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 **11:00 a.m.** on **Monday, November 4, 2024.**

Members: Doug Diny (President), Sarah Watson, Jim Force, Joe Gehin, John Robinson

AGENDA

1. Approve Minutes of October 1, 2024 Meeting.
2. Director's Report on Utility Operations
   - Lead and Copper Rule Improvements (LCRI) Finalized
   - Update on GAC Treatment at the Water Treatment Facility
   - Wastewater Facility Continues to Discharge a Quality Effluent
   - Wastewater Northwestern Lift Station
3. Presentation by the Marathon County Health Department Regarding Fluoridation in Drinking Water.
4. Discussion and Update on Drinking Water PFAS Levels for Treated Water and Discharge Water from Backwashing.
5. Discussion and Possible Action Approving the Development of a Pilot Study to Begin Accepting Leachate from the Marathon County Landfill.
6. Operating Budget Quarterly Update Through September 2024.
7. Discussion and Possible Action Approving the Replacement of an Existing Truck.
8. Discussion and Possible Action Approving a Research Project with the Water Research Foundation for Regeneration or Disposal of PFAS-Laden Drinking Water Residuals, Media, and Waste.

Adjourn.

Next meeting scheduled for **December 3rd 2024 @ 11:00 AM*

Signed by: /s/ Doug Diny, Mayor
Presiding Officer or Designee

THIS NOTICE POSTED AT CITY HALL AND EMAILED TO CITY PAGES AND DAILY HERALD: October 30th, 2024 at 2:30 p.m.

This meeting is being held in person. Members of the public who do not wish to appear in person may view the meeting live over the internet, cable TV, Channel 981, and a video is available in its entirety and can be accessed at https://tinyurl.com/wausaucitycouncil. Any person wishing to offer public comment not appearing in person may e-mail gina.vang@wausauwi.gov 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) 261-6622 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 October 1, 2024

A meeting of the Wausau Water Works Commission was called to order at 11:00 a.m. in City Hall on Tuesday, October 1, 2024. In compliance with Wisconsin Statutes, this meeting was posted and receipted for by the Wausau Daily Herald on September 27th 2024.

Members Present: President Diny, Commissioners Robinson, Gehin, Force, Watson
Others Present: Eric Lindman, Scott Boers, Ben Brooks, MaryAnne Groat, David Hagenbucher/Marathon County Solid Waste Director, Lance Leonhard/ Marathon County Administrator, Joe Kafczynski/ BecherHoppe, Tonia Westphal/Clark-Dietz

1) **Approve Minutes of September 3, 2024 Meetings.**
   Robinson motioned to approve minutes. Seconded by Watson.
   Motion carried 5-0.

2) **Director's Report on Utility Operations.**
   Lindman highlighted the first item has been coming up, the county administrator has been speaking with the Mayor and this was an update of where our last discussion was with acceptance of the leachate from Marathon County Landfill. There are other updates here as well if you'd like to review or discuss any other items.
   Robinson requested to hear from Hagenbucher and Leonhard as they were present.
   Leonhard summarized that it would be beneficial if we could work together with the city. Leachate is a concern; we are trucking that leachate to another municipality but are hoping to find a way to work together to address some issues. There are some regulations due coming for State of WI relative to innovation fund. Our cost to truck that leachate treated in plover is 2/10th's of a cent per gallon but what rate makes sense to accept that leachate, what needs to be in place. Hagenbucher mentioned metering this in for large municipalities. My hope is that we could have some prompt discussions to come up with a plan allowing cost savings approach.
   Brooks stated in discussion with Hagenbucher, we were thinking about parking a tanker and letting that drizzle/flow in slowly throughout the day to see how it impacts the plant and our ultraviolet disinfection and turbidity level of leachate in summer months. In Winter months, things seem to freeze up but its something we'd have to pilot.
   Hagenbucher stated the flow slows down in Winter and we've had many discussions with this leachate and the approach to try to find a solution. We are all serving the public and trying to keep costs low and we are all facing regulations coming down the road and we don't understand what they look like but beginning to look at number and if there are opportunities to work together in this 2-year timeline. The clean water fund that we both applied to is something we could look into, due at the end of this month. Maybe a metering station, if we could offload to a further city limit lift station, the leachate would be diluted before it got to the plant or try to spread this out, the solid waste department would probably want to phase it in instead of a big load all at once.

Robinson recommended a work group look at the issue. We are in the process of getting a new WPDES permit that could be impacted by the leachate and we don't know the impact of the GAC, resin and in reducing influent to the plant but it would be worthwhile to have each party start identifying those issues. If we can't get biosolids, where could we place them, if we can't land spread them to have a disposal option or explore opportunities for cooperation. Neither party is generating the PFAS but both are being asked to address it. There are currently efforts to classify PFAS as hazardous waste but there's been discussion on municipal exemptions for landfills and wastewater treatment plants. We must come forward with an outline where there are opportunities to cooperate and identify provisions in the agreement or how we might deal with potential exceedance of the surface water standards.

Gehin questioned if we might be hurt by getting the leachate. He stated we should try to figure out how we could work together.

Brooks replied it may potentially hurt us but in the grand scheme of things, with issuance of the new discharge permit, there's going to be a 2-year testing period from that data collected in the next 2 years, there's going to be a P99 calculated as far as what we are allowed to discharge for PFOA/PFOS. Do we accept the leachate prior so the data includes that or do we wait till afterwards?

Lindman recapped this would have to be a step process, we'd have to look at an interim or short-term solution as we did with other treatment options with the water and wastewater to look at a long-term solution. I don't see the long-term solution being there for a couple more years but if we had discussions about what happens between now and then, we'll work towards that long term solution that would be beneficial not only for collecting data on our side in determining how this would affect treatment and how we are going to change treatment but determine what the long term solution is, whether it's centrally located or couple different discharge points in the system but those are some solutions we'd have to look at as we move through this. It's a regional issue not just a county issue. We've also talked about the possibility of pipe network of force mains coming directly to the city but economically not sure if that is feasible or just trucking it is a better option. We've had good discussion in the past but opening that dialogue again, we'll have to look for a good solution for long term.

Robinson requested that we come back at the next meeting with potential framework for progressing with the discussion and work on developing.

Force questioned the results of the PFAS in leachate that the county was going to share with the commission and assumed it hasn't taken place.

Lindman replied the county has done the testing but that would be part of those discussions moving forward with this leachate. Other updates provided were Lead Service Line Replacement Program and staffing addition approved by city council, next step is advertising positions, then begin onboarding. Utility finances are up for further discussion in the agenda and construction updates for the GAC project and Wastewater updates with Veolia getting some warranty work done.

Force wanted to see if we could make the equiflow website more prominent on the city's website so the residents could access more easily.

Director's Report Placed on File.

3) Presentation by the Marathon County Health Department Regarding Fluoridation in Drinking Water.

Diny stated Marathon County Health Department couldn't make it but we've enclosed information they provided for review and we'll work rescheduling them at a future meeting but there have been new studies coming out and cities around the country are eliminating fluoridation.

Gehin questioned the reduction for the level of fluoridation as recalled we have natural

fluoridation in some of our wells.

Boers replied levels were 1 -1.5 and now its' .6 to .8mg/Liter. We average .7mg/Liter.

Force questioned if there was a community group pushback regarding fluoridation.

Diny replied Department of Health Services (DHS) subcommittee provided 324 page report to health dept. and the feedback was that they would come provide us feedback. There's a dental association, notice to area dentists that treat/preventive medicine for children who don't have access to fluoridation.

Boers replied the site reference cites 1.5mg/L fluoridation in the water and were drawing links to developmental issues but some speculations or work that was done is not exact of precise but there's two sides to a story, the packet shows there could be a cost savings to the community for removing fluoridation. Fluoridation costs the city about $20k a year.

Diny stated the report is from DHS so it needs to be presented for better understanding. We'll bring it back once we get the health department in here.

No Action Taken.

4) Discussion and Possible Action Approving the Utility Operational Budgets Proposed for 2025.

Lindman reported Boers, Brooks and Mayor sat together with Groat to go over this budget.

Groat began each budget organized in the same fashion but with new software, we're still struggling with reporting and other issues. 1st page has income summary of budget, capital budget and projects underway for 2025 followed by itemized detail budget that provides adopted of 2024 prior year actuals, budget requests and changes. We are using modified accrual looking at impact of transaction each year to the utility cash revenues, up to 60 days out. In the details, last year's actuals are there. We get reporting enhancements daily but I'll take that back and I can email it. We've gone over line item by line item and feel strongly we have good revenue estimates and up to date debt service. There was a meeting with Ehler's in August and we'll bring it back as part of the budget process but that's council's decision. There's a million-dollar intergovernmental revenue funding for the media exchange. The budget proposes spending the entire million dollars with that Grant which is an eligible cost. We don't know costs for replacement but it made sense to step into operations and budget the media that budgets the grant. We may not need the whole million dollars but it offsets those costs for replacements in 2025 for chemicals and building materials.

Lindman replied that application was made in 2023, its about $1.67 million, it was the congressionally directed spending received through Baldwin's office. He stated the intent was to offset our granular activated carbon project. We had emerging contaminate funding, principal forgiveness from DNR and loan component. The $1.67 million was going to go against the loan but after we received that, the DNR said they weren't going to allow it but if used on the project they'll reduce the principal forgiveness. We have been working with Environmental Protection Agency (EPA) to establish another avenue to expend those dollars, no expiration date but we want the funds to be advantageous to the utility and the ratepayer. One of the requirements is that it must be related to PFAS.

Watson questioned what water bulk sale was?

Boers replied those were water fill stations at the old meter shop and a well house that provides water in bulk that contractors could purchase for work.

Force wanted to see summary that showed operating budget for coming year, compared against operating budget prior year, how we performed against budget for prior year, and if our budget was adequate inadequate. It's in the detail but I'd like to see where you could make a quick comparison what we budgeted this year, budgeted last year, spent last year, budget is one thing, spend sheet is another.

Robinson questioned if the council would be addressing Payment in Lieu of Taxes (PILOT) because it's an expense not reflected here and if they decided to keep the Pilot, what happens to the budget?

Diny replied it's in here, and we just invested a million dollars in meters and are looking at replacing the old meters. Our intention is to start picking up the revenue through the water loss.

Groat replied its in the budget, I just can't find it right now but I'll find it for you. Water utility has a cash balance of $300,000 but at some point it was close to zero and even a negative but in both the capital projects, we are trying to use the ARPA dollars and TID financing when we can. Lead Service Line (LSL) had a budget but we won't be using that for American Rescue Plan Act (ARPA), we'll bring it back to council to replace SCADA equipment budgeted for 2025 that would use those ARPA dollars. I'll get you that summarized report.

Gehin questioned if we were able to approve the operating budget?

Diny replied how we have it agendize we are looking to but have we in the past approved it at this level Groat?

Groat replied we have not in the past.

Lindman replied we've always just updated the commission on the operating but it's always just been the capital budget the Commission approved for borrowing.

Diny replied its worthy of advisory but we need to talk about a few things. One thing we've discussed is lowering the PILOT by$100,000 from $1.59 million to $1.49 million but its something we should talk about.

Groat replied its not the utility's decision, it's the council's decision to forgive the PILOT because we are behind in the budget, this last year was reevaluation. The state completes manufacture assessments, we're still waiting for final numbers on assessed value to analyze impact, we just got our expenditure limitations and are awaiting on transportation aids to feed into the budget. It came across clear that the council wanted to look at the PILOT. The financial advisor said even with the PILOT reduction, it wasn't going to translate into a change in the rate for the consumer. We have no cash and need to build up cash reserves so we could replace mains that cost more and looking at the rate of return and depreciation.

Diny replied so a reduction in the PILOT won't trigger a rate case as discussed. PSC math: we can reduce expenses and look at rate increase to build a reserve. Philosophically the reduction of $100,000 may not translate because the PSC math but will reduce the long-term upward pressure on rates so its worthy of discussion. We could take an advisory vote or comment. Historically we don't approve it but at this level, your privy to the data so why not.

Lindma replied we could also change that moving forward that the commission sees and accepts the operating budget on annual basis prior to going to finance and council. I think its good this commission sees and discusses the operating budget. The commission has a unique knowledge of the utility throughout the year where expenses are and operations and how things are going.

Robinson agrees as we don't have context for many of our discussions without seeing an operational budget to see what's there. In terms of the PILOT, that's council's decision, one of the factors is the advantage of the PILOT, as we capture revenue from some sources that traditionally don't contribute to the property taxes through nonprofits, churches, schools that all have costs in terms of capital projects. Where are our rates relative to others but is helpful to bring it in. I still don't have a lot of contexts but would be nice to have an operational and capital budget going forward but I appreciate bringing it in and hopefully in the future we could get quarterly reports for and understanding of where we are.

Diny stated it was important we talked about it and you had the proper context and the option but without a motion or a second, we won't vote on this.

No Action Taken.

5) Discussion and Possible Action Approving Special Assessments for Homeowners to Abandon their Private Well.

Boers began we are at renewal term for private wells that require them to be permitted which means they are required to be inspected for plumbing, cross connections and bacteriological safe samples. We have some wells where homeowners don't have the resources to abandon their wells but are not safe, this gives them another tool to get those wells taken care of. The code reads that we could go through a long process and then finally cause the abandonment of the well which would be assessed to the property, this would be a shortcut, gives homeowner an option to assess the work and not have to go through wasting resources to get to that point. There are grant programs through the DNR but they're tied to income and some of these folks don't qualify for that program so this gives them another tool. The average abandonment is around $1,200 so paid back around five years.

Robinson moved to approve the special assessments for homeowners to abandon their wells. Seconded by Force.

Motion carried 5-0.

6) Discussion and Possible Action Approving Amendment 2 for Engineering Services for Construction Inspection of the Headworks Screening Project.

Lindman stated this adds on to the original project with Donohue that went through planning design and now would oversee construction of the work just bid.

Robinson questioned the 9% construction oversight cost. They are charging $180-$190/hr, do we have the right people or any opportunities to ratchet that down, it seems high?

Lindman replied typically the overall engineering for a project is within this range. This project overall is about 16%. We typically go up to 18% but there's some complexity in this project with rehab buildings. It's not for a construction season, the duration of this project is going through end of 2026. We have seen engineering cost go up, but percentage wise for the overall costs of the project would still be within bounds of a typical project. We discussed with Donohue and had one of the project managers swapped out for a lesser cost of an hourly rate.

Force questioned why this Headworks project was not included originally?

Diny replied it was removed as a cost savings effort initially.

Lindman stated it was an add alternate and that was one of the ones that was not selected.

Gehin stated it was updated 15 years ago and not the same age of the plant but we took advantage of the savings at the time.

Brooks added that the Huber step screens in place haven't been maintained properly due to the complexity of taking the screens out of the channels and through the roof. The maintenance would be much easier and user friendly with newer screens and we won't have to lift them through the roof. The screens were through hydro dine center flow, we were going to go with Huber units but it was found later because of the compact space of the headwork's building, they couldn't convey the solids upstairs. There wasn't a manufacturer that would guarantee a conveyance system that would do this, so the whole system was redesigned and hydro dine center flows was chosen, they're able to do that.

Gehin commented it is imperative that we do the best job in the preliminary treatment coming into the plant and motioned to approve the amendment. Seconded by Watson.

Motion carried 5-0.

7) **Discussion and Possible Action Approving the Contract with J.F. Ahern for the Construction of the Headworks Screening Project.**

Lindman pointed in the packet were three bids that came in with the alternates for the screens, the lowest bid was from JF Ahern and that was the recommendation. The board accepted the bid, this is for accepting the contract that's with legal for review.

Robinson motioned to approve the contract of JF Ahern for the Headworks Screening Project. Seconded by Gehin.

Force questioned if there were good results with Ahern.

Lindman replied they were a subcontractor with Miron at the water treatment facility, the issues with the piping and coating were not with Ahern, it was the supplier of the piping who overcoated the pipes but we dealt with Miron for that complication.

Motion carried 5-0.

8) **Discussion and Update from the Consumer Confidence Report Task Force.**

Force updated the commission that the tables of the Consumer Confidence Report (CCR) were required and must be included but felt there was a more effective way to communicate. Some recommendations were to include a brief narrative explaining the tables in an understandable language, including a series of little-known facts about water, latest news from water utility and graphics depicting the water treatment distribution system and improving our website in an effective way of communicating with our customers. We didn't come up with any actions, these were recommendations and if we are ok with proceeding, we'll try to get into these tasks and figure who was going to do what, I don't see us hiring outside, its something we could do with staff and members of the commission, overall, the commission has agreed we need to improve what we are putting out there. Rather than throwing columns out there and expecting people to understand, we are looking for format or content that is reader friendly.

Diny questioned if we were needing to improve the City's website or if there was going to be a separate website out there?

Boers replied the discussion was the City's website on the water tab.

Robinson stated Department of Natural Resources (DNR) approved a scoping statement for revisions to NR 809- the administrative code for the Safe Drinking Water Act that governs the CCR report, we would need to pay attention to the requirements that will be revised to that 809 going forward.

No Action Taken.

9) **Discussion on a new Date for November 5th Meeting: Council Chambers in Use for Presidential Election- possibly Monday, November 4th or Wednesday, November 6th at 11am.**

Diny stated discussion on changing dates or moving the meeting but it had to be broadcasted and requested for thoughts on availability for chosen dates and/or moving location.

Watson replied the 4th works for her. Gehin and Force replied the 4th or 6th works. Force stated we don't get a lot of participation from the public but changing the place is one more change so keeping the same place/time and just changing date is easiest.

Diny stated with no other conflicts we will be meeting November 4th if there's anything

else that comes up let us know.

No formal action taken; Commissioners agreed on date via nod.

10) Adjourn.

Robinson motioned to adjourn. Seconded by Gehin.

Motion carried 5-0.

Link to view meeting in its entirety: *https://tinyurl.com/wausaucitycouncil*
Gina Vang, Recording Secretary
S:\WaterWorks\Common\WaterCommission\2024\November\WWWC_20241001_Minutes.doc.

WAUSAU WATER WORKS
FOR YOU!

MEMORANDUM

TO: President Diny
Commissioner Watson
Commissioner Force
Commissioner Gehin
Commissioner Robinson

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

SUBJECT: Director's Report – November 2024

Lead & Copper Rule Improvements (LCRI) finalized.

- The LCRI was finalized and announced by the USEPA on October 7, 2024. I have attached a USEPA Fact Sheet that highlights some of the major changes that will affect the water utility. Just as a highlight this will increase our sampling by 4-times each year, sets a mandate to replace LSL's (private and public side) within 10-years, lowers the action limit, mandates more frequent public outreach and sets requirements for inventory requirements for both the private and public side service lines. See attached EPA Fact Sheet for additional information.

WATER DIVISION

1. Update on GAC (Granular Activated Carbon) Treatment at the Water Treatment Facility. See attached.

WASTEWATER DIVISION

1. The Wastewater Treatment Plant continues to discharge a quality effluent.

2. Northwestern Lift Station is currently in service and working well. Emergency generator start-up has been completed and awaiting final project completion from Earth Inc. and Clark Dietz. The same applies to the Greenwood Hills Lift Staton project.

FACT SHEET

EPA's Lead and Copper Rule Improvements
October 2024

Lead in drinking water irreparably harms children and adults. Lead is a highly toxic metal that can impact brain development in children, kidney function in adults, and interferes with the production of red blood cells that carry oxygen to all parts of your body. The federal government banned the installation of new lead pipes in 1986, yet up to 9 million homes and businesses are still connected to water mains through legacy lead pipes in neighborhoods across America. These remaining lead pipes are disproportionately concentrated in low-income communities and communities of color.

That is why it is so important to remove lead from our water systems. The Lead and Copper Rule Improvements (LCRI) strengthen nationwide requirements to protect children and adults from lead in drinking water. These advancements are commonsense, achievable, and built on actions already underway in states and cities around the country.

Key Provisions from Lead and Copper Rule Improvements

For the first time, the vast majority of water systems will be required to replace lead service lines within 10 years. By removing the greatest source of lead in drinking water nationwide, we can further the goal of safe drinking water for current and future generations.

Lead service line replacement within ten years is achievable. Cities like Benton Harbor, MI and Green Bay, WI replaced their lead service lines in less than 10 years. Other systems like Detroit, MI, Pittsburgh, PA, Denver, CO, Milwaukee, WI, and Saint Paul, MN have already started this work and are on pace to replace every lead service line within the next 10 years. For a limited number of drinking water systems, in limited circumstances, that cannot replace every lead pipe in 10 years, the rule establishes some additional time to get the job done.

The final rule supports ongoing efforts to locate existing lead pipes. Knowing where lead pipes are located is critical to replacing them efficiently and equitably. Under existing requirements, regulated water systems are completing initial inventories of their lead service lines in October 2024, and regularly update those inventories under the Lead and Copper Rule Improvements. Systems also must create a service line replacement plan that includes a strategy to prioritize replacement considering community-specific factors, such as populations disproportionately impacted by lead. Water systems are required to make their inventory and replacement plans available to the public.

The final rule strengthens tap sampling requirements. The LCRI makes key changes to drinking water sampling requirements, informed by best practices already being used by leading states like Michigan. For sites with lead service lines, water systems are required to collect and analyze the first-liter and fifth-liter and use the higher of the two values when determining compliance with the rule.

The rule lowers the threshold for taking action and eliminates the overly complex trigger level. The LCRI lowers the threshold for taking action, known as the lead action level, from 15 µg/L to 10 µg/L. When a water system's lead sampling exceeds this level, the system is required to inform the public and take action to reduce

lead exposure while working to expeditiously replace all lead pipes. For example, the water system would install or adjust corrosion control treatment to reduce lead that leaches into drinking water.

The final rule includes additional requirements to reduce exposure to lead in drinking water. Water systems with multiple exceedances of the lead action level are required to continue adjusting treatment, conduct additional community outreach, and make filters that are certified to reduce lead available to all consumers.

Communicating transparently and frequently. The Lead and Copper Rule Improvements require more frequent and proactive communications about lead pipes and plans for replacement. The rule also requires water systems to include clear health language about the dangers of lead in the Consumer Confidence Reports. The Consumer Confidence Reports will also provide information about testing for lead in schools and childcare facilities and will tell consumers where they can find the water system's lead service line replacement plan.

Federal Funding

The Bipartisan Infrastructure Law and funding programs like EPA's Water Infrastructure Improvements for the Nation Act (WIIN) grants, the Drinking Water State Revolving Funds (DWSRF), and Water Infrastructure Finance Innovation Act (WIFIA) loans provide billions of dollars for projects to reduce lead in drinking water. To complement this historic federal funding, EPA's technical assistance programs are helping more communities plan and apply for funding.

Alongside the LCRI, EPA is announcing $2.6 billion in newly available drinking water infrastructure funding through the Bipartisan Infrastructure Law to support lead pipe replacement projects. Total funding through the Bipartisan Infrastructure Law that can be used for lead line replacements is over $26 billion over five years and includes:

- $15 billion over five years for lead service line replacement activities,
- $11.7 billion over five years, including $2.6 billion that was announced today, in general supplemental funding to the Drinking Water State Revolving Fund program, which can be used to remove lead pipes or address other pressing drinking water issues in communities.

Half of this funding will go to disadvantaged communities as grants (or principal forgiveness loans). The EPA's water technical assistance (WaterTA), including the **Get the Lead Out (GLO) Initiative**, helps disadvantaged communities identify lead services lines, develop replacement plans, and apply for funding. Communities seeking to access GLO Initiative resources can request assistance by completing the WaterTA request form on EPA's WaterTA website.

EPA is also announcing the availability of $35 million in competitive grant funding for reducing lead in drinking water. Communities are invited to apply directly for grant funding through this program: https://www.epa.gov/dwcapacity/wiin-grant-reducing-lead-drinking-water. Additional federal funding is available to support lead pipe replacement projects and EPA has developed a website identifying available funding sources.

Cost and Benefits

The annual benefits of the Lead and Copper Rule Improvements are estimated to exceed the annual costs by more than ten-fold. Investments in removing lead pipes will create good-paying, local jobs. The Lead and Copper Rule Improvements will help protect millions of people across America from exposure to lead in drinking water.

EPA estimates that on average, each year after the LCRI is issued it will:

- Protect up to 900,000 infants from having low birthweight, which puts them at risk of longer and more expensive hospital stays after birth.
- Prevent Attention-Deficit Hyperactivity Disorder (ADHD) in up to 2,600 children).
- Reduce up to 1,500 cases of premature death from heart disease.
- Prevent up to 200,000 IQ points lost in children.

These results not only protect public health, but they are also expected to reduce healthcare costs and increase school attendance and economic productivity. The estimated annual benefits of the rule are up to 13 times greater than its estimated annual costs.

- EPA estimates benefits will be $13 to $25 billion per year.
- EPA estimates the costs to be $1.5 to $2 billion per year.

Whole of Government Approach

Through its 2021 Lead Pipe and Paint Action Plan, the Biden-Harris Administration has made accelerating lead service line replacement a top priority. Under this whole of government approach, 10 federal agencies[i] are advancing more than 15 new actions ensuring the federal government is marshalling every resource to make rapid progress towards 100% lead pipe replacement. EPA's actions, including the LCRI, are setting the nation on the course to solve a legacy problem, a problem we can solve by getting the lead out.

[i] EPA, Department of Labor (DOL), Department of Education (ED), Health and Human Services (HHS), Department of Agriculture (USDA), Department of Housing and Urban Development (HUD), Department of Interior (DOI), the Centers for Disease Control (CDC), the Treasury Department, and Executive Office of the President

Invoice Status Report

PFAS Response

City of Wausau, Wisconsin

Donohue Project Number 14066

4

Invoice 14066-29
Period | September 8, 2024 – October 5, 2024

Activities This Period

- Supported City as needed with communications and information.
- Conducted Internal Coordination Meetings as needed and provided Monthly Status Report.
- Responded to Requests for Information and clarification of construction documents.
- Reviewed Pay Application 12 and provided preliminary review of Pay Application 13.
- Prepared Change Order 4 and coordinated City approval, WDNR review and approval and Contractor execution.
- Reviewed Contractor requests for facility shutdown as needed.
- Provided on-site observation of construction, with Resident Project Representative (RPR) at site while Contractor and Subcontractors performing major construction activities including facility shutdowns, delivering and installation of equipment and piping and RPR staff on site to observe Contractor progress and answer Contractor questions.
- Developed requests for proposals for equipment modifications and structure improvements including hot water connections in chemical rooms, power panel surge protection device, overhead door threshold and retaining wall bollard,
- Reviewed contractor responses to requests for proposals.
- Revised coagulant room and polymer system modifications based on Owner comment.
- Reviewed submittals for operation and maintenance manuals, training and warranties.
- Attended monthly construction progress meeting and on site meetings with Contractor as necessary.
- Continue support of funding activities including Safe Drinking Water Loan including submitting disbursement request from Emerging Contaminants funding.
- Provided Applications Engineering Services including on site programming and input/output checkout for actuated valves and PFAS treatment system.
- Provided Designer Review Site Visits and development of punch list.
- Supported startup up activities by Contractor and coordinated WDNR field visit and review of construction.

Activities Next Period

- Support City as needed with communications and information.
- Conduct internal Weekly Coordination Meetings as needed and provide Monthly Status Report.
- Provide construction related services including on-site observation, review of submittals, consideration of requests for information, processing change orders and pay applications.
- Continue review of RFPs as needed and develop RFPs as needed.
- Prepare SDWLP disbursement requests and track budget.
- Provide Designer Review Site Visits and support during Filtered Water Pump startup.
- Develop Standard Operating Procedures and guides for system startup processes.
- Provide Application Engineering services.
- Facilitate Congressionally Directed Spending funding.

Invoice Status Report

PFAS Response

City of Wausau, Wisconsin

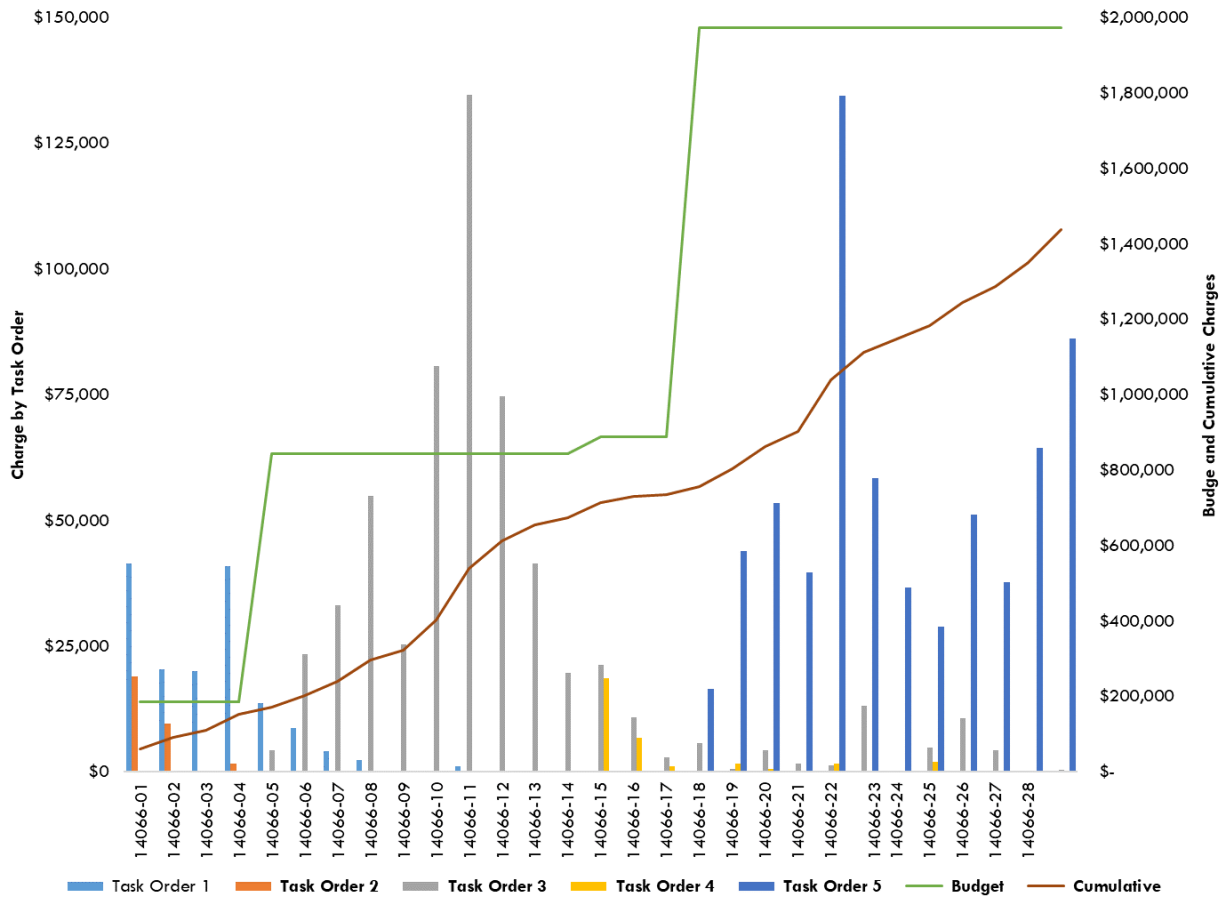
Donohue Project Number 14066

4

Invoice 14066-29
Period | September 8, 2024 – October 5, 2024

Budget Status

Engineering Budget



Invoice Status Report

PFAS Response

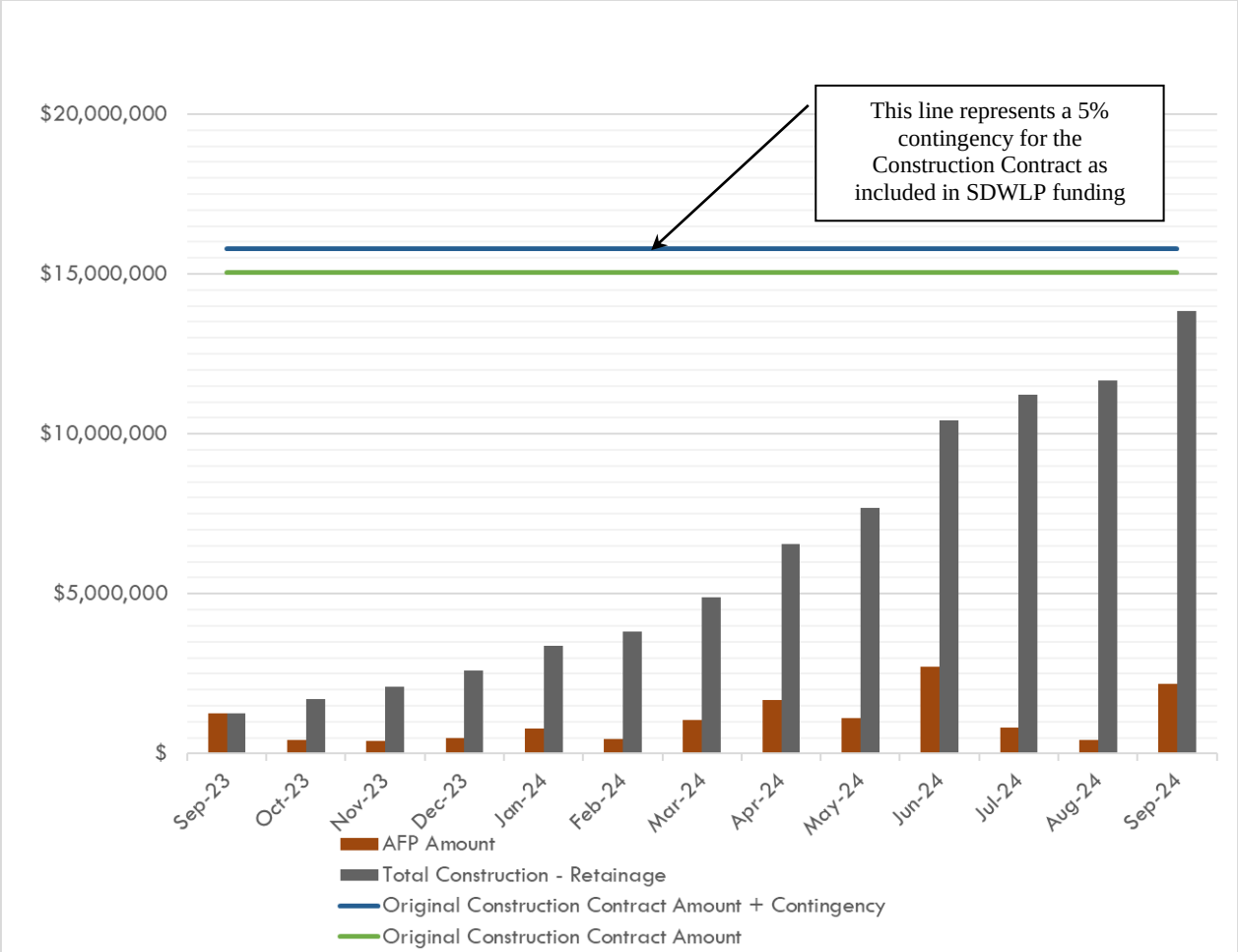
City of Wausau, Wisconsin

Donohue Project Number 14066

4

Invoice 14066-29
Period | September 8, 2024 – October 5, 2024

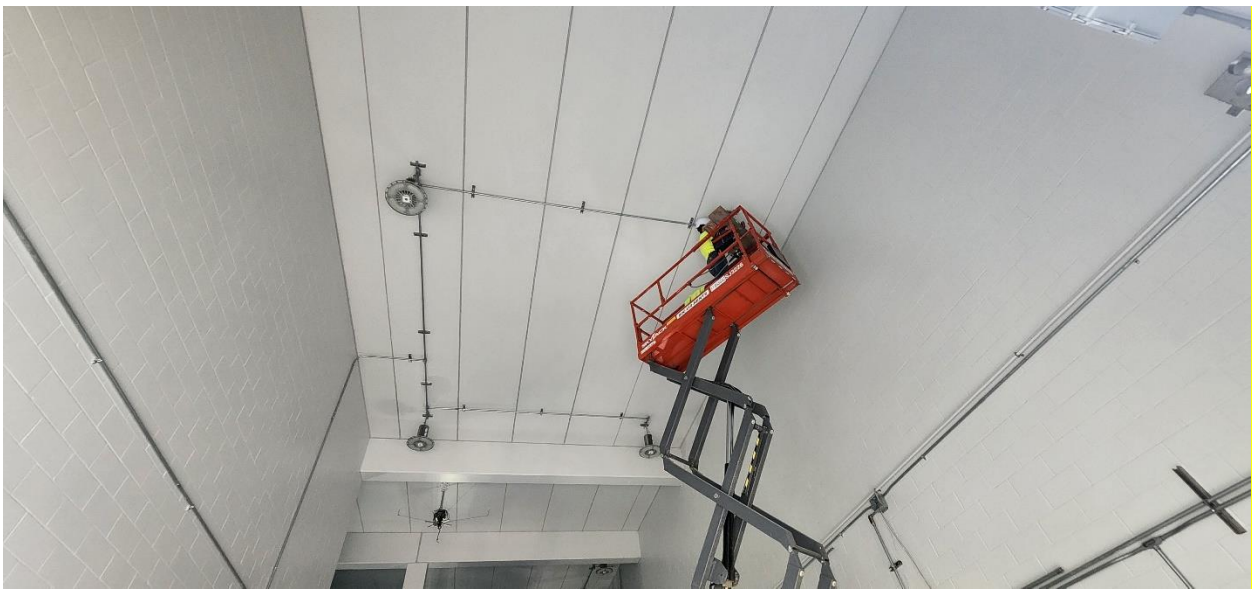
Construction Budget



Construction Photo Log

The photos below represent the construction activities that have taken place thus far.

Structure 100 (Process Building) lower level Filtered Water Pump 2 installed.



Structure 120 (PFAS Treatment Building): finishing installation of ceiling lights.

Invoice Status Report

PFAS Response

City of Wausau, Wisconsin

Donohue Project Number 14066

4

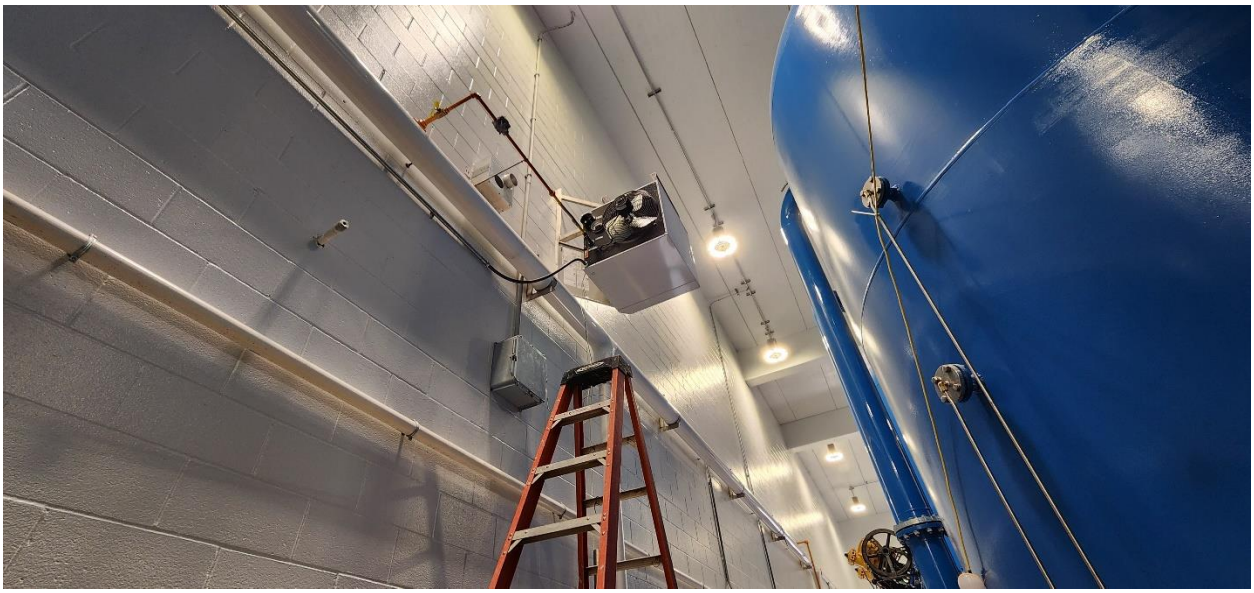
Invoice 14066-29
Period | September 8, 2024 – October 5, 2024

Structure 120 (PFAS Treatment Building) 46,000 lbs. of granular activated carbon (GAC) being installed into one PFAS vessel by Calgon (11 more to go).

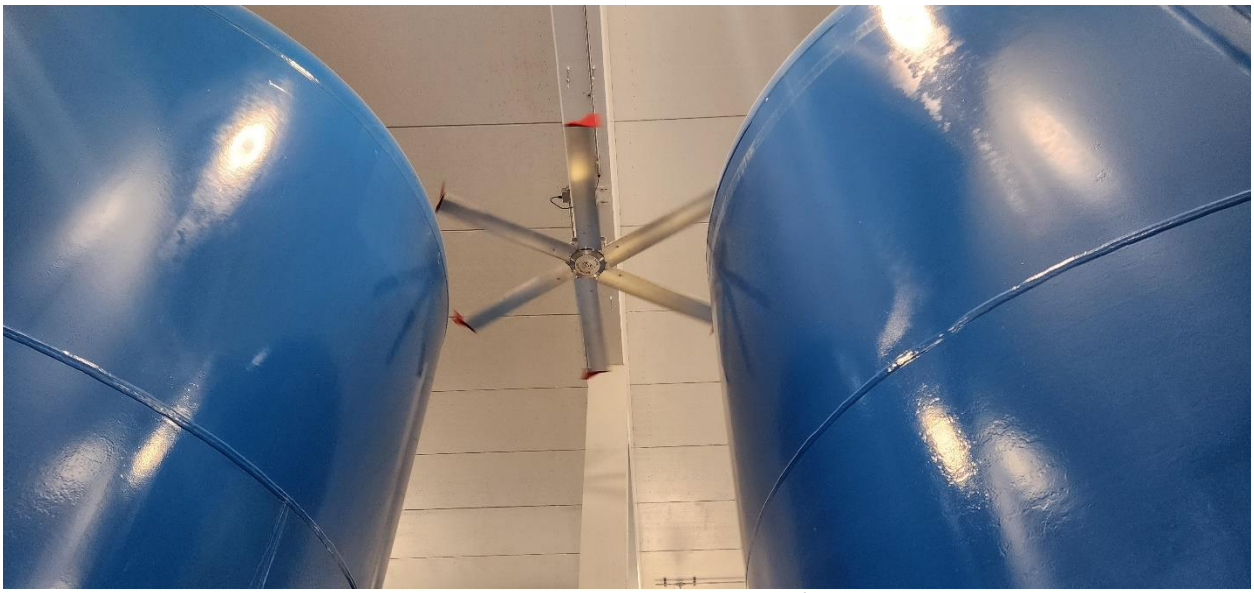
Pumping water into GAC tanker truck to suspend in order to pump into GAC vessels.

4

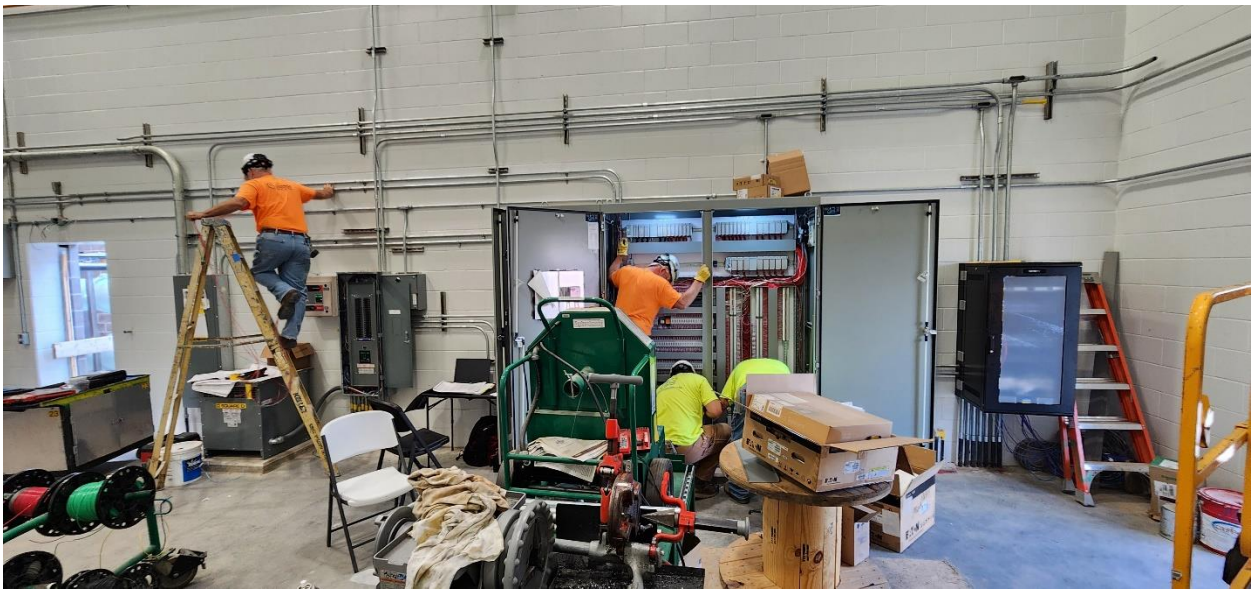
Invoice 14066-29
Period | September 8, 2024 – October 5, 2024



Structure 120 (PFAS Treatment Building) gas unit heaters installed and prepping for wiring power and control to each unit.



Structure 120 (PFAS Treatment Building) large ceiling fans & power/control installed.



Structure 120 (PFAS Treatment Building) network rack and 120-PLC installed and wired.

Structure 120 (PFAS Treatment Building) roof top lightning protection installed and connected.

Structure 120 (PFAS Treatment Building) Pipe labelling ongoing.


Structure 120 (PFAS Treatment Building) overhead garage door, building pipe bollards and exterior lighting installed.

4

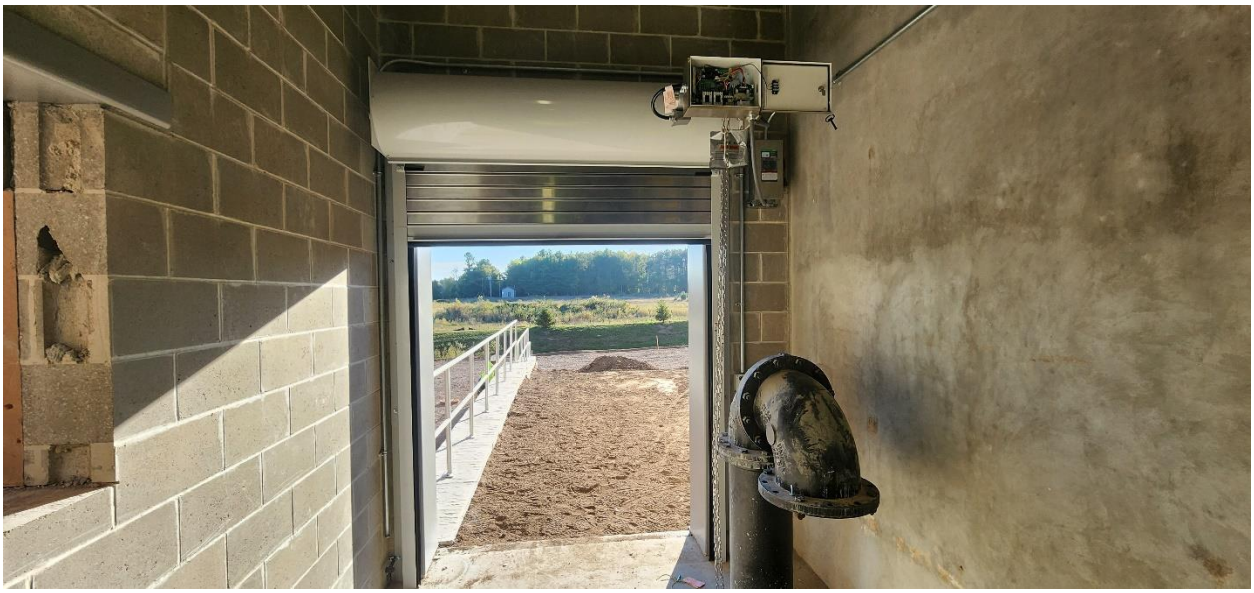
Invoice 14066-29
Period | September 8, 2024 – October 5, 2024

Structure 120 (PFAS Treatment Building) Donohue SCADA Programmer working with Aqueous Vets and IPS to set up the actuated valves on GAC vessels.

Structure 120 (PFAS Treatment Building) man doors and stairways installed, rough grade for asphalt completed, and concrete poured for Structure 410 slab, Structure 120 (PFAS Treatment Building) exterior sump and for landings below man doors.

Backwashing of GAC in vessels has started, this is the GAC fines being washed out into the Structure 120 (PFAS Treatment Building) process waste sump.

Exterior piping between Structure 100 (Process Building) and Structure 120 (PFAS Treatment Building) getting pipe insulation and jacketing installed.



Structure 100 (Process Building) new overhead garage door installed in storage area located north of the Filtered Water tanks.

Structure 120 (PFAS Treatment Building), set of photos showing fines at the start of a GAC backwashing sequence, the middle and the end with fines washed out.

INVOICE

DONOHUE

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

Invoice To:

City of Wausau
Attn: Eric Lindman
407 Grant Street
Wausau, WI 54403

Invoice Date:	October 10, 2024
Donohue Project No.:	14066
Invoice No:	14066-29
Project Manager:	Susan Wojtkiewicz
Terms:	Net 30 Days
Billing Period:	09/08/27 - 10/05/24

Project Description: Continuing Services Agreement

Your Authorization: Continuing Professional Services Agreement, Signed 03/17/22
Task Order No. 1, Signed 03/17/22
Task Order No. 2, Signed 03/18/22
Task Order No. 3, Signed 07/21/22
Task Order No. 4, Signed 05/16/23
Task Order No. 5, Signed 08/09/23

Compensation:

Task Order No. 1 - Time and Expense Not-to-Exceed	$	155,375.00
Task Order No. 2 - Time and Expense Not-to-Exceed	$	30,000.00
Task Order No. 3 - Time and Expense Not-to-Exceed	$	658,695.00
Task Order No. 4 - Time and Expense Not-to-Exceed	$	44,920.00
Task Order No. 5 - Time and Expense Not-to-Exceed	$	1,083,284.00
Total	$	1,972,274.00

Billing Summary:

Total Charges to Date	$	1,437,543.64
Charges Previously Billed	$	1,351,066.72
Current Charges	$	86,476.92
Task Order No. 1	**$**	**155,375.00**
Total Charges to Date	$	152,354.26
Charges Previously Billed	$	152,354.26
Labor (hours)	$	-
Reimbursable Expenses	$	-
Subconsultants	$	-
Total	$	-
Task Order No. 2	**$**	**30,000.00**
Total Charges to Date	$	30,000.00
Charges Previously Billed	$	30,000.00
Task Order No. 3	**$**	**658,695.00**
Total Charges to Date	$	572,361.59
Charges Previously Billed	$	571,971.59
Labor (0.0 hours)		
Reimbursable Expenses	$	-
Permit Fees	$	-
Subconsultants	$	390.00
Total	$	390.00

Task Order No. 4		**$**	**44,920.00**
Total Charges to Date		$	32,145.00
Charges Previously Billed		$	32,145.00
Labor (hours)		$	-
Reimbursable Expenses		$	-
Subconsultants		$	-
	Total	$	-
Task Order No. 5		**$**	**1,083,284.00**
Total Charges to Date		$	650,682.79
Charges Previously Billed		$	564,595.87
Labor (417.0 hours)		$	81,197.50
Reimbursable Expenses		$	4,889.42
Subconsultants		$	-
	Total	$	86,086.92
Current Charges Due		**$**	**86,476.92**

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
$86,476.92	$64,384.87	$0.00	$0.00	$0.00

FLUORIDATION

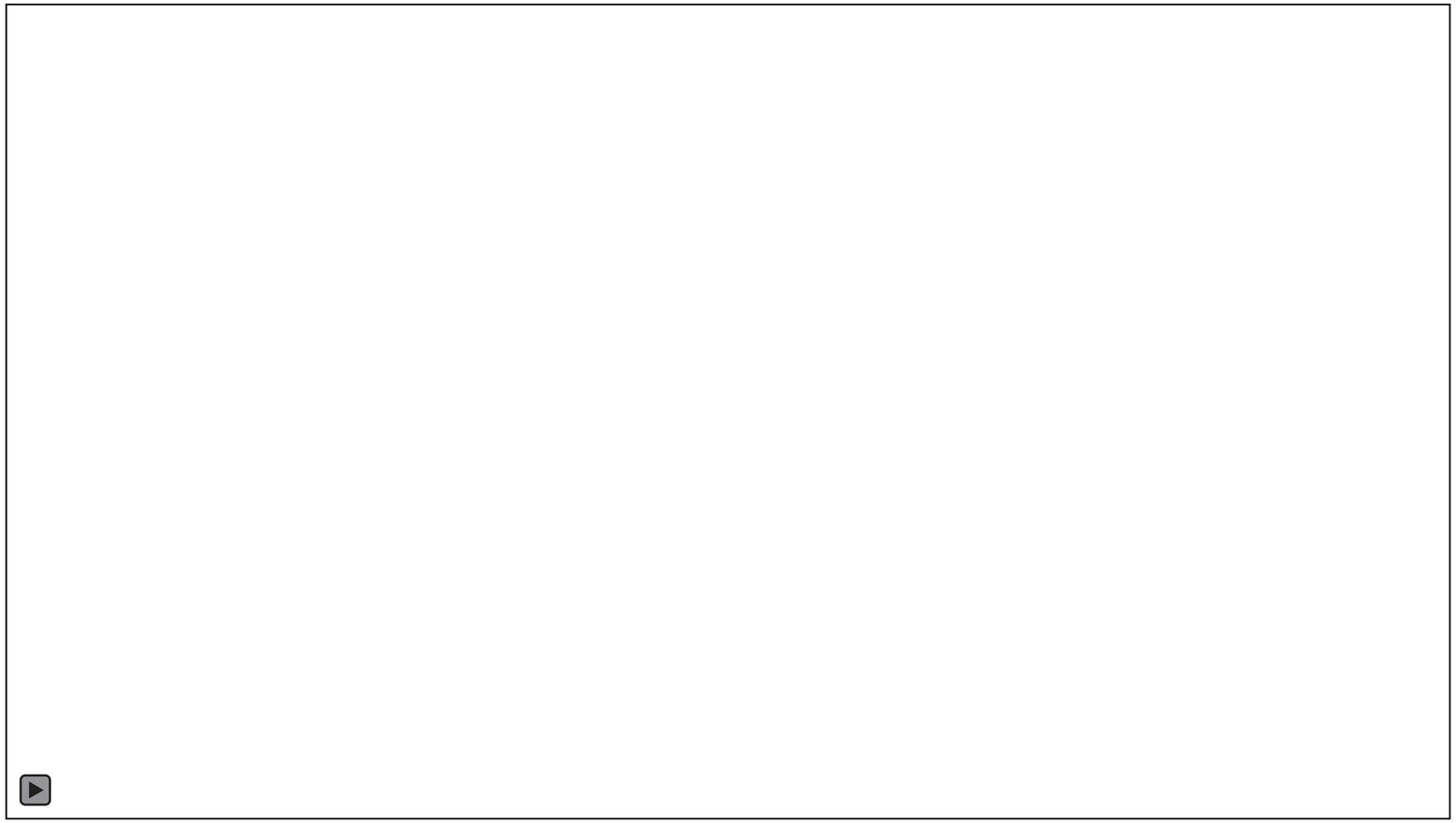
Laura Scudiere RN, MPH, CHES
Marathon County Health Officer
2024

WHAT IS FLUORIDE

- Naturally occurring mineral
- Found in rocks, soil, and most water sources
- Strengthens developing tooth enamel
- Slows down tooth decay

HOW FLUORIDE WORKS

DENTAL IMPACT



FLUORIDE FACTS

- Even with widespread availability of fluoride from other sources, community water fluoridation prevents at least 25 tooth decay in children and adults throughout their lifespan
- Optimal level is 0.7 mg/dL

https://ods.od.nih.gov/factsheets/Fluoride-HealthProfessional/#:~:text=Fluoride%20is%20the%20ionic%20form,contain%20trace%20amounts%20of%20fluoride.

LOCAL DENTAL SNAPSHOT

County: Marathon

50.1%

percent of students

Source: Bridging Brighter Smiles
Measurement period: 2022-2023
Maintained by: Marathon County Health Department
Last update: December 2023

COMPARED TO

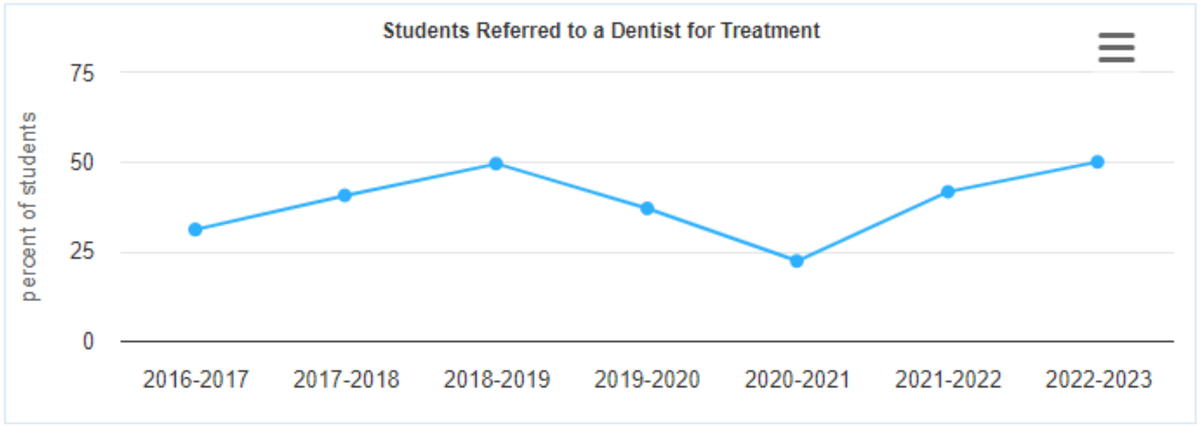
Prior Value
(41.7%)

Trend

Graph Selections

INDICATOR VALUES

☑ Change over Time



SAVINGS

Community Water Fluoridation Data Snapshot

How can community water fluoridation help your community?

Wausau, WI

1 Population served

2 Savings based on population

$1,274,656/year

Individuals in communities that fluoridate water save an average of $32 per person by avoiding dental care for cavities.

IMPACT

3 Poverty rate

13.2%

- Approximately **one out of eight** people in Wausau are living in poverty.
- Children 2 to 5 years-old living in poverty are **three** times more likely to have untreated cavities. By ages 12 to 19, adolescents living in poverty are **twice** as likely to have untreated cavities in their permanent teeth.
- Low-income adults have **two to three** times more untreated cavities.
- Communities save **$20** for every **$1** invested in community water fluoridation.
- Nation-wide, nearly **$6.5 billion** are saved per year by avoiding direct and indirect dental costs.

For more information on community water fluoridation, visit the Wisconsin Oral Health Program's website: www.dhs.wisconsin.gov/oral-health/community-water-fluoridation-fluoride.htm.

xxx

COST PERSPECTIVE

Findings suggest that Medicaid eligible children in communities without water fluoridation had an increased cost for dental treatment per child that was twice as high as those children living in fluoridated communities.

IN THE NEWS

DENTAL AND HEALTH EXPERT PERSPECTIVE

American Academy of Pediatrics

American Dental Association

Academy of General Dentistry

Wisconsin Dental Association

Wisconsin Department of Health Services

REFERENCES/RESOURCES

American Dental Association. (2018). Fluoridation facts: Practical guide series.

Wisconsin Department of Health Services. (2024). Community water fluoridation snapshot [Infographic].

Wisconsin Oral Health Coalition. (n.d.). Tap into healthy teeth: Community water fluoridation toolkit. Wisconsin Department of Health Services.

National Toxicology Program
U.S. Department of Health and Human Services

https://ntp.niehs.nih.gov/go/fluoride

Fluoride Exposure: Neurodevelopment and Cognition

The State of the Science Monograph is now available.

Topic Overview

CASRN: 16984-48-8
Status: Evaluation completed

BACKGROUND INFORMATION

Since 1945, the use of fluoride has been a successful public health initiative for reducing dental cavities and improving general oral health of adults and children. There is a concern, however, that some pregnant women and children may be getting more fluoride than they need because they now get fluoride from many sources including treated public water, water-added foods and beverages, teas, toothpaste, floss, and mouthwash, and the combined total intake of fluoride may exceed safe amounts.

Therefore, the National Toxicology Program (NTP) conducted a systematic review of the published scientific literature on the association between fluoride exposure and neurodevelopment and cognition. The NTP released their findings in a State of the Science Monograph (available below under Documents). A corresponding meta-analysis on children's IQ has been accepted by a scientific journal for publication later in 2024.

The NTP started this work in 2016. As with all research documents intended for publication, the NTP fluoride monograph and meta-analysis underwent rigorous scientific evaluation. The evaluation process has involved many steps. The draft fluoride monograph received critical feedback during peer-review by the National Academies of Science, Engineering and Medicine (NASEM), from other external experts, and from experts in several federal health agencies. After modifications were made, additional evaluation following a rigorous scientific framework was conducted by subject matter experts organized by the NTP Board of Scientific Counselors. This document is now complete and available for reference.

The monograph represents a thorough review of the data, and the various interpretations of the data, to accurately reflect what we know and where additional research is needed.

Findings

The NTP monograph concluded that higher levels of fluoride exposure, such as drinking water containing more than 1.5 milligrams of fluoride per liter, are associated with lower IQ in children. The NTP review was designed to evaluate total fluoride exposure from all sources and was not designed to evaluate the health effects of fluoridated drinking water alone. It is important to note, however, that there were insufficient data to determine if the low fluoride level of 0.7 mg/L currently recommended for U.S. community water supplies has a negative effect on children's IQ.

The NTP uses 4 confidence levels - high, moderate, low, or very low - to characterize the strength of scientific evidence that associates a particular health outcome with an exposure. After evaluating studies published through October 2023, the NTP Monograph concluded there is moderate confidence in the scientific evidence that showed an association between higher levels of fluoride and lower IQ in children.

The determination about lower IQs in children was based primarily on epidemiology studies in non-U.S. countries such as Canada, China, India, Iran, Pakistan, and Mexico where some pregnant women, infants, and children received total fluoride exposure amounts higher than 1.5 mg fluoride/L of drinking water. The U.S. Public Health Service currently recommends 0.7 mg/L, and the World Health Organization has set a safe limit for fluoride in drinking water of 1.5 mg/L. The NTP found no evidence that fluoride exposure had adverse effects on adult cognition.

Application

Many substances are healthy and beneficial when taken in small doses but may cause harm at high doses. More research is needed to better understand if there are health risks associated with low fluoride exposures. This NTP monograph may provide important information to regulatory agencies that set standards for the safe use of fluoride. It does not, and was not intended to, assess the benefits of fluoride.

DOCUMENTS

Date	Document
Aug 21, 2024	NTP Monograph - Final (Abstract) **Preferred Citation:** National Toxicology Program (NTP). 2024. NTP monograph on the state of the science concerning fluoride exposure and neurodevelopment and cognition: a systematic review. Research Triangle Park, NC: National Toxicology Program. NTP Monograph 08. https://doi.org/10.22427/NTP-MGRAPH-8
Aug 21, 2024	Interactive Reference Flow Diagram (NTP Monograph Figure 2)
Aug 21, 2024	Interactive Reference Flow Diagram for Updated Literature Search (NTP Monograph Addendum Figure 1)

Date	Document
May 18, 2023	Transmittal Letter Final Version of the NTP Board of Scientific Counselors Working Group Report
Mar 15, 2023	Table of Contents Documents Provided to the NTP Board of Scientific Counselors (BSC) and BSC Working Group
Sept 16, 2020	Literature Search Results
Sept 16, 2020	NTP Protocol for Systematic Review of Human, Animal, and Mechanistic Evidence - Second Revision
May 29, 2019	NTP Protocol for Systematic Review of Human, Animal, and Mechanistic Evidence - First Revision
Jun 01, 2017	NTP Protocol for Systematic Review of Human, Animal, and Mechanistic Evidence
Jul 01, 2016	Completed Systematic Review (Abstract) **Preferred Citation:** NTP (National Toxicology Program). 2016. Systematic literature review on the effects of fluoride on learning and memory in animal studies. NTP Research Report 1. Research Triangle Park, NC: National Toxicology Program. Research Report 1. https://doi.org/10.22427/NTP-RR-1
Dec 02, 2015	Presentation: NTP Evaluation of Fluoride Exposure and Potential for Developmental Neurobehavioral Effects
Nov 19, 2015	Proposed NTP Evaluation on Fluoride Concept
Oct 07, 2015	Federal Register notice requesting information on nominated substances

MEETINGS & EVENTS

Date	Event	Event Type	Materials
May 16, 2023	**Board of Scientific Counselors Meeting**	Board of Scientific Counselors	• Final Documents • Agenda • Meeting Materials • Presentations • Videos

Date	Event	Event Type	Materials
May 04, 2023	**Board of Scientific Counselors Meeting**	Board of Scientific Counselors	• Agenda • Meeting Materials • Presentations • Videos
Oct 19, 2020	**Peer Review of the Revised NTP Monograph on Fluoride Exposure and Neurodevelopmental and Cognitive Health Effects by the National Academies of Science, Engineering, and Medicine**	Expert Panels - Other Panels	• Final Documents • Meeting Webpage • Response to NASEM Review for NTP Monograph Only
Nov 06, 2019	**Peer Review of the Draft NTP Monograph on Systematic Review of Fluoride Exposure and Neurodevelopmental and Cognitive Health Effects by the National Academies of Science, Engineering, and Medicine**	Expert Panels - Other Panels	• Meeting Webpage • Response to NASEM Review
Dec 01, 2015	**NTP Board of Scientific Counselors Meeting**	Board of Scientific Counselors	• Agenda • Meeting Materials

Supplemental materials for some events, meetings, and workshops prior to 2021 have been archived. These archived materials frequently include presentations, background materials, and public comments. Email us or use our contact form to request a list or copy of archived materials.

Note on Accessibility: Persons with disabilities or using assistive technology may find some documents are not fully accessible. For assistance, email us or use our contact form and identify the

documents/pages for which access is required. We will assist you in accessing the content of these files. NIEHS has helpful information on accessibility.

10/10/2024 at 8:09AM

Good Morning, Mayor Diny-

I am contacting you at the request of local health professionals regarding an upcoming discussion of community water fluoridation at the Wausau Water Works Commission meeting on November 4, 2024. I understand that communication to Commission members should be sent to you.

The American Academy of Pediatrics supports community water fluoridation as a cost-effective means of preventing tooth decay throughout the lifespan and joins with other major medical and health organizations in advocating for this common-sense public health policy.

Many people don't realize that tooth decay, although preventable, is the most common chronic childhood disease, 5 times more common than asthma. All too often, it leads to countless hours out of school and work, needless pain and suffering, and costly visits to the emergency room.

We support community water fluoridation because it is backed by a solid base of scientific evidence and over 70 years of practice and because it is safe and effective.

Attached you will find our letter of support. We invite you to visit our website, ILikeMyTeeth.org, for additional information.

Respectfully submitted,

Hollis Russinof, MUPP
American Academy of Pediatrics
Campaign for Dental Health
Section on Oral Health
345 Park Boulevard
Itasca, Illinois 60143
630/626-6483
Pronouns: she/her/hers
My regular days at the Academy are Monday through Thursday.

American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN®

345 Park Blvd
Itasca, IL 60143
Phone: 630/626-6000
Fax: 847/434-8000
www.aap.org

October 10, 2024

Wausau Water Commission
c/o Doug Diny, Mayor
City of Wausau
407 Grant Street
Wausau, Wisconsin 54403

Dear Commission Members –

On behalf of the American Academy of Pediatrics (AAP), a non-profit professional organization of 67,000 primary care pediatricians, pediatric medical sub-specialists, and pediatric surgical specialists dedicated to the health, safety, and well-being of infants, children, adolescents, and young adults, I write to support the recommendations of the Centers for Disease Control and Prevention (CDC) and the American Dental Association (ADA) in stating that community water fluoridation is safe, effective, and prevents unnecessary dental disease, a costly and painful condition.

The AAP is particularly concerned with the high rates of early childhood caries (tooth decay) in the United States and the detrimental effects this disease can have on children. Dental caries, although largely preventable, is the most common chronic childhood disease, five times more common than asthma. Dental caries can lead to severe health problems, including serious infection, debilitating pain, dietary and speech problems, and in rare cases, even death.

The AAP supports community water fluoridation to help protect children's teeth. Regular and frequent exposure to small amounts of fluoride is the best way to protect the teeth against caries. This exposure can be readily accomplished through drinking water that has been optimally fluoridated and brushing with fluoride toothpaste twice daily.[1] Community-based water fluoridation intervention optimizes the level of fluoride in drinking water, resulting in pre-eruptive and post-eruptive protection of the teeth. The delivery of fluoride includes community-based, professionally applied, and self-administered modalities.

Water fluoridation is a cost-effective means of preventing dental caries, with the lifetime cost per person equaling less than the cost of one dental restoration. In short, fluoridated water is the cheapest and most effective way to deliver anti-caries benefits to communities.[2] Water fluoridation is an effective and inexpensive, does not require daily adherence, and promotes equity, because it benefits everyone regardless of socioeconomic status.[3]

The AAP continues its mission to ensure the health and well-being of all children, and, to this end, supports local and state efforts for children to have access to safe, optimally fluoridated water. If you require additional information, please contact Cheryl De Pinto, MD, MPH, FAAP at cdepinto@aap.org.

Sincerely,

Benjamin D. Hoffman, MD, FAAP
President

BDH/hr

1 Bright Futures Guidelines for the Health Supervision of Infants, Children, and Adolescents, 4th Edition. 2017.
2 Fluoride Use in Caries Prevention in the Primary Care Setting. Pediatrics. Pediatrics December 2020, 146 (6).
3 Early Childhood Caries in Indigenous Communities. Pediatrics. June 2021, 147 (6).

10/09/2024 at 3:59PM

Dear Mayor Diny and Wausau City Council,

The American Dental Association (ADA) would like to express our support for continuing water fluoridation for the community of Wausau, WI. The ADA, along with the American Academy of Pediatrics, American Academy of Family Physicians, Centers for Disease Control and Prevention, World Health Organization, and almost every major health care organization recommend drinking fluoridated water.

Why? Because above and beyond the use of fluoridated toothpaste and rinses, communities with water fluoridation see an additional 25% reduction in tooth decay. Although children get the most benefit from fluoride (especially lower income kids), adults benefit as well. Poor oral health is still a problem in our country and can result in pain, infection, hospitalization, and loss of school and work hours.

In studies from Texas and Louisiana, towns that fluoridate had lower Medicaid dental treatment costs for children than similar towns that didn't. Research shows that fluoridated communities can save up to $32 per person- per year in dental treatment costs. Fluoridating water in Wausau saves residents about $1,274,656 per year by avoiding dental care for cavities.

Fluoride is a naturally occurring mineral found in soil, air, and all sources of water. In most places in the U.S., water needs just a little extra fluoride to reach a level where it reduces tooth decay (0.7 parts per million water). Over 75 years of research shows that fluoridation is socially equitable, safe, and effective. Most of the studies that opponents of fluoridation cite are from countries like China and India with very high naturally occurring levels of fluoride- many times higher than we find in the U.S.

Water operators often have questions about fluoridation and may receive information from dubious sources about the process that is simply untrue. We urge water operators to turn to information on fluoridation from the AWWA and the CDC. The CDC has great information for water operators on their website. I went to a water plant in Murfreesboro, TN to take their course, but it is now available free online, at: https://www.cdc.gov/fluoridation-engineering/trainings/fluoridation-learning-online.html

I've also attached an information sheet for Water Operators that ADA developed with the help of water operators.

Oral health is an important part of general health, and we hope that you will consider the health of your community as you make your decision.
Thank you.

Sincerely,
Dr. Liz Lense

Elizabeth C. Lense, DDS, MSHA, FAAOMP
Health Equity and Prevention Programs
Council on Advocacy for Access and Prevention
Email: lensee@ada.org

American Dental Association Chicago, IL 60611 www.ada.org

ADA American Dental Association®
America's leading advocate for oral health

211 East Chicago Avenue
Chicago, Illinois 60611

T 312.440.2700
F 312.440.7488
www.ada.org

Raymond A. Cohlmia
Executive Director

October 9, 2024

Mr. Doug Diny, Mayor
407 Grant Street
Wausau, WI 53566

Dear Mayor Diny and Wausau Council Members,

I am writing to express the American Dental Association's (ADA) support for water fluoridation and the opportunity to continue providing optimally fluoridated water for the community of Wausau, WI.

Fluoridation began in 1945 in Grand Rapids, Michigan, where studies showed a dramatic decline in tooth decay in school children. Since that time, numerous communities across the United States have implemented fluoridation programs. Today nearly 75% of the U.S. population served by public water supplies (more than 207 million people) has access to water with optimal levels of fluoride to prevent tooth decay.

Because of its contribution to the dramatic decline in tooth decay, fluoridation of community water supplies has been proclaimed by the Centers for Disease Control and Prevention as one of 10 great public health achievements of the 20th century. Fluoridation is effective, safe, economical, and socially equitable in preventing tooth decay.

Studies show that community water fluoridation prevents at least 25% of tooth decay in children and adults, even with the widespread use of fluoride-containing products such as toothpaste. Simply through optimal water fluoridation, people can benefit from cavity protection-regardless of age, education, race, or socio-economic status.

Through decades of research and over 75 years of practical experience, fluoridation of public water supplies has been responsible for dramatically improving the public's oral health. The ADA is truly gratified when, in the interest of the public's health and welfare, communities provide optimally fluoridated water to their residents.

The ADA provides detailed information about fluoridation at www.ada.org/fluoride. Should you have additional questions, please contact Dr. Elizabeth Lense at lensee@ada.org. Thank you for your thoughtful consideration of this important community health issue.

Sincerely,

Raymond A. Cohlmia, DDS
Executive Director

Association of State and Territorial Dental Directors
3858 Cashill Blvd., Reno, NV 89509• Phone: 775-626-5008
Website: http://www.astdd.org

October 9, 2024

The Wausau Water Commission
c/o Mayor Doug Diny
Wausau City Hall
407 Grant Street
Wausau, Wi 54403

Dear Mayor Diny**:**

On behalf of the Association of State and Territorial Dental Directors (ASTDD), I am writing this letter to ask you for your support for continuing community water fluoridation in Wausau, Wisconsin. ASTDD's official policy is that we fully support and endorse community water fluoridation in all public water systems throughout the United States. Community water fluoridation has been demonstrated to be safe, cost-effective and beneficial through every stage of life and for all people, regardless of age, race, ethnicity or socioeconomic status.

Dental caries (tooth decay) is a chronic infectious disease that can begin in early infancy and that, by the time children reach adulthood, will affect over 92 percent of the U.S. adult population.[1] In addition, dental caries particularly affects low-income and socially-marginalized populations.[2, 3] Children from families with low incomes had nearly 12 times as many restricted-activity days (e.g., days of missed school) because of dental problems as did children from families with higher incomes.[4]

Scientific studies have confirmed the association between optimal levels of fluoride in water supplies, improved dental health and absence of any negative health impacts. As such, community water fluoridation has been the cornerstone of caries prevention in the United States.[5] The CDC has recognized water fluoridation as one of ten great public health achievements of the twentieth century.[6]

In light of the above, I urge you to support the continuing of community water supplies in Wausau, Wisconsin. Support for community water fluoridation is a major achievement that will positively impact the health of your constituents.

Sincerely,

Dr. Russell Dunkel

Russ Dunkel, DDS, BS, BA, FACD, FICD, FPFA
President, ASTDD

Sources:

[1]Dye BA, Tan S, Smith V, et al. Trends in oral health status: United States, 1988-1994 and 1999-2004. *Vital Health Stat 11*. April 2007;(248):1-92.

[2] Fisher-Owens SA, Gansky SA, Platt LJ, Weintraub JA, Soobader MJ, Bramlett MD, Newacheck PW. Influences on children's oral health: a conceptual model. Pediatrics. 2007:120(3):e510-520.

[3] Petersen PE. The World Oral Health Report 2003: continuous improvement of oral health in the 21st century – the approach of the WHO Global Oral Health Programme. Community Dent Oral Epidemiol. 2003;31(s1):3-24.

[4] Adams PF, Marano MA. 1995. *Current estimates from the National Health Interview Survey, 1994* (Vital and Health Statistics: Series 10, Data from the National Health Survey; no. 193). Hyattsville, MD: U.S. Department of Health and Human Services, National Center for Health Statistics.

[5] Pollick HF. Water fluoridation and the environment: current perspective in the United States. Int. *J Occup Environ Health*.2004;10:343-350.

[6] Ten Great Public Health Achievements—United States, 1900-1999. *MMWR*. December 24, 1999;48(50):1141.

ADA American Dental Association®

Learn more at:
ADA.org/fluoride

Fluoride Facts for Water Operators

Why Water Personnel are Oral Health Heroes

Community water fluoridation is a time-tested, cost-effective, and equitable solution for optimal oral health.

Good oral health is essential to overall health. Children with cavities suffer from pain, infections, and poor nutrition. An average of 34 million hours of school are lost per year in the U.S. because of dental problems. Poor oral health in adults also results in pain, infection, and tooth loss, along with difficulty obtaining a job due to the appearance of their teeth, and lost work hours. Dental problems result in a $46 billion/year loss of production to the U.S. economy.[1]

More than 75 years of research and practical experience shows optimal fluoridation of water supplies helps prevent cavities. Studies prove water fluoridation continues to reduce tooth decay by more than 25% in children and adults, even with the use of other fluoride products like toothpaste.[1]

The benefits of community water fluoridation are recognized by the American Medical Association, American Water Works Association (AWWA), U.S. Public Health Service, Centers for Disease Control and Prevention (CDC), and the American Academy of Pediatrics (AAP). The CDC, AAP, and AWWA also provide fluoride information for water operators.[2, 3, 4]

Water facilities and water operators perform a valuable public service by carefully adjusting the level of fluoride in water to improve the oral health of their community.

Almost 73% of the U.S. population on community water systems (209 million people) receive the benefits of fluoridation.[5]

Rules and recommendations for water facilities are designed to ensure operator and public safety.[4]

- OSHA requires **Safety Data Sheets (SDS)** be prepared by the manufacturers and suppliers of additive products. Each water facility should have the most current SDS sheets for the products they use. SDS sheets describe safe handling and use procedures of all materials.
- With the proper use of **Personal Protective Equipment (PPE)**, an operator will not have hazardous exposure to fluoride additive products. Fluoride additives present risks comparable to other water additives commonly used such as hypochlorite, quicklime, aluminum sulfate, sodium hydroxide, and ferrous sulfate. In some cases, the fluoride additives are much less dangerous than many other additives, including chlorine gas.
- The process of **adding fluoride to water has little impact on the acidity or pH of drinking water** and therefore will not corrode water pipes.

continued »

- If a water system is reporting problems with corrosion from evaporating hydrogen fluoride (i.e., the glass in the facility has become "frosted"), there is a leak in the piping. **The storage tank and other locations in the feed system may not be sealed or correctly vented**. All fluoride products storage, handling, and feed systems should be vented to the outside of the building, and the system and piping should be pressure tested (low pressure is sufficient) to identify possible leaks which should be promptly corrected. With no system leaks, there will be no corrosion problems.
- All state requirements, as well as Ten States Standards, require **storage of ALL additives be separate from other additives used in the facility**. It is important to keep different materials separated, as there is the potential to react with each other.
- **The CDC offers a free, online training course for Water Operators to learn more about Fluoridation at *www.cdc.gov/fluoridation-engineering/trainings/index.html.***

More questions? Check out ADA's Fluoridation Facts, or contact Dr. Elizabeth Lense at *lensee@ada.org*.

References:

[1] U.S. Centers for Disease Control and Prevention (CDC). 2024. About Oral Health. *www.cdc.gov/oral-health/about/index.html.*

[2] CDC. 2024. Fluoridation Engineering and Operations. *www.cdc.gov/fluoridation-engineering/?CDC_AAref_Val=https://www.cdc.gov/fluoridation/engineering/index.htm.*

[3] American Academy of Pediatrics. 2024. Helpful Information for Water Operators. *ilikemyteeth.org/waterops.*

[4] American Water Works Association. 2016. *M4 Water Fluoridation Principles & Practices, 6th Ed. www.awwa.org/portals/0/files/publications/documents/m4lookinside.pdf.*

[5] CDC. 2024. 2020 Water Fluoridation Statistics. *www.cdc.gov/fluoridation/php/statistics/2020-water-fluoridation-statistics.html.*

Wausau Waterworks	Project: 2024 Quarterly DW		
1801 Burek Ave	Project Number: 2024 WDNR Drinking Water Requirerments	**Reported:**	**Work Order:**
Wausau, WI 54401	Project Manager: Scott Boers	10/9/24 15:54	CC11696

Sample Results

Sample: EP400 (PFAS)

CC11696-01 (DW) Sampled: 09/25/24 12:50

Analyte	Result	Qualifier	LOD	LOQ	MCL	Units	Date Prepared	Date Analyzed	Analyst	Method	Lab Cert Code
Semi-Volatiles											
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	ND		0.31	1.0		ng/L	9/30/24 5:56	9/30/24 21:39	JPW	EPA 537.1, Rev 2.0	2
9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	ND		0.48	1.6		ng/L	9/30/24 5:56	9/30/24 21:39	JPW	EPA 537.1, Rev 2.0	2
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.42	1.4		ng/L	9/30/24 5:56	9/30/24 21:39	JPW	EPA 537.1, Rev 2.0	2
hexafluoropropylene oxide dimer acid (HFPO DA)	ND		0.95	3.1		ng/L	9/30/24 5:56	9/30/24 21:39	JPW	EPA 537.1, Rev 2.0	2
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	3.9	J	1.8	5.9		ng/L	9/30/24 5:56	9/30/24 21:39	JPW	EPA 537.1, Rev 2.0	2
n-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.0	6.6		ng/L	9/30/24 5:56	9/30/24 21:39	JPW	EPA 537.1, Rev 2.0	2
perfluorobutanesulfonic acid (PFBS)	ND		0.74	2.5		ng/L	9/30/24 5:56	9/30/24 21:39	JPW	EPA 537.1, Rev 2.0	2
perfluorodecanoic acid (PFDA)	ND		0.55	1.9		ng/L	9/30/24 5:56	9/30/24 21:39	JPW	EPA 537.1, Rev 2.0	2
perfluorododecanoic acid (PFDoA)	ND		0.64	2.1		ng/L	9/30/24 5:56	9/30/24 21:39	JPW	EPA 537.1, Rev 2.0	2
perfluoroheptanoic acid (PFHpA)	2.2		0.55	1.9		ng/L	9/30/24 5:56	9/30/24 21:39	JPW	EPA 537.1, Rev 2.0	2
perfluorohexanoic acid (PFHxA)	2.2		0.57	1.9		ng/L	9/30/24 5:56	9/30/24 21:39	JPW	EPA 537.1, Rev 2.0	2
perfluorohexanesulfonic acid (PFHxS)	ND		0.65	2.2		ng/L	9/30/24 5:56	9/30/24 21:39	JPW	EPA 537.1, Rev 2.0	2
perfluorononanoic acid (PFNA)	ND		0.53	1.8		ng/L	9/30/24 5:56	9/30/24 21:39	JPW	EPA 537.1, Rev 2.0	2
perfluorooctanoic acid (PFOA)	5.2		0.48	1.6		ng/L	9/30/24 5:56	9/30/24 21:39	JPW	EPA 537.1, Rev 2.0	2
perfluorooctanesulfonic acid (PFOS)	0.70	J	0.49	1.7		ng/L	9/30/24 5:56	9/30/24 21:39	JPW	EPA 537.1, Rev 2.0	2
perfluorotetradecanoic acid (PFTA)	ND		0.55	1.9		ng/L	9/30/24 5:56	9/30/24 21:39	JPW	EPA 537.1, Rev 2.0	2
perfluorotridecanoic acid (PFTrDA)	ND		0.55	1.9		ng/L	9/30/24 5:56	9/30/24 21:39	JPW	EPA 537.1, Rev 2.0	2
perfluoroundecanoic acid (PFUnA)	ND		0.53	1.8		ng/L	9/30/24 5:56	9/30/24 21:39	JPW	EPA 537.1, Rev 2.0	2
Surrogate: (SURR) C13-PFHxA	*93%*		*Limits:*	*70-130%*			*9/30/24 5:56*	*9/30/24 21:39*	*JPW*	*EPA 537.1, Rev 2.0*	2
Surrogate: (SURR) C13-HFPODA	*86%*		*Limits:*	*70-130%*			*9/30/24 5:56*	*9/30/24 21:39*	*JPW*	*EPA 537.1, Rev 2.0*	2
Surrogate: (SURR) C13-PFDA	*87%*		*Limits:*	*70-130%*			*9/30/24 5:56*	*9/30/24 21:39*	*JPW*	*EPA 537.1, Rev 2.0*	2
Surrogate: (SURR) d5-NEtFOSAA	*83%*		*Limits:*	*70-130%*			*9/30/24 5:56*	*9/30/24 21:39*	*JPW*	*EPA 537.1, Rev 2.0*	2

Wausau Waterworks	Project: 2024 Quarterly DW		
1801 Burek Ave	Project Number: 2024 WDNR Drinking Water Requirements	**Reported:**	**Work Order:**
Wausau, WI 54401	Project Manager: Scott Boers	10/9/24 15:54	CC11696

Sample: EP500 (PFAS)

CC11696-03 (DW) Sampled: 09/26/24 08:50

Analyte	Result	Qualifier	LOD	LOQ	MCL	Units	Date Prepared	Date Analyzed	Analyst	Method	Lab Cert Code
Semi-Volatiles											
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	ND		0.31	1.0		ng/L	9/30/24 5:56	9/30/24 22:04	JPW	EPA 537.1, Rev 2.0	2
9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	ND		0.47	1.5		ng/L	9/30/24 5:56	9/30/24 22:04	JPW	EPA 537.1, Rev 2.0	2
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.41	1.3		ng/L	9/30/24 5:56	9/30/24 22:04	JPW	EPA 537.1, Rev 2.0	2
hexafluoropropylene oxide dimer acid (HFPO DA)	ND		0.93	3.1		ng/L	9/30/24 5:56	9/30/24 22:04	JPW	EPA 537.1, Rev 2.0	2
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.9	J	1.7	5.8		ng/L	9/30/24 5:56	9/30/24 22:04	JPW	EPA 537.1, Rev 2.0	2
n-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.9	6.4		ng/L	9/30/24 5:56	9/30/24 22:04	JPW	EPA 537.1, Rev 2.0	2
perfluorobutanesulfonic acid (PFBS)	ND		0.72	2.4		ng/L	9/30/24 5:56	9/30/24 22:04	JPW	EPA 537.1, Rev 2.0	2
perfluorodecanoic acid (PFDA)	ND		0.54	1.8		ng/L	9/30/24 5:56	9/30/24 22:04	JPW	EPA 537.1, Rev 2.0	2
perfluorododecanoic acid (PFDoA)	ND		0.62	2.0		ng/L	9/30/24 5:56	9/30/24 22:04	JPW	EPA 537.1, Rev 2.0	2
perfluoroheptanoic acid (PFHpA)	2.5		0.54	1.8		ng/L	9/30/24 5:56	9/30/24 22:04	JPW	EPA 537.1, Rev 2.0	2
perfluorohexanoic acid (PFHxA)	2.6		0.56	1.8		ng/L	9/30/24 5:56	9/30/24 22:04	JPW	EPA 537.1, Rev 2.0	2
perfluorohexanesulfonic acid (PFHxS)	ND		0.63	2.1		ng/L	9/30/24 5:56	9/30/24 22:04	JPW	EPA 537.1, Rev 2.0	2
perfluorononanoic acid (PFNA)	ND		0.52	1.7		ng/L	9/30/24 5:56	9/30/24 22:04	JPW	EPA 537.1, Rev 2.0	2
perfluorooctanoic acid (PFOA)	6.4		0.47	1.5		ng/L	9/30/24 5:56	9/30/24 22:04	JPW	EPA 537.1, Rev 2.0	2
perfluorooctanesulfonic acid (PFOS)	0.86	J	0.48	1.6		ng/L	9/30/24 5:56	9/30/24 22:04	JPW	EPA 537.1, Rev 2.0	2
perfluorotetradecanoic acid (PFTA)	ND		0.54	1.8		ng/L	9/30/24 5:56	9/30/24 22:04	JPW	EPA 537.1, Rev 2.0	2
perfluorotridecanoic acid (PFTrDA)	ND		0.54	1.8		ng/L	9/30/24 5:56	9/30/24 22:04	JPW	EPA 537.1, Rev 2.0	2
perfluoroundecanoic acid (PFUnA)	ND		0.52	1.7		ng/L	9/30/24 5:56	9/30/24 22:04	JPW	EPA 537.1, Rev 2.0	2
Surrogate: (SURR) C13-PFHxA	*93%*		*Limits: 70-130%*				*9/30/24 5:56*	*9/30/24 22:04*	*JPW*	*EPA 537.1, Rev 2.0*	2
Surrogate: (SURR) C13-HFPODA	*87%*		*Limits: 70-130%*				*9/30/24 5:56*	*9/30/24 22:04*	*JPW*	*EPA 537.1, Rev 2.0*	2
Surrogate: (SURR) C13-PFDA	*91%*		*Limits: 70-130%*				*9/30/24 5:56*	*9/30/24 22:04*	*JPW*	*EPA 537.1, Rev 2.0*	2
Surrogate: (SURR) d5-NEtFOSAA	*86%*		*Limits: 70-130%*				*9/30/24 5:56*	*9/30/24 22:04*	*JPW*	*EPA 537.1, Rev 2.0*	2

Wausau Waterworks	Project: 2024 Investigative PFAS Testing		
1801 Burek Ave	Project Number: 2024 Investigative PFAS Testing	**Reported:**	**Work Order:**
Wausau, WI 54401	Project Manager: Scott Boers	10/15/24 16:53	CC12348

Sample Results

Sample: Outfall 001

CC12348-01 (DW) Sampled: 10/10/24 09:50

Analyte	Result	Qualifier	LOD	LOQ	MCL	Units	Date Prepared	Date Analyzed	Analyst	Method	Lab Cert Code
Semi-Volatiles											
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	ND		0.31	1.0		ng/L	10/14/24 5:45	10/14/24 21:10	JPW	EPA 537.1, Rev 2.0	2
9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	ND		0.48	1.6		ng/L	10/14/24 5:45	10/14/24 21:10	JPW	EPA 537.1, Rev 2.0	2
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.42	1.4		ng/L	10/14/24 5:45	10/14/24 21:10	JPW	EPA 537.1, Rev 2.0	2
hexafluoropropylene oxide dimer acid (HFPO DA)	ND		0.95	3.1		ng/L	10/14/24 5:45	10/14/24 21:10	JPW	EPA 537.1, Rev 2.0	2
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.8	5.9		ng/L	10/14/24 5:45	10/14/24 21:10	JPW	EPA 537.1, Rev 2.0	2
n-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.0	6.6		ng/L	10/14/24 5:45	10/14/24 21:10	JPW	EPA 537.1, Rev 2.0	2
perfluorobutanesulfonic acid (PFBS)	ND		0.74	2.5		ng/L	10/14/24 5:45	10/14/24 21:10	JPW	EPA 537.1, Rev 2.0	2
perfluorodecanoic acid (PFDA)	ND		0.55	1.9		ng/L	10/14/24 5:45	10/14/24 21:10	JPW	EPA 537.1, Rev 2.0	2
perfluorododecanoic acid (PFDoA)	ND		0.64	2.1		ng/L	10/14/24 5:45	10/14/24 21:10	JPW	EPA 537.1, Rev 2.0	2
perfluoroheptanoic acid (PFHpA)	ND		0.55	1.9		ng/L	10/14/24 5:45	10/14/24 21:10	JPW	EPA 537.1, Rev 2.0	2
perfluorohexanoic acid (PFHxA)	ND		0.57	1.9		ng/L	10/14/24 5:45	10/14/24 21:10	JPW	EPA 537.1, Rev 2.0	2
perfluorohexanesulfonic acid (PFHxS)	ND		0.65	2.2		ng/L	10/14/24 5:45	10/14/24 21:10	JPW	EPA 537.1, Rev 2.0	2
perfluorononanoic acid (PFNA)	ND		0.53	1.8		ng/L	10/14/24 5:45	10/14/24 21:10	JPW	EPA 537.1, Rev 2.0	2
perfluorooctanoic acid (PFOA)	ND		0.48	1.6		ng/L	10/14/24 5:45	10/14/24 21:10	JPW	EPA 537.1, Rev 2.0	2
perfluorooctanesulfonic acid (PFOS)	ND		0.49	1.7		ng/L	10/14/24 5:45	10/14/24 21:10	JPW	EPA 537.1, Rev 2.0	2
perfluorotetradecanoic acid (PFTA)	ND		0.55	1.9		ng/L	10/14/24 5:45	10/14/24 21:10	JPW	EPA 537.1, Rev 2.0	2
perfluorotridecanoic acid (PFTrDA)	ND		0.55	1.9		ng/L	10/14/24 5:45	10/14/24 21:10	JPW	EPA 537.1, Rev 2.0	2
perfluoroundecanoic acid (PFUnA)	ND		0.53	1.8		ng/L	10/14/24 5:45	10/14/24 21:10	JPW	EPA 537.1, Rev 2.0	2
Surrogate: (SURR) C13-PFHxA	*85%*		*Limits:*	*70-130%*			*10/14/24 5:45*	*10/14/24 21:10*	*JPW*	*EPA 537.1, Rev 2.0*	2
Surrogate: (SURR) C13-HFPODA	*83%*		*Limits:*	*70-130%*			*10/14/24 5:45*	*10/14/24 21:10*	*JPW*	*EPA 537.1, Rev 2.0*	2
Surrogate: (SURR) C13-PFDA	*82%*		*Limits:*	*70-130%*			*10/14/24 5:45*	*10/14/24 21:10*	*JPW*	*EPA 537.1, Rev 2.0*	2
Surrogate: (SURR) d5-NEtFOSAA	*78%*		*Limits:*	*70-130%*			*10/14/24 5:45*	*10/14/24 21:10*	*JPW*	*EPA 537.1, Rev 2.0*	2

Wausau Waterworks	Project: 2024 Investigative PFAS Testing		
1801 Burek Ave	Project Number: 2024 Investigative PFAS Testing	**Reported:**	**Work Order:**
Wausau, WI 54401	Project Manager: Scott Boers	10/28/24 13:03	CC12623

Sample Results

Sample: Outfall 001

CC12623-01 (DW) Sampled: 10/17/24 11:05

Analyte	Result	Qualifier	LOD	LOQ	MCL	Units	Date Prepared	Date Analyzed	Analyst	Method	Lab Cert Code
Semi-Volatiles											
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	ND		0.33	1.1		ng/L	10/25/24 5:53	10/25/24 18:26	JPW	EPA 537.1, Rev 2.0	2
9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	ND		0.51	1.7		ng/L	10/25/24 5:53	10/25/24 18:26	JPW	EPA 537.1, Rev 2.0	2
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.44	1.4		ng/L	10/25/24 5:53	10/25/24 18:26	JPW	EPA 537.1, Rev 2.0	2
hexafluoropropylene oxide dimer acid (HFPO DA)	ND		1.0	3.3		ng/L	10/25/24 5:53	10/25/24 18:26	JPW	EPA 537.1, Rev 2.0	2
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.9	6.3		ng/L	10/25/24 5:53	10/25/24 18:26	JPW	EPA 537.1, Rev 2.0	2
n-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.1	7.0		ng/L	10/25/24 5:53	10/25/24 18:26	JPW	EPA 537.1, Rev 2.0	2
perfluorobutanesulfonic acid (PFBS)	ND		0.79	2.7		ng/L	10/25/24 5:53	10/25/24 18:26	JPW	EPA 537.1, Rev 2.0	2
perfluorodecanoic acid (PFDA)	ND		0.59	2.0		ng/L	10/25/24 5:53	10/25/24 18:26	JPW	EPA 537.1, Rev 2.0	2
perfluorododecanoic acid (PFDoA)	ND		0.68	2.2		ng/L	10/25/24 5:53	10/25/24 18:26	JPW	EPA 537.1, Rev 2.0	2
perfluoroheptanoic acid (PFHpA)	ND		0.59	2.0		ng/L	10/25/24 5:53	10/25/24 18:26	JPW	EPA 537.1, Rev 2.0	2
perfluorohexanoic acid (PFHxA)	ND		0.61	2.0		ng/L	10/25/24 5:53	10/25/24 18:26	JPW	EPA 537.1, Rev 2.0	2
perfluorohexanesulfonic acid (PFHxS)	1.5	J	0.69	2.3		ng/L	10/25/24 5:53	10/25/24 18:26	JPW	EPA 537.1, Rev 2.0	2
perfluorononanoic acid (PFNA)	ND		0.57	1.9		ng/L	10/25/24 5:53	10/25/24 18:26	JPW	EPA 537.1, Rev 2.0	2
perfluorooctanoic acid (PFOA)	ND		0.51	1.7		ng/L	10/25/24 5:53	10/25/24 18:26	JPW	EPA 537.1, Rev 2.0	2
perfluorooctanesulfonic acid (PFOS)	ND		0.52	1.8		ng/L	10/25/24 5:53	10/25/24 18:26	JPW	EPA 537.1, Rev 2.0	2
perfluorotetradecanoic acid (PFTA)	ND		0.59	2.0		ng/L	10/25/24 5:53	10/25/24 18:26	JPW	EPA 537.1, Rev 2.0	2
perfluorotridecanoic acid (PFTrDA)	ND		0.59	2.0		ng/L	10/25/24 5:53	10/25/24 18:26	JPW	EPA 537.1, Rev 2.0	2
perfluoroundecanoic acid (PFUnA)	ND		0.57	1.9		ng/L	10/25/24 5:53	10/25/24 18:26	JPW	EPA 537.1, Rev 2.0	2
Surrogate: (SURR) C13-PFHxA	*93%*		*Limits:*	*70-130%*			*10/25/24 5:53*	*10/25/24 18:26*	*JPW*	*EPA 537.1, Rev 2.0*	2
Surrogate: (SURR) C13-HFPODA	*94%*		*Limits:*	*70-130%*			*10/25/24 5:53*	*10/25/24 18:26*	*JPW*	*EPA 537.1, Rev 2.0*	2
Surrogate: (SURR) C13-PFDA	*82%*		*Limits:*	*70-130%*			*10/25/24 5:53*	*10/25/24 18:26*	*JPW*	*EPA 537.1, Rev 2.0*	2
Surrogate: (SURR) d5-NEtFOSAA	*70%*		*Limits:*	*70-130%*			*10/25/24 5:53*	*10/25/24 18:26*	*JPW*	*EPA 537.1, Rev 2.0*	2

Wausau Waterworks	Project: 2024 Investigative PFAS Testing		
1801 Burek Ave	Project Number: 2024 Investigative PFAS Testing	**Reported:**	**Work Order:**
Wausau, WI 54401	Project Manager: Scott Boers	10/28/24 13:19	CC12845

Sample Results

Sample: Outfall 001

CC12845-01 (DW) Sampled