tap sample between 3 and 6 months after completion and make the results available to the consumer. The inventory and compliance sampling pool should also be updated if needed

The final rule does not include a requirement for water systems to include pitcher filter tracking and a maintenance plan because water systems will likely distribute the filters and all replacement cartridges simultaneously, making it unnecessary to track filter replacement schedules over time.

School And Childcare Facility Sampling

Section 141.92 requires specific approaches for schools and childcare facilities. This includes developing a complete list of schools and childcare facilities in a service area. These facilities must be provided annual information about lead and health risks. Additionally, systems must complete one sampling cycle over five years, covering 20 percent of all public and private elementary schools annually (five samples each), and 20 percent of all licensed childcare facilities (two samples each). Upon request, secondary schools must be sampled. After the initial five-year sampling cycle, schools (primary and secondary) and childcare facilities can request sampling from the utility. The EPA has revised §141.92(a)(3) to document a non-response after a system has made two separate good-faith attempts to reach the facility. In §141.92(c), the EPA also clarified that non-responses and refusals may be accounted for in the annual 20 percent testing requirement for elementary schools and childcare facilities during the mandatory sampling.

Notably, the EPA agrees various programs may differ from the proposed requirements but may otherwise be sufficient or more comprehensive. In response, the final rule provides additional flexibility for existing programs to reduce duplicative testing by systems.

Lead and Copper Rule Updates *continued on next page*

Lead and Copper Rule Updates *continued from previous page*

School and licensed childcare facility testing procedures should match the EPA's recommended testing procedures in its '3Ts for Reducing Lead in Drinking Water in Schools and Child Care Facilities' manual and must recognize that any testing carried out by water systems in school or childcare facilities will be the result of a collaborative process.

The EPA has clarified that the remediation information should be detailed in the 3Ts. Schools and childcare facilities are encouraged to use the testing results and 3Ts Toolkit to inform follow-up activities and remediation actions.

Summary

Overall, the changes will significantly impact systems with LSLs, galvanized service lines ever downstream of an LSL, and service lines of unknown material. Clearly, early coordination with States is essential to develop initial LSL inventories and replacement plans within three years of the updated regulations' final publication. Therefore, incentives to verify unknown service lines' material composition should be realized as early as possible to reduce partial replacements.

What To Expect Next – Schedule

Here is an overview of the new regulation publication and compliance schedule:

January 15, 2021 LCR Revisions Published

March 15, 2021 Rule as published final if there is no action by the new administration

January 16, 2023 Primacy Package

January 16, 2024 LSL inventory and LSL replacement plan must be complete
New compliance requirements in effect for Trigger Level, Find-and- Fix, Public
Notice requirements, Notifications, School, and childcare monitoring

The Biden Administration has placed a hold on the revisions until their review is completed. It is believed that the new administration will move forward with revisions in some form rather than pull it back for a lengthy complete overhaul with additional public comment. In addition, at least two legal challenges have been filed against EPA, arguing the revisions do not go far enough to require the removal of lead piping. AWWA has intervened in these law suits to ensure water utilities have a place at the table if EPA negotiates a settlement.

We hope that this overview is helpful to you. But remember, this is a summary, not an exhaustive guide. Every utility and service must review the original rule revisions as there are many more details to consider.

Project Status Report

Wastewater Treatment Facility Improvements Project – Engineer During Construction

City of Wausau, Wisconsin

Donohue Project Number 13229

Period | February 7, 2021 – March 6, 2021

Invoice 45

Engineer Activities This Period

- Construction administration services related to technical review of contractor shop drawings, responding to contract interpretation questions (RFIs), initiating requests for proposals (RFPs), attending weekly and monthly construction progress meetings, processing work change directives to the contract, and contractor monthly payment requests.
- Prepared and submitted Clean Water Fund disbursement request and provided CWF administration.
- Provided full time Resident Project Representative (RPR).
- Provided part time on-site observation of selected work by Becher-Hoppe.
- Becher-Hoppe also provides input into appropriate shop drawing reviews, RFI responses, and RFP requests.
- Submitted Change Orders 4 and 5 for Owner signature.
- Prepared several Work Change Directives to address unforeseen work that needed to be expedited to allow the Contractor to maintain their construction scheduled progress.
- Weekly coordination calls have been established to facilitate contractor startup of the various systems that are being scheduled for near-future startup.
- The Engineer's application engineering staff are working on the various systems programming that will need to be completed as the new unit process systems are brought into operation. Start-up of servers to occur this week.
- Developed into a weekly meeting are discussions pertaining to system commissioning and how all systems tie together to provide further detail to the construction schedule.

Engineer Near-Term Activities

- As the project proceeds, the engineer will continue to provide construction administration services including the technical review of shop drawings, responding to RFIs, preparing RFPs, attending weekly and monthly construction progress meetings, processing change orders, reviewing contractor payment requests, and providing full-time on-site resident engineering services.
- Preparation of Change Order 6.
- Continue to coordinate temporary Server install and work thru connectivity protocol to the City's Network for initiation of Applications Engineering programming.
- The "administrative" portion of Administration Building (Structure 120) has been substantially completed. The Design Team will be conducting a punch list review of this work in the next week. Substantial Completion of this portion of the building will allow the Owner to occupy this area by the end of March. Substantial Completion of the laboratory is expected to be achieved by mid-April.

Contractor Progress to Date

- The Notice to Proceed with Construction was issued to the Contractor on June 18, 2020 and established the final completion date as June 3, 2023.
- Construction on the improvements to the Wastewater Treatment Facility (WWTF) began on July 6, 2020.
- Structure 100 (Main Building):
    - Miron continued with formwork and poured the slab on grade for the new electrical, generator and gas compression rooms.
    - Van Ert Electric placed conduit for new switchgear and generators.
    - Concrete work and mechanical piping work continued in the gas compressor lower level area.
    - Masonry work is almost complete for new electrical, generator and gas compression rooms.
    - Precast plank ceiling set for gas compressor room.
    - Van Ert placed new CT cabinets for main power coming into the plant.

- Structure 120 (Administration Building):
    - Meeting took place with City of Wausau Fire Department to determine location of knox box.
    - Miron, Van Ert Electric and August Winters and Sons are working on final building, mechanical, electrical and plumbing details for milestone walk through in March.
    - Roofers are working on finishing touches on roof, parapet and exterior trim.
    - Skylights have been installed in garage area of structure.
    - Garage doors, exterior doors and main vestibule windows are installed.
    - City of Wausau building and electrical inspectors have been onsite to review progress on structure.
    - Tile, flooring, ceiling tile and casework has been installed in administration area of structure.
- Structure 350 (Primary Effluent Channel) and Structure 404 (Junction Structure):
    - Miron placed the aluminum grating along the top of the channel.

- Structure 400 (Activated Sludge Building):
    - Van Ert Electric is placing conduit in upper and lower levels of structure for new blowers and equipment.
    - Miron has demolished the old blower equipment pad and floor opening to allow for new pad and floor fill in work.

- Structure 610 (Chemical Building):
  - Miron masons completed the exterior face brick on structure.
  - Roofers completed the roof insulation and membrane placement.
  - Miron boxed in doors and openings of structure to allow for heaters to be placed for painting and for mechanical, electrical and plumbing work to commence.
  - Painting of the inside of the structure has started.

- Structure 700 (Digester Building) and Structures 710, 720, 730 and 740 (Digesters 1, 2, 3 and 4):
  - Miron saw cut south grade level opening.
  - August Winters and Sons placing hot water supply and return and biogas piping in structure, as well as prior to placement of new piping temporarily moving the existing piping to allow the facility to continue operations.
  - Biogas boilers are placed on equipment pads.

- Structure 770 (Solids Building):
  - Miron placing formwork for north and northeast stairs from lower level to grade and rubbing concrete walls in lower level of structure.
  - Precast walls and roof placement continue for at grade areas of structure.
  - August Winters and Sons is beginning placement of floor drain and large bore process piping in lower level of structure.
  - Van Ert Electric continues installation of conduit runs from Tunnel 910 into the lower level of Structure 770 (Solids Building).
  - Formwork placed for sludge screening room structural slab.
  - Chemical room tank pads poured and coated, prior to placement of chemical tanks.

- Tunnel 910
  - Miron continued with concrete rub on tunnel walls.
  - Van Ert Electric has been installing 4-inch conduit along ceiling for electrical feeds to Structure 770 (Solids Building).

- Site Work: Integrity Grading and Excavating is working on piping runs between Structure 340 (Primary Clarifier 4) and Structure 410 (Activated Sludge Basins) that will run from Tunnel 900 to Structure 770 (Solids Basin). Michels is on site to remove dewatering setup at the east side of the site. Temporary location of network/SCADA system installed in generator room at the Department of Public Works Facility.

- Valentine's Day Digester Sludge Leak from Structure 740 (Digester 4): At roughly 5:30 am on Sunday February 14, 2021, Secondary Digester 4 started to leak in the lower level of Structure 700 (Digester Building). By the time Miron arrived onsite (9:30 am) to check their heaters placed around the site, they noticed that there was an issue in the lower levels of Structure 700 and Structure 770 (Solids Building). Miron contacted City staff and the cleanup began. The sludge flooded into the lower levels of Structures 100 (Main Building), 400 (Activated Sludge Building), 700 and 770 as well as all Tunnels 900 and 910.

- Construction progress photographs are located at the end of this progress report.

Construction Schedule

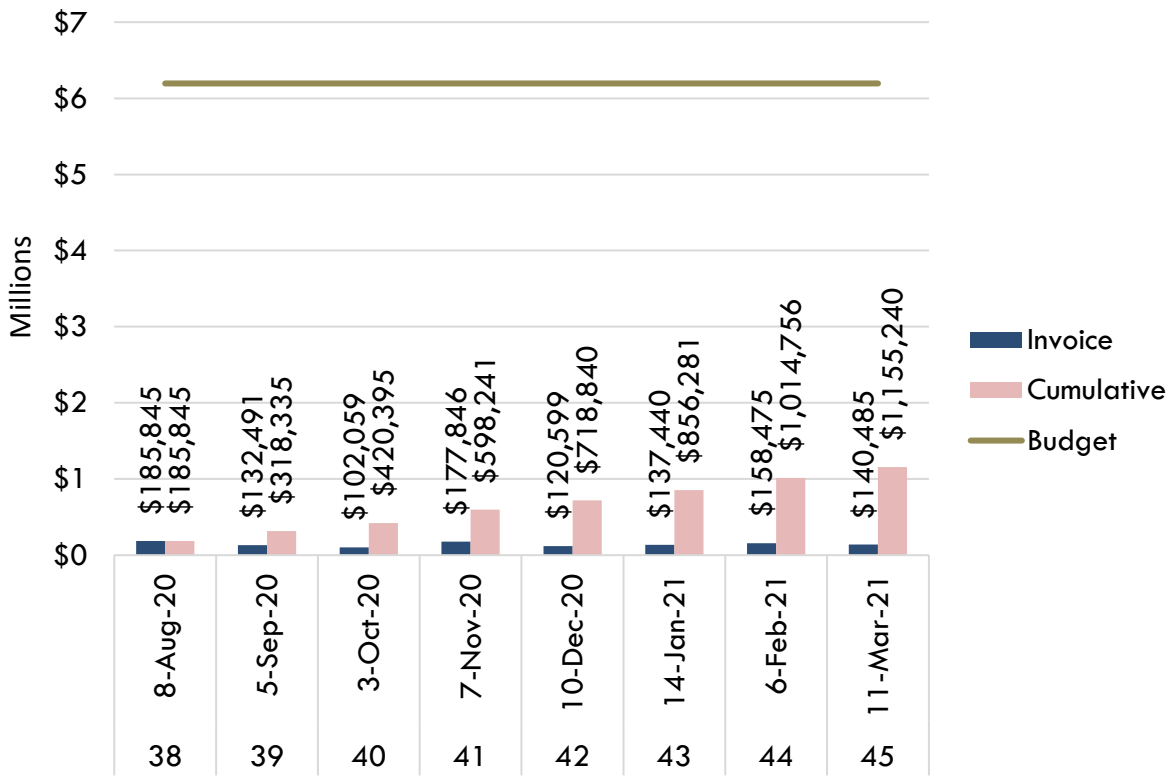
- The Contractor has developed a detailed construction schedule that defines a timeline for the orderly completion of the work and a breakdown by structure of the work to be done in the various work areas. We continue to review the timeline and work tasks against the various constraints identified in the project manual to confirm that the contractor has adequately addressed them and accounted for shutdown time limits as their work proceeds.

Period | February 7, 2021 – March 6, 2021

Invoice 45

Project Related Budget Snapshot

Construction Engineering Budget



Project Status Report

Wastewater Treatment Facility Improvements Project – Engineer During Construction

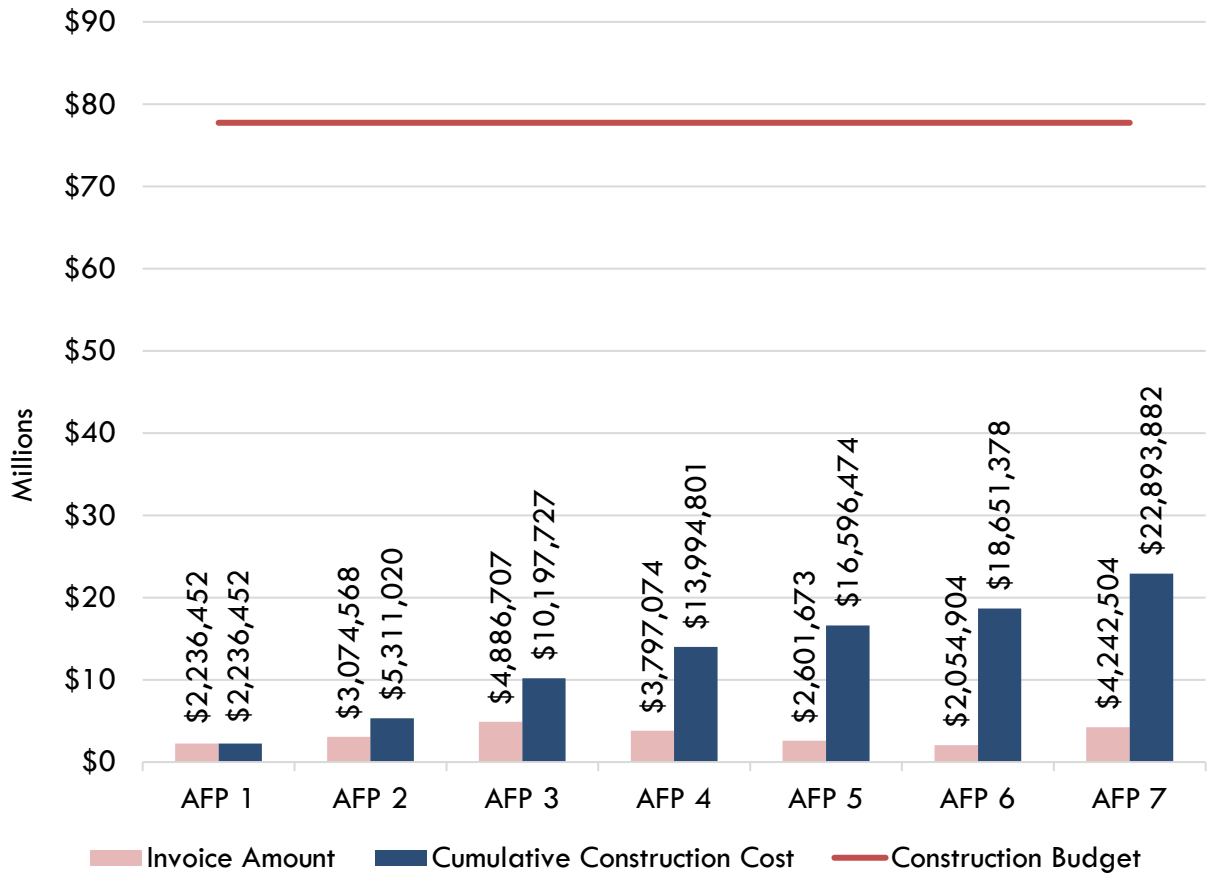
City of Wausau, Wisconsin

Donohue Project Number 13229

Period | February 7, 2021 – March 6, 2021

Invoice 45

Construction Budget: Pay Applications Approved by Engineer



Project Status Report

Wastewater Treatment Facility Improvements Project – Engineer During Construction

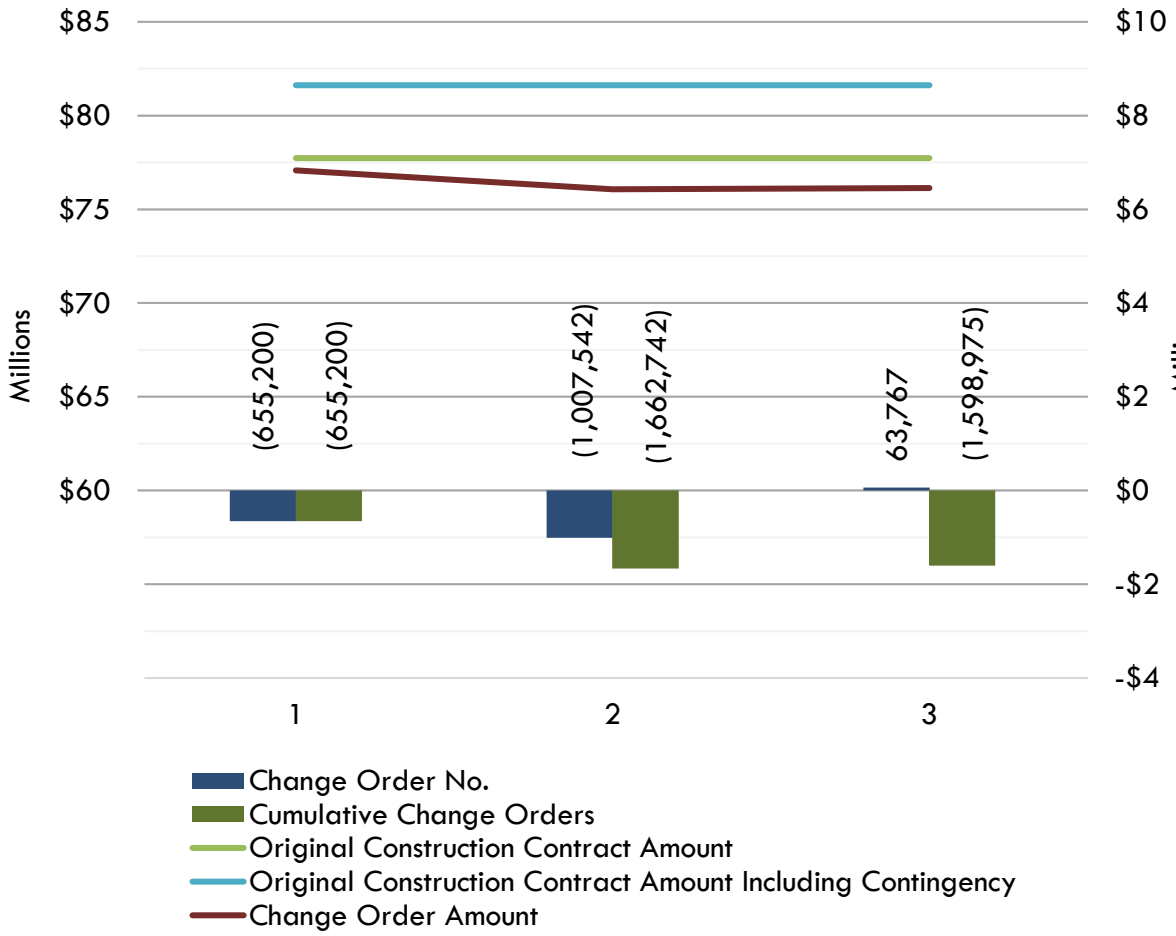
City of Wausau, Wisconsin

Donohue Project Number 13229

Period | February 7, 2021 – March 6, 2021

Invoice 45

Overall Project Budget



Budget Notes:

1. No budget issues at this time.

Remarks

1. None.

Construction Photographs

Site work, installing piping runs.

Miron forming for slab on grade pour at Structure 100 (Main Building).

Conduit runs for new Structure 100 (Main Building) electrical switchgear

Structure 100 (Main Building) concrete masonry unit walls and precast plank for new electrical room and gas compressor room.

Casework placed in the new breakroom of Structure 120 (Administration Building).

Garage doors, lights and skylights have been installed in Structure 120 (Administration Building).

Miron placed the aluminum grating along the top of Structure 350 (Primary Effluent Channel 350).

At Structure 400 (ML Channel), Miron preparing to demo existing blower pipe penetration.

Structure 610 (Chemical Building): roof insulation and membrane work completed and openings enclosed for heating.

Painters completed chemical tank room coating on interior of Structure 610 (Chemical Building).

HWS and HWR lines installed and anchored to concrete masonry unit walls of electrical room in Structure 700 (Digester Building).

August Winters & Sons bringing in a new biogas boiler through new south access door at Structure 700 (Digester Building).

Formwork for northeast corner lower level stairway in Structure 770 (Solis Building).

Floor drain and mechanical piping placed in lower level of Structure 770 (Solids Building).

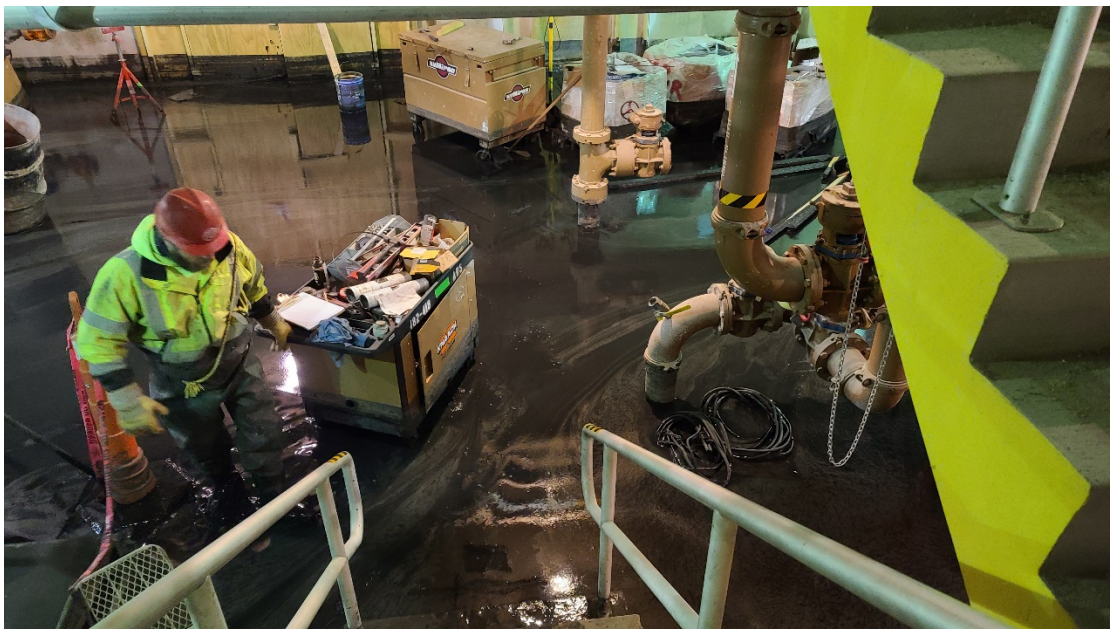
Structural slab for sludge screening room placed in Structure 770 (Solids Building).

Looking east from the Control Room deck to the newly placed chemical feed tanks in Structure 770 (Solids Building).

Last of the wall and roof precast work placed for the exterior of Structure 770 (Solids Building).

August Winters & Sons placed 16-inch ductile iron return activated sludge piping at south end of Tunnel 900.

In Tunnel 910, Miron continued with concrete rub on tunnel walls. Van Ert installing 4-inch conduit along ceiling for electrical feeds to Structure 770 (Solids Building).



Sludge in the lower level of Structure 700 (Digester Building).

Line on wall in the Boiler Room of Structure 100 (Main Building), indicating sludge depth approximately 20 inches.

Lines on wall showing sludge depth down new Tunnel 910 heading to Structure 770 (Solids Building).

Sludge line on wall in the lower level of new Structure 770 (Solids Building) indicating sludge depth of approximately 56 inches.

INVOICE

DONOHUE

3311 Weeden Creek Road
Sheboygan, WI 53081
Phone: 920-208-0296
www.donohue-associates.com

Invoice To:

City of Wausau
Attn: Dave Erickson
407 Grant Street
Wausau, WI 54403

Invoice Date:	March 11, 2021
Donohue Project No.:	13229
Invoice No:	13229-45
Project Manager:	Mike Gerbitz
Terms:	Net 30 Days
Billing Period:	02/07/21 - 03/06/21

Project Description: Wastewater Facilities Plan & Design

Your Authorization:
Engineering Services Agreement, Signed 03/29/17
Amendment No. 1, Signed 06/28/18
Amendment No. 2, Signed 03/05/19
Amendment No. 3, Signed 01/27/20
Amendment No. 4, Signed 05/07/20
Permit Review Fees Payment Request, 02/27/20

Compensation:

Time and Expense	$	129,220.00
Time and Expense	$	984,565.00
Time and Expense	$	3,323,900.00
Time and Expense	$	4,351,831.00
Time and Expense	$	1,843,325.00
Permit Review Fees	$	12,534.50
Total	$	10,645,375.50

Billing Summary:

Total Charges to Date	$	5,605,475.95
Charges Previously Billed	$	5,464,991.15
Current Charges	$	140,484.80

Summary of Current Charges

Labor (861.0 hours)	$	129,632.50
Reimbursable Expenses (Travel, shipping, printing)	$	4,401.30
Permit Review Fees	$	-
Subconsultants	$	6,451.00
Total	$	140,484.80

Current Charges Due	**$**	**140,484.80**

Please Remit to:

Donohue & Associates, Inc.
3311 Weeden Creek Road
Sheboygan, WI 53081
Phone: 920-208-0296
Fax: 920-208-0402

Aged Receivables

Current	31 - 60 Days	61 - 90 Days	91 - 120 days	>120 days
$140,484.80	$0.00	$0.00	$0.00	$0.00

Clark Dietz

Engineering Quality of Life®

Wausau DWTF Solar

Water Commission Update – April 13, 2021

Update on Solar Siting

- Initial location to the north of the DWTF was deemed unsuitable for a solar installation
- Investigated areas further north
- Property at 1010 Bugbee became available
  - Survey field work has been completed
  - City is pursuing purchase of the property
  - Geotechnical investigation will occur after purchase

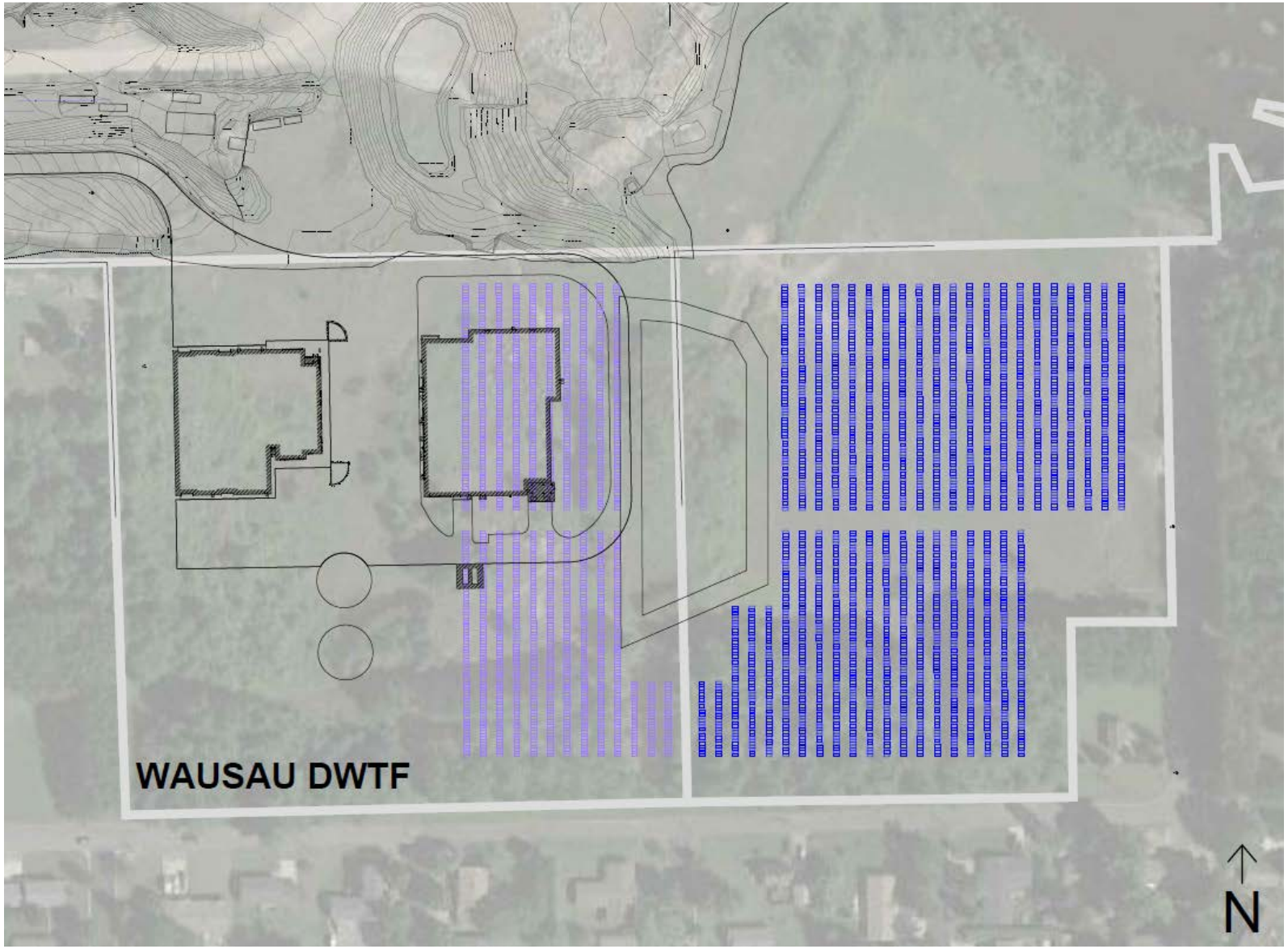
Sunvest Introduction

- Sunvest is a solar developer and our resource for the photovoltaic design
- Extensive experience in Wisconsin and the Midwest
- At the forefront of the latest solar technologies
- They offer a real-time perspective to constructability and costs associated with this project

Preliminary Layout – 1010 Bugbee

- Facility annual electrical consumption is approximately 3,000,000kWh
- Estimated production of Single Axis Tracking Solar Array – 1,405kWh/kW* – based on DC system size
- Each MW (DC) of Single Axis Tracking solar requires 6 acres of viable property – dependent on soil quality, solar obstructions (trees) and topography
- Potential system size at 1010 Bugbee Ave: 1.23 MW
- **Annual production: 1,722,000 kWh, or 57% of estimated facility consumption**
- **Estimated system cost: $1,889,082 or $1,560/kW* (DC)**
- **Estimated ROI 13.9 years**

Preliminary Layout – 1010 Bugbee



90% Design

- Estimated size for a 90% offset system – 1.92 MW
- Estimated cost - $2,977,300 for single axis tracking system
- Estimated ROI – 14.7 years

Example Photo – UW Parkside

Example Photo – Washington County

Typical Array – Ground Level

Array with Pollinator Habitat

Construction Photo – Posts

Construction Photo – Racking

Construction Photo – Inverters

Sample Construction Timeline

Item	Date(s)	Notes
Prior to contract award – system size, location and project developer will be determined		
Contract Award & Execution	1/1/2022	Contract award assumes system size and location have been determined
Preliminary design completed Permit application and approval	2/15/21	
Design approval • Main Service Gear Approved • Final electrical design • Structural design complete	2/15 – 3/31/22	Structural design includes "pull test" & geotechnical survey
Preconstruction Meeting	3/15/22	
Construction Start-Up • Trailer & Equipment Staging • Security Protocols established • Site Safety Planning	4/1/22- 4/10/22	
Array Construction begins • Material mobilization • Vertical post ramming • Tracker Assembly • Module Installation	4/3/22 - 5/30/22	
Electrical Work • Transformer(s) set • Directional Boring/underground conduit installation • AC panels and wiring • DC array connections • Utility connections • Testing of all circuits		All electrical work will occur simultaneously during array construction. Inverter installation and DC/AC connections included
Landscaping, pollinators and site clean-up	6/1/22	
Commissioning & Start up • Training • Owners Manuals	6/15/22	

Please note:
This table uses a commencement date of 1/1/2022 as a sample starting point.

Questions?

Department of Public Works

Eric Lindman, P.E.
Director of Public Works and Utilities

TO: Wausau Waterworks Commission

FROM: Eric Lindman, P.E.
Director of Public Works & Utilities

DATE: April 13, 2021

SUBJECT: Possible partnership on Solar with WPS and WEC Energy Group

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Staff had a meeting with Wisconsin Public Service (WPS) and WEC Energy Group Corporate staff. WPS and WEC would like to partner with the utility and City on developing solar power generation. They have liked what we are proposing for the DWTF and since they have not done a project in this area they would like to have this site considered for their first partnership.

We will be continuing to work with Clark Dietz on the design of the system and will be having a meeting with WPS on the required Interconnect Agreement. Through this process we will begin to have discussions about partnering and determining details about that partnership moving forward. WPS and/or WEC will be at a future meeting, possibly in May, so we can propose what a partnership would look like as well as time frame.

Past discussions about building solar were determined not economical and WPS did not have any programs or partnerships in place to support alternative energy. It is very positive that they are willing to partner with us and assist/support us with this initiative. There could also be potential for them to partner with us on future sites within the city to build solar. Establishing this partnership and building it over time is beneficial for residents as well as the environment.

Department of Public Works

Eric Lindman, P.E.
Director of Public Works and Utilities

TO: Wausau Waterworks Commission

FROM: Eric Lindman, P.E.
Director of Public Works & Utilities

DATE: April 6, 2021

SUBJECT: Rain Barrels – Implementation Program

As part of the WauterSavvy initiative, a rain barrel program was approved to be developed at the march Commission meeting. Since the last meeting Commissioners Force and Robinson along with myself held a conference call with Rain Barrel Solutions. Rain Barrel Solutions is a 3rd party vendor who manufactures and sells rain barrels and also administers online sales of the barrels directly to residents. Based on our call with Rain Barrel Solutions the program would be set up as follows:

1. Enter into an MOU (attached) with Rain Barrel Solutions (RBS)
2. RBS will set up a website for Wausau residents to order and pay for rain barrels
3. The utility would subsidize the purchase (Ex: if the commission wants to subsidize the barrels then residents would pay the discounted amount online and RBS would bill the utility the difference)
4. RBS takes the orders and sends us the addresses to review and make sure they are in the City limits, if they are then they get the discounted rate and if not then they pay full price for the barrel.
5. We allow for 4-6 weeks to advertise and allow people to purchase the barrels then on a specified date the website would no longer allow residents to purchase and would list the pick-up date.
6. The barrels would be shipped and arrive within a week of the purchase time ending
7. City will set up a day and time for residents to pick up their barrels, the 3rd party would assist with the pick-up and/or volunteer groups could assist for a donation

Looking at a general timeline with RBS the program timing would look similar to the following:

1. Wednesday April 7, 2021 – Begin advertising the website and program
2. Friday June 11, 2021 – Last day to purchase
3. June 19 or 22, 2021 – Pick up day (Saturday or weekday???)

Pick up during the week can be done later in afternoon so residents have time after work or we can set it up on a weekend. RBS stated either works well so we can determine what works best for our situation.

The Commission will need to determine the amount per barrel to subsidize so we can get the pricing established on the website. Based on interest and calls we should plan on selling 500-600 barrels and hope we can meet this goal. RBS stated they typically see the number of barrels sold is about 1% of the population, they feel this is a good rule of thumb.

JOB DESCRIPTION
Water Distribution Maintainer/Relief Operator

Job Title:	Water Distribution Maintainer/ Relief Operator	Reports To:	Water Superintendent
Department:	Public Works & Utilities	FLSA Status:	Non Exempt
Division:	Wausau Water Works	EEO Code:	8-Service-Maintenance
Salary Grade:	18	Occupational Code:	3220
Employee Group:	General Employee	Training Category:	E-Specialized
Created:	January 2021	Last Revision:	January 2021

This description is not an announcement of a position opening. To view current openings please visit www.ci.wausau.wi.us. The following statements are intended to describe, in broad terms, the general functions and responsibility levels characteristic of positions assigned to this classification. They should not be viewed as an exhaustive list of the specific duties and prerequisites applicable to individual positions that have been so classified.

Purpose of the Position

Installation, maintenance and repair of all assets associated with the pumping, treatment and distribution of potable water. Skilled work in the operation of wells, water treatment, and storage systems of the public water supply, to safely and efficiently supply water to the community. This position supports the utility in operating efficiently and effectively while maintaining a high level of customer service and staying compliant with governing/regulatory agencies (WDNR, EPA, WPSC). The Water Distribution Maintainer is expected to perform Distribution Maintainer duties approximately 60% of the time and Operator duties 40% of the time.

Essential Duties and Responsibilities

Distribution Maintainer duties

1. Make taps in water lines with tapping machines, install taps and copper service lines.
2. Install new, repair, or replace sections of water mains, fire hydrants, service laterals, curb boxes and water main operating valves.
3. Repair and replace concrete sidewalks, curbs and gutters and landscaping after water main or service installation and/or repair.
4. Thaw frozen hydrants, mains and services using hand tools, electric welder or water jetting equipment.
5. Operate large backhoe and other heavy equipment for trenching, filling ditches, and similar work around gas, power, fiber optic lines and other utilities, where fine tolerance is required and where serious hazards to the operator or other employees may exist.
6. Drive liquid solids truck and operates equipment for the Utility's Treatment Solids Disposal Program. Coordinate placement of product and land availability with landowners. Maintain program compliance with WDNR regulations.
7. Operate large end loader for loading trucks and performing similar work.
8. Install, remove, or replace water meters. Turn on or off water service as requested. Perform inspections for leaks and cross-connections.
9. Install and repair remote meter reading equipment including installation of radio reader and cables. Perform necessary checks to verify proper function of equipment. Accurately document work performed.

10. Investigate customer water complaints and take necessary corrective action.
11. Test meters in the shop and field test larger meters per WPSC requirements. Accurately record and document information.
12. Repair, clean, and rebuild meters as required.
13. Read meters as assigned.
14. Read and interpret maps and navigate GIS system.
15. Locate water service and main leaks using Acoustic or computerized leak detection devices.
16. This position may assist the Department of Public Works with duties as necessary and assigned.
17. Locate underground utility lines in accordance with Diggers Hotline using electronic locating equipment.

Relief Operator duties

18. Operates and maintains water plant to comply with all EPA and WDNR regulations and water quality standards. Performs Standby as assigned to assure plant operations are sustained.
19. Operate water treatment plant equipment including pumps, air compressors, electric motors, electrical generators, solids removal and chemical feeding equipment, monitor process control systems and resolve alarm conditions, etc.
20. Obtain working knowledge of process control system and utilize system for plant and supply control.
21. Perform chemical and bacteriological tests on raw and treated water including pH, hardness, alkalinity, iron, manganese, fluoride, chlorine, and similar tests. Draw samples for quality control and compliance monitoring.
22. Read meters, gauges and flow charts. Record necessary information and make mathematical calculations.
23. Record, document and report information on plant operations as required by state and federal regulations.
24. Assist in maintaining and repairing of plant equipment including check oil and lubrication levels of pumps and motors; and adding lubrication as needed; perform general maintenance tasks such as packing pumps, checking pump calibration, and general maintenance.
25. Collect samples from plant and distribution as required by state and federal regulations.
26. Perform custodial related work as necessary to maintain plant cleanliness, including sweeping and mopping floors, washing windows, removing snow by hand and small power snow removal equipment, mowing lawns, hosing the interior of tanks and painting building and equipment as needed.
27. Perform maintenance of plant facilities, including plumbing, plastering, painting and carpentry work.
28. Order/receive and maintain inventory for all chemicals used in the treatment process, lab and facility.
29. Familiar with proper PPE used for working with Lime, Sodium Hypochlorite, Ammonia, Fluoride and other hazardous chemicals.
30. Foster a productive and collaborative work environment by coordinating work efforts with other City departments and employees.

Additional Duties and Responsibilities

While the following tasks are necessary for the work of the unit, they are not an essential part of the purpose of this position and may also be performed by other unit members.

- Possess knowledge of WDNR Water Well Codes and has the ability to perform field inspections.
- Obtain knowledge of Cross Connections and Cross Connection Control Devices and have the ability to become certified for inspections and repair.
- May perform tasks of the Senior Water Distribution Maintainer during his/her absents.
- Performs tasks of Water Plant Operations Technician when necessary
- Performs other tasks and projects as assigned by the Water Superintendent or his/her designee.

Education and Experience Requirements

Necessary Requirements: High school diploma or equivalent. Possession of a valid Class B Wisconsin Commercial Driver's license (CDL), including tanker endorsement (N), or ability to obtain the Class B CDL with N endorsement within 12 months of hire, and to be maintained throughout employment.

Preferred: Experience in construction and repair, water main construction or repair, trade experience, plumbing, mechanical or electrical experience.

Required licensure and credentialing or the ability to obtain within 24 months of hire includes:

- Certification in Wisconsin DNR Waterworks Operator Grade 1- GDLV certification

Knowledge, Skills and Abilities

- Able to read and interpret maps, ability to use a Tablet or PC to navigate GIS Systems.
- Knowledge of safe and efficient operation of facility equipment, pumps, electrical motors, generators and process control systems.
- Ability to problem solve, communicate effectively and maintain effective working relationships.
- Knowledge of or ability to learn safe and efficient operation of conventional and specialized large and small vehicles and construction equipment typically used in a municipal public works department. Ability to do manual labor such as shoveling.
- Knowledge of or ability to learn and apply the proper methods, tools, materials and equipment used for the repair and maintenance of water distribution systems, street pavements and sewer structures.
- Availability to be on 24 hour call and respond to emergencies. Must be able to report to job within a reasonable time in such instances.
- Must be able to frequently lift and/or move up to 10 pounds and occasionally life and/or move up to 100 pounds.
- Ability to interpret a map.

Physical and Working Environment

Employee performs standard activities requiring physical effort. The duties of the job include physical activities such as stooping, kneeling, standing, walking, lifting (lift and carry objects weighing 60 pounds or less, and push or pull objects weighing up to 100 pounds), fingering, grasping, talking, hearing/listening (perceiving sounds in order to understand signals such as spoken directions, warning alarms, or requests for information), seeing/observing, bending/twisting (of the neck, back, or torso in order to reach, lift, tend machines, move materials, etc.), reaching (extending the hands or arms in any direction in order to push, pull, or grasp an object or control), feeling (using the sense of touch in fingers, hands, or other body parts to sense the position or quality of objects) and climbing (ascending or descending steps, stairs, ladders, scaffolding, or machines). Specific vision abilities required include close, distance, and peripheral vision; depth perception; the ability to adjust focus; and distinguish objects clearly at 20 inches or less with glasses, if needed.

The employee may be exposed to disagreeable elements of high and low outdoor temperatures. The employee may be exposed to repetitive activities; intense or continuous noise; dirty environment; improper illumination; chemical hazards, and air contamination. The use of personal protection equipment (PPE) may be required, as there is significant exposure to hazards and conditions where there is a possible danger to life, health, or bodily injury, which may include mechanical, electrical, air contaminations, and heights. May be required to work in a physically confined worksite with cramped, small or restricted workplace making it difficult to stand, sit, or walk.

Acknowledgement

All requirements of the described position are subject to change over time. The employee may be required to perform other duties as requested by the City.

Signature of Department Director: _____ Date: _____

I acknowledge that this job description is neither an employment contract nor a legal document. I have received, read, and understand the expectations for the successful performance of this job.

Printed Name: _____ Signature: _____ Date: _____

The City of Wausau is an Equal Opportunity Employer. In compliance with the American with Disabilities Act, the City will provide reasonable accommodations to qualified individuals and encourages both prospective and current employees to discuss potential accommodations with the employer.

Wausau Water Works Commission

April 13, 2021

Agenda Item
Discussion and possible action classifying the position of Water Distribution Maintainer - Relief Operator.
Background
The Wausau Water Department has developed a job description for the position of Relief Operator (attached). This position combines the job duties of the Water Distribution Maintainer position (Salary Grade 19, $40,927-$57,297) and the Water Plant Operator position (Salary Grade 18, $43,742.40-$61,256). The position is intended to spend approximately 60% of work time on Maintainer tasks and 40% of work time on Operator tasks.
Fiscal Impact
Approximately $10,000 plus benefits.
Staff Recommendation
There are three pay options for the Relief Operator position: 1. Classify the Relief Operator position equivalent to an Operator (Salary Grade 18, $43,742.40-$61,256), because they are responsible for all of the same job duties as an Operator. This could cause morale issues with others who perform Operator duties 100% of the time. 2. Classify the Relief Operator position equivalent to a Maintainer (Salary Grade 19, $40,927-$57,297) and pay an incentive when the Relief Operator is performing Operator duties. There is an approximately 6-7% pay spread between the two positions. 3. Job cost the position based on the job being performed. The Relief Operator would be paid a Maintainer rate when performing Maintainer duties and Operator rate when performing those duties. The department prefers option 1. Options 2 and 3 require more administrative work but are careful stewards of citizen funds.
Staff contact: Toni Vanderboom (715-261-6634) and Eric Lindman (715-261-6745).

February 2021

OPPORTUNITIES NOW

An Analysis of Priority Issues and Actions
for Wisconsin's Natural Resources

2021
2023

PFAS – Forever Chemicals in Wisconsin

WISCONSIN'S greenfire
VOICES FOR CONSERVATION

PFAS – Forever Chemicals in Wisconsin

Contributors

Sarah Peterson
John Robinson
Meleesa Johnson
Tom Jerow
James Baumann
Fred Clark

About this Work:

Opportunities Now is an issue paper series published by Wisconsin's Green Fire that summarizes the science and background of key conservation and environmental issues and makes policy recommendations that support pro-conservation outcomes. Each of the papers in our Opportunities Now series is the product of an analysis of current literature, interviews with agency staff and experts, and the consensus of our subject matter teams. Policy makers, conservation organizations, and concerned citizens are all welcome to use and distribute Opportunities Now papers without restrictions.

Direct inquiries on this paper to WGF Science Director Sarah Peterson, at speterson@wigreenfire.org

Cover photo: Aqueous Film Forming Foam containing PFAS at use in a fire at a city of Madison electric substation in July, 2019. Photo credit: Wisconsin State Journal.

Foam containing PFAS found in Starkweather Creek, Madison, Wisconsin. Photo Credit: WDNR.

PFAS – Forever Chemicals in Wisconsin

Countries across the world are grappling with the long-term health and environmental impacts related to the manufacturing and use of the large family of chemicals known as PFAS, or Per- and Polyfluoroalkyl Substances. PFAS are often called "forever chemicals" due to a molecular structure that gives them extraordinary persistence in the environment and the ability to resist decomposition.

PFAS as a group includes thousands of individual chemicals, many of which have been in production and use in a wide variety of products since at least the 1950s. PFAS are especially valued for their ability to resist grease, stains, oil, water, and heat and are found in many everyday products such as firefighting foam, carpeting, coated paper, chrome metal plating, nonstick cookware, dental floss, and a wide variety of food packaging. Due to their widespread use in so many consumer products, PFAS are now being detected in the environment and in humans, animals, and other organisms in every part of the world.

Exposure to high levels of PFAS has been linked to a myriad of human health issues including increased risk of some cancers, decreased vaccine response in children, changes in liver enzymes, and fertility and pregnancy complications in women.[1]

In the last 15 years PFAS have been found in groundwater, surface water, drinking water wells, as well as in biosolids, soils, and aquatic sediments in Wisconsin. In the absence of a comprehensive federal approach to PFAS, Wisconsin, along with other states, is now grappling with how to regulate these chemical contaminants while working to better understand their health effects.

Like many other states, Wisconsin currently lacks enforceable standards for PFAS in surface water, groundwater, and drinking water.

Johnson Controls - Tyco Fire Products Stanton Street Facility located on the Menominee River in Marinette has been a documented source of PFAS contamination. Photo Credit: Fred Clark.

The lack of state enforceable standards is compounded by the lack of federal standards – the United States Environmental Protection Agency (EPA) currently has not established enforceable standards* for any PFAS chemical. The EPA has established non-regulatory health advisory levels for drinking water of 70 parts per trillion (ppt) or two of the most tested-for PFAS chemicals, perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS), combined.

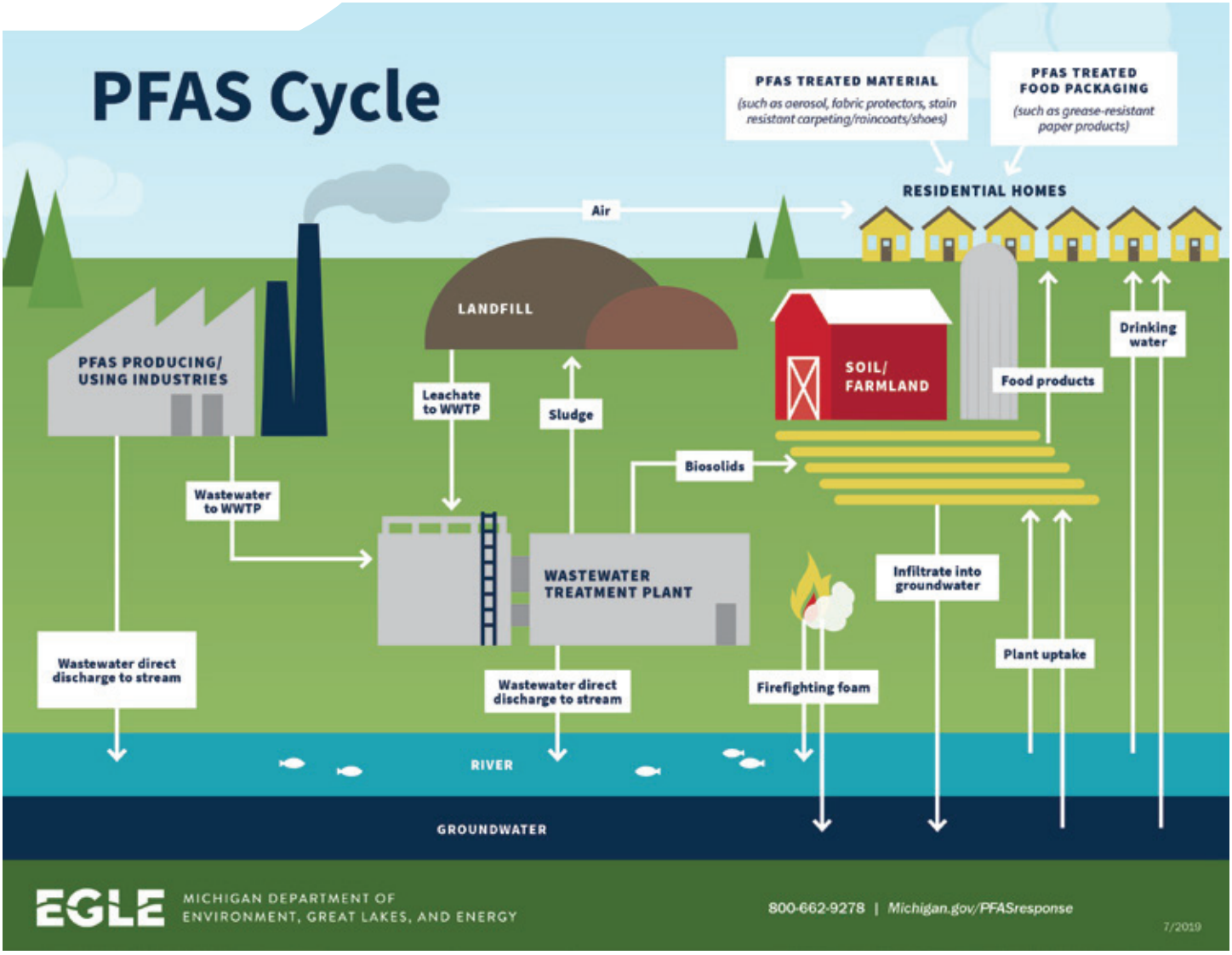
One of the earliest PFAS chemicals to be studied, PFOS, was voluntarily phased out of use in 2002 in the United States. U.S. Manufacturers voluntarily eliminated PFOA emissions and their use in products by the end of 2015. Despite these actions numerous other PFAS known as "short chain PFAS" are still in use.[2]

Short chain PFAS contain fewer fluorine atoms than long chain PFAS and have been reported in manufacturers' studies to be safer and less likely to bioaccumulate.[3] Recent toxicity studies however show that second generation short-chain PFAS chemicals have comparable toxicity with longer chain chemicals, affecting the same organ systems, similar to the effects of the older longer chain PFAS.[4]

In the absence of federally enforceable standards for PFAS, states are left to devise their own standards and response. The Wisconsin Department of Health Services (WDHS) has recommended a health-based standard of 20 ppt for PFOA and PFOS combined, in groundwater. As of December 2020, a Wisconsin Department of Natural Resources (WDNR) rulemaking process is underway to develop statewide standards for PFAS in drinking water, ground, and surface waters.

*Enforceable Standards are regulatory limits for contaminants that require corrective action when exceedances occur. Health advisory levels are non-regulatory thresholds that trigger public advisories.

This report provides a look into sources of exposure, health effects, and known releases for PFAS in Wisconsin, as well as state agency involvement. Recommendations in the report point to improved environmental management of PFAS grounded in the latest science, methods to reduce exposure and devise clean up procedures for spills that occur.



How PFAS cycle through the environment, their fate and transport. Credit: Michigan Department of Environment, Great Lakes, and Energy

Background

Routes of Exposure

PFAS have a unique chemical structure that contributes to their persistence. PFAS molecules contain a hydrophobic (or water repellent) fluorine-saturate carbon chain and a hydrophilic (attracted to water) functional group. This structure gives PFAS their desirable water and fat repellent quality that makes them perfect for nonstick and water repellent products, but it also contributes to their exceptional persistence in the environment.[5]

Detecting and managing PFAS is complex, in part due to the numerous points within the manufacturing and distribution systems and the waste streams where PFAS and products containing PFAS enter the environment. Human exposure may occur at any of these points.

Homes, work places, hospitals and even schools can also be sources of PFAS exposure because of commonly used items, which may include:[6]

- Stain-free carpeting, draperies, and furniture
- Grease and moisture-resistant paper products such as fast-food wrappers, dry goods packaging, and medical gowns and curtains[7]

- Non-stick pans and cookware
- Building products such as plumbing tape, house wraps and paints
- Outdoor rain-resistant fabrics and gear
- Personal care products like lotions, cosmetics, and dental floss
- Fabric softeners

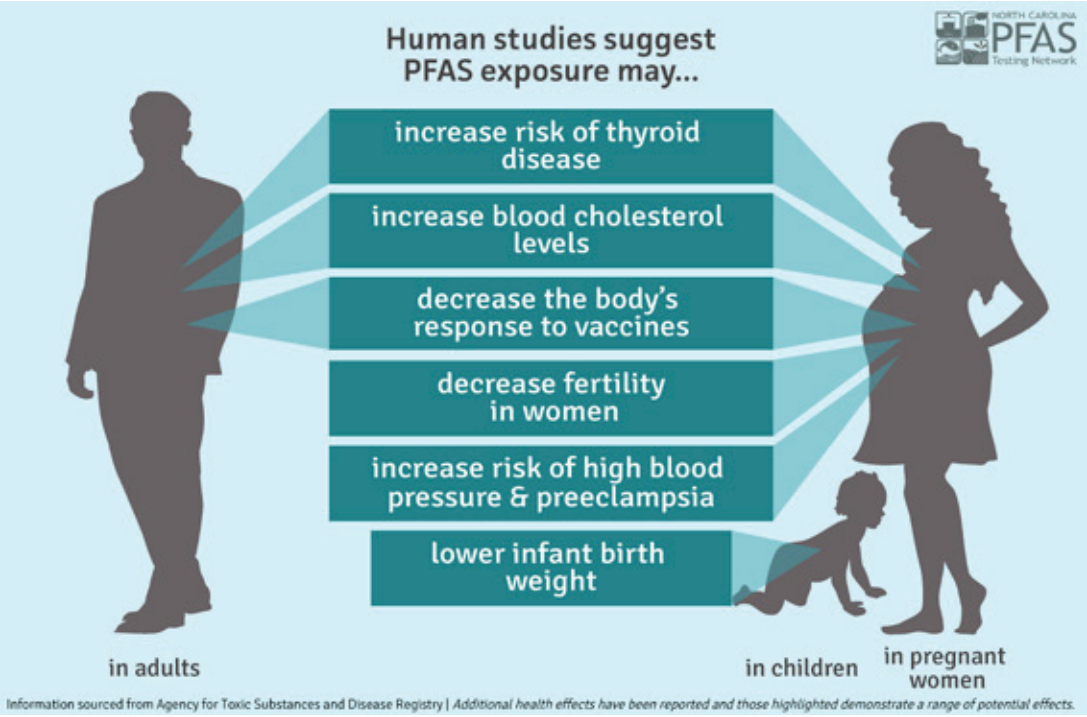
Through their regular use, humans become exposed to PFAS that leach from cooking pans or by breathing PFAS-laden dust loosened from fabrics. As these items are discarded, they enter the environment, either through the solid waste stream, or directly to air or water. Whether recycled, landfilled, composted, or incinerated, PFAS remain in the air, water, and soil because of their persistent nature.

PFAS have been found in wastewater effluent and in industrial and municipal waste system biosolids (the solid fraction that remains after wastewater treatment). Biosolids from wastewater treatment plants (WWTPs) are often land-spread on farm fields as a soil amendment or sent to solid waste facilities for management. PFAS can be reintroduced back into the environment when present in biosolids. Studies have also shown that plants have the ability to uptake PFAS from PFAS-laden soil.[8]

Another common entry point for PFAS to the environment is through the use of aqueous film-forming foams (AFFFs) used in municipal airport and airfield firefighting. Firefighting training exercises at military air bases have commonly led to releases of PFAS to surface and groundwater. Documented releases have occurred across the state at all three of Wisconsin's Air National Guard bases.

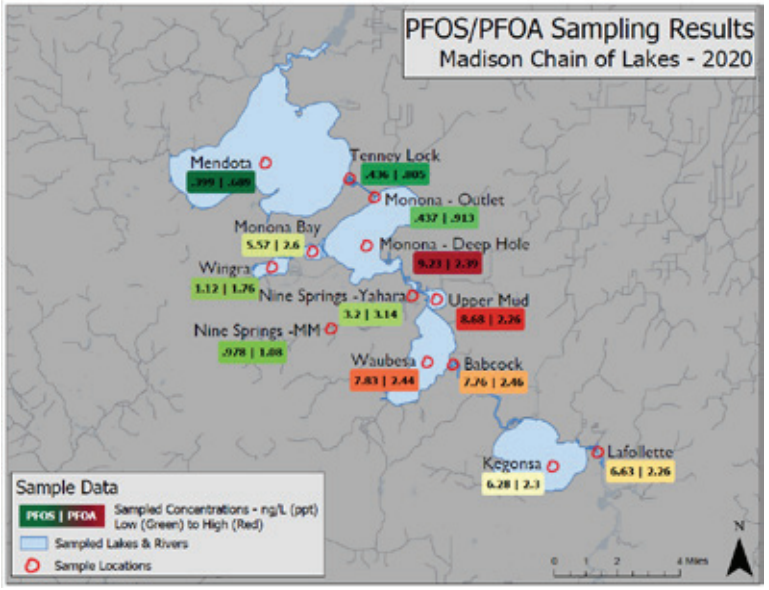
Health Effects

PFAS chemicals bind to proteins, particularly in the liver and blood.[9] Preliminary research suggests that high levels of PFAS may increase cholesterol levels, decrease how well the body reacts to vaccines, result in changes in liver enzymes, increase the risk of certain cancers, increase the risk of pregnancy compilations such as pre-eclampsia and lower average birth weights in newborns.[1, 10] Reducing human exposure to PFAS is difficult, however, due to



Research suggests a variety of human health impacts from PFAS exposure. Credit: Agency for Toxic Substances and Disease Registry.

Lake Monona shoreline anglers fish next to a fish consumption advisory notice in Madison, WI. Photo credit: Midwest Environmental Advocates.



Map based on 2020 sampling showing elevated levels of PFOS and PFOA compounds in the Madison Chain of Lakes. Credit: WDNR.

multiple sources of exposure and the widespread use of PFAS in everyday life.

Due to their resistance to degradation in the environment, PFAS compounds have high potential for bioaccumulation and biomagnification and toxicity to organisms.[5] Fish advisories are commonly issued following known releases of PFOS to the environment or in areas where PFAS has been a persistent problem.[11] A recent WDNR study also found PFOS in the livers of deer near the Johnson Controls International (JCI)/Tyco site in Marinette.[12]

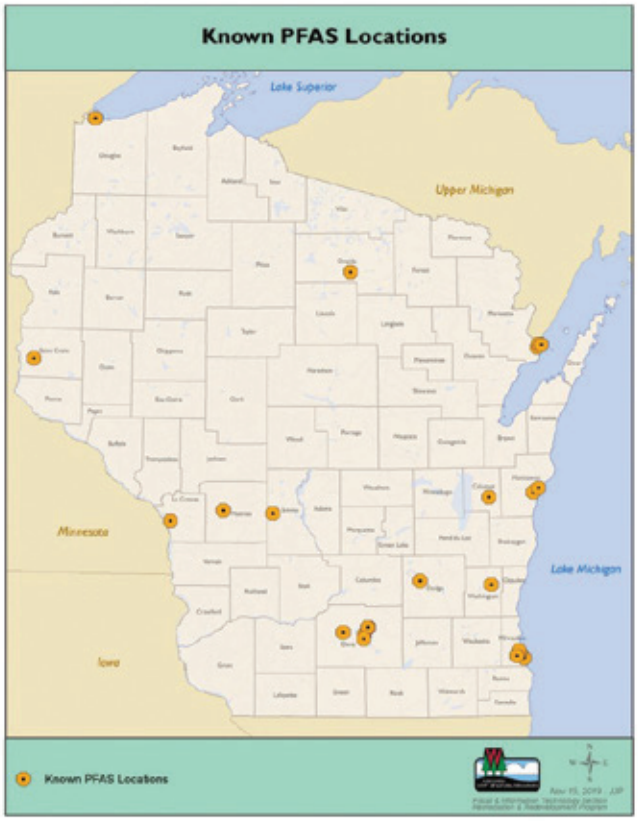
The manufacture, incineration, and disposal of PFAS chemicals has inordinate impacts on vulnerable communities. **Multiple studies have shown that low-income communities and communities of color are more likely to live near PFAS-contaminated areas and face exposure to bioaccumulating PFAS toxins found in fish due to a higher reliance on subsistence fishing activities.**[13, 14]

Known Areas of Contamination in Wisconsin

Notable sites with high-profile releases include:

- MIRRO Plants in Manitowoc and Chilton: former manufacturing facilities
- JCI/TYCO site in Marinette: manufacture and testing of firefighting foam
- 2018 Husky Energy Refinery in Superior: use of firefighting foam to suppress an explosion and fire
- 2019 MG&E Substation Transformer in Madison: use of firefighting foam to suppress an explosion and fire
- Truax Field in Madison: use of firefighting foam in training exercises requiring fire suppression
- Volk Field at Camp Douglas and Fort McCoy: use of firefighting foam in training exercises requiring fire suppression
- General Mitchell Airport in Milwaukee: use of firefighting foam in training exercises requiring fire suppression
- Refuse Hideaway Landfill in Middleton and Junker Landfill in Hudson: leachate containing PFAS

As of October 2020, there were 47 documented releases of PFAS into the environment in Wisconsin



Known PFAS locations in Wisconsin. Source: Wisconsin Department of Natural Resources.

The known PFAS releases in Wisconsin have resulted in impacts to public and private water supply wells at several sites including wells in the Peshtigo/Marinette area (JCI/TYCO), Rhinelander Municipal Well #7, La Crosse Municipal Wells 23 &24. In August 2020, Madison Water Utility reported PFAS in all 22 of its active wells with total PFAS concentrations ranging from 2.5 to 47 ppt.[15]

Due to concerns over the uptake and bioaccumulation of PFAS in deer livers from grazing on fields impacted by PFAS runoff or landspreading of biosolids, the WDHS and the WDNR have recommended that hunters do not eat liver harvested from deer within the PFAS advisory area around the JCI/TYCO site.[13]

Aqueous Film Forming Foam containing PFAS at use in a fire at a City of Madison electric substation in July, 2019. Photo credit: Wisconsin State Journal.

The lack of information relating to the historic use and release of PFAS is one of the biggest limitations in effectively managing this threat. Our understanding of the extent and distribution of PFAS contamination in Wisconsin is still incomplete but growing as additional sampling occurs and new information becomes available.

Monitoring in Wastewater Treatment Plants Wisconsin

Current monitoring for PFAS in Wastewater Treatment Plants (WWTPs) is incomplete and insufficient, partly due to the lack of enforceable environmental standards and the lack of adequate agency authority. Most of the monitoring that has occurred at WWTPs to date has either been done by the WDNR or done by WWTP operators on a voluntary basis.

Understanding the level of PFAS in influent, effluent, and biosolids at WWTPs is critical to developing regulations and water quality standards. This information would help provide an understanding of the potential routes for human exposures through the consumption of fish, wildlife, and drinking water.

Treatment, Containment, and Remediation

Effectively treating and destroying PFAS is an area of emerging research. Membrane bioreactors, granulated activated carbon, ion exchange resins, ultrafiltration, reverse osmosis, electrochemical oxidation, electrocoagulation, and concentrators are all methods being evaluated and some are in early stage use.[16] None of these methods achieves complete remediation however as each method leaves residual PFAS in filters, membranes, and resins. Methods for destroying PFAS through incineration also result in incomplete remediation and leave behind residual PFAS.

All of the known remediation methods for PFAS also carry high costs and available funding is nowhere near adequate to address the known problem areas today. The U.S. Department of Defense (DOD) estimated that the cost to cleanup PFAS contamination at DOD installations alone would exceed $3 billion.[17]

Wisconsin State Government: Policy and Agency Capacity

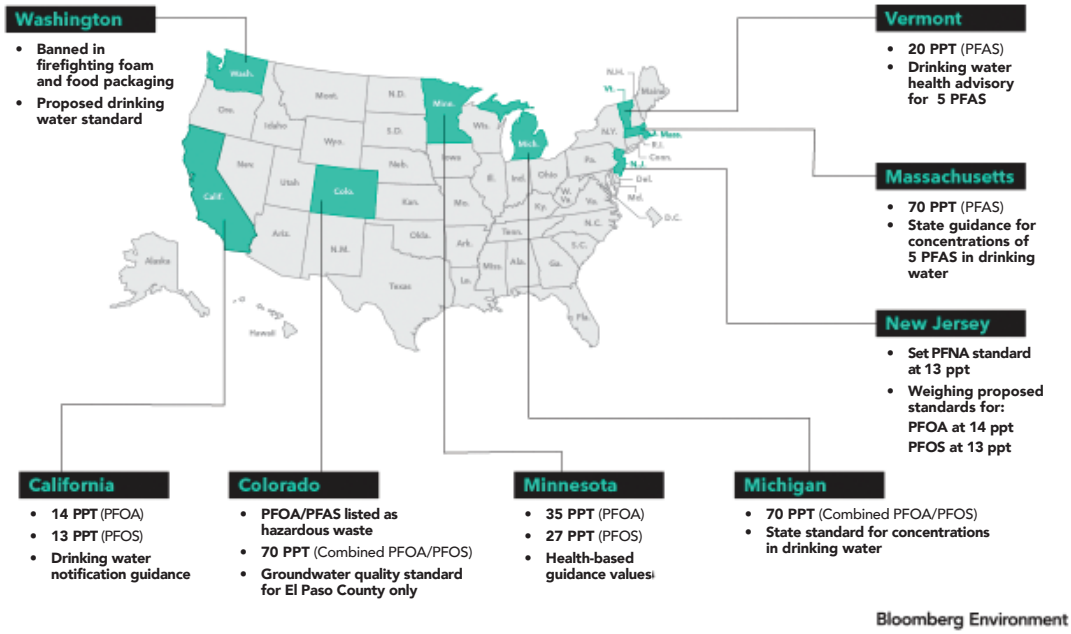
PFAS were identified as a priority issue during multiple public hearings hosted by the 2019 Wisconsin State Assembly Water Quality Taskforce.[18]

Only one of the proposals introduced during the 2019-2020 legislative session was enacted into law. 2019 Wisconsin Act 101 limits the use and discharge (with limited exceptions) of Class B firefighting foams that contains intentionally added PFAS. A WDNR emergency rule to implement Act 101 was approved on December 9, 2020 by the Wisconsin Natural Resources Board. On December 18th, the Wisconsin Legislature's Joint Committee on Review of Environmental Rules (JCRAR) voted to eliminate key provisions from the rule that addressed containment of PFAS contaminated material, rendering an important intent of the legislation ineffective.

In August 2019, Governor Evers issued Executive Order 40, which established a Wisconsin PFAS Coordinating Council, (since renamed the Wisconsin PFAS Action Council, or WisPAC). The Council was tasked with developing statewide standards for drinking water, ground water, and surface waters.

On December 16, 2020 WisPAC released a PFAS Action Plan that included a broad set of recommendations for environmental and health standards, pollution prevention, engagement and communication, research, bans and the phasing out of PFAS chemicals,

States With Numerical PFAS Limits



In the absence of federal standards, the states in green have been developing numerical standards. Since 2018, several other states have also commenced standard-setting processes. Source: Bloomberg Environment, 2018.

program funding, environmental justice issues, and addressing the historic legacy of PFAS discharges and exposures.

WDHS has recommended health standards of 20 ppt for PFOS and PFOA. WDNR is in the process of incorporating the proposed standards into drinking and groundwater standards. WDNR is also developing surface water quality standards for other PFAS chemicals. The agencies are seeking input from the public through stakeholder meetings.

All of the efforts to develop administrative rules and standards are processes that can take as much as three years, however delays caused by COVID-19 restrictions

Marinette, Wisconsin residents voice their concerns around PFAS exposure and cancer at a public listening session in January 2020. Photo Credit: Susan Bence.

Madison, Wisconsin residents organize to urge the Wisconsin Air National Guard to investigate and clean up PFAS chemicals in 2018. Photo Credit: Steve Apps/Wisconsin State Journal.

on meetings may cause further delays. Given the urgency of human health aspects of PFAS, WDNR may use the emergency rule process to provide guidance for enacting drinking water standards sooner.

Conclusion

Although PFAS have been known in Wisconsin for at least 15 years, the issue is gaining increased attention as an important public health concern. In the absence of federal action, the Wisconsin environmental and public health community is beginning to understand the reach and scope of the problem.

In order to properly address PFAS in the environment and protect human health, Wisconsin must take a holistic, comprehensive, and science-based approach to managing these forever chemicals. This will require collaboration in the ways that PFAS are managed, working closely with all the players in the PFAS cycle from manufacturing to disposal, educating the public on limiting exposure, and using the best available science to guide decision-making and passing necessary legislation.

Recommended Actions

= Executive Action = Budget = Policy

Contamination by PFAS is known to have disproportionate effects on low-income communities and communities of color. PFAS action should adopt a "no-harm" approach that avoids placing additional burden on these communities and giving priority to sampling, monitoring, and abating PFAS contamination in communities with known releases.

Wisconsin Department of Natural Resources will be the primary agency in regulating PFAS use and remediation. Wisconsin Department of Health Services (WDHS) will play a supporting role.

1. Identify sources of PFAS exposures and releases

a. Require that all public water supplies begin testing for multiple PFAS compounds no later than the 2021-2022 state fiscal year and the results of those tests should be publicly available.

b. Require statewide sampling of PFAS in the influent, effluent, and biosolids of municipal and industrial wastewater treatment facilities no later than the 2021-2022 state fiscal year.

c. Use the results of the sampling of public waste supply systems and wastewater treatment systems to identify PFAS clean systems and the systems with risk.

d. Collect, assemble and make available representative data from a subset of Wisconsin dischargers as part of the rule development process. This action will support the ongoing administrative rule processes for drinking water Ch NR 809 Wis. Admin. Code, groundwater Ch NR 140 Wis. Admin. Code, and surface waters/ wastewater Ch NR 102 to NR 211.

e. Expand understanding of the prevalence of PFAS in the environment, through the collection of randomized data in watersheds and ecosystems in Wisconsin. The data can serve as the basis for development of environmental standards. Wisconsin can look to neighboring states such as Minnesota and Michigan to compare and evaluate standards.

2. Develop science-based statewide standards that are protective of human health and the environment

a. Establish science-based environmental standards for drinking water, groundwater, and surface waters for PFOA and PFOS. In a second phase, establish standards for other PFAS compounds.

b. Support expediting cleanup standards by using the emergency rule process for soil, groundwater, and drinking water standards. Establish science-based standards for biosolids application to cropped fields and other lands, for solid waste and soil, and sediment associated with remediation/cleanup projects.

c. Support additional research into PFAS in drinking water, surface water, wastewater, and groundwater across the state, as well as studies on health and environmental impacts. This includes sampling fish tissues and blood serum from wildlife near suspected sources.

= Executive Action = Budget = Policy

3. Manage environmental PFAS contamination and devise cleanup procedures for PFAS-containing media

a. Build off WisPAC recommendations on disposal, and direct research dollars towards encouraging the development of innovative approaches to understand how PFAS can be safely destroyed.

b. Provide funding for PFAS remediation efforts for fire departments, municipalities, small businesses, and waste water treatment plants.

c. Amend the Cooperative Agreement between WDNR and the Department of Defense (DOD) to ensure a full evaluation of the fate and transport of PFAS associated with contaminated DOD sites across the state.

4. Control sources of PFAS and identify methods to reduce exposure to contamination

a. Incentivize voluntary and regulatory approaches to control PFAS at the manufacturing source by limiting or eliminating their distribution and use in the supply chain. Consider phasing out the use of short-chain and new generation PFAS from food packaging.

b. Develop legislation to encourage product stewardship and extended producer responsibility – closing the loop on management and end-of-life care of PFAS wastes. Producers, wholesalers, retailers, and users of PFAS products, need to share the costs of disposal and cleanup.

c. Fund a clean sweep program for collection and disposal of unused PFAS Class B firefighting foam.

5. Lead an educational campaign to inform the public on how they can act personally to reduce their exposure to PFAS

a. Support consumer groups and partner organizations in their ability to properly dispose of household materials containing PFAS.

b. Assist consumer groups and partner organizations in making informed decisions about the products they buy and whether PFAS may be found in those products.

c. Support efforts to create a PFAS single point of contact to coordinate communication both within the WDNR but also within state agencies to develop targeted and consistent messaging on PFAS. A designated person who can champion the issue is critical.

d. Coordinate state agency development of PFAS-related educational material for the classroom.

e. Encourage WisPAC to host a PFAS summit to provide a forum for sharing information and the latest research.

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WISCONSIN'S greenfire
VOICES FOR CONSERVATION

715.203.0384
wigreenfire.org | info@wigreenfire.org
PO Box 1206 | Rhinelander, WI 54501

OWNER REVIEW

DRAFT

STRAND ASSOCIATES®
Strand Associates, Inc.®
910 West Wingra Drive
Madison, WI 53715
(P) 608.251.4843

Task Order No. 21-01
City of Wausau, Wisconsin (OWNER)
and Strand Associates, Inc.® (ENGINEER)
Pursuant to Agreement for Technical Services dated May 27, 2020

Project Information

Services Name: 2021 Collection System Study

Services Description: Collection system assessment related to infiltration/inflow (I/I) in sanitary sewer basins NE-4 and NW-3. Assessment activities include smoke testing and manhole assessments.

Scope of Services

ENGINEER will provide the following services to OWNER.

Manhole Assessment Services

1. Prepare a manhole assessment database using Microsoft Access to document condition, defects, and rehabilitation alternatives.

2. Assess the condition of approximately 300 manholes within the NE-4 and NW-3 basins of OWNER's existing collection system. Prepare a field observation form for each manhole. The intent of the assessment is to evaluate potential rehabilitation methods and a priority ranking for future rehabilitation efforts. Manhole assessments are anticipated to be conducted in ten business days over the course of four weeks depending on weather conditions.

3. Develop a draft report summarizing of the field observations and provide considerations for system rehabilitation as well as potential subsequent I/I identification activities.

4. Meet onsite with OWNER to review draft report.

5. Provide OWNER an electronic and hard copy version of the final report.

Smoke Testing Services

1. Prepare a smoke testing database using Microsoft Access to document defects.

2. Provide example smoke testing notifications for OWNER to print on its letterhead and deliver to affected businesses and residents.

3. Provide equipment and two staff members to conduct smoke testing of approximately 90,300 linear feet of sanitary sewer within the NE-4 and NW-3 basins. Smoke testing will typically be conducted during periods of dry weather. It is anticipated that smoke testing will be conducted in ten business days over the course of four weeks depending on weather conditions.

4. Develop a draft report summarizing a description and location of potential deficiencies as well as potential repairs. Data from the smoke testing database will be included in the report.

5. Meet onsite with OWNER to review draft report.

6. Provide OWNER an electronic and hard copy version of the final report.

7. Combine smoke testing and manhole assessment reports into one comprehensive report.

8. Present results from the report at the Wausau Waterworks Commission.

9. Develop final report and submit one portable document format file copy and five hard copies to OWNER.

Compensation

OWNER shall compensate ENGINEER for Services under this Task Order on an hourly rate basis plus expenses an estimated fee of $65,500 allocated as shown in the table below:

Scope of Services		Estimated Fee
Manhole Assessment Services		$23,000
Smoke Testing Services		$42,500
	Total	**$65,500**

Schedule

Services will begin upon execution of this Task Order, which is anticipated the week of April 12, 2021. Manhole Assessment Services are scheduled for completion on June 30, 2021. Smoke Testing Services are scheduled for completion on November 30, 2021.

OWNER Responsibilities

In addition to those provided in the Agreement for Technical Services, OWNER shall contact emergency services to make them aware of the smoke testing. OWNER shall also provide all necessary traffic control for the smoke testing.

TASK ORDER AUTHORIZATION AND ACCEPTANCE:

ENGINEER:

STRAND ASSOCIATES, INC.®

DRAFT

Joseph M. Bunker Date
Corporate Secretary

OWNER:

CITY OF WAUSAU

DRAFT

Katie Rosenberg Date
Mayor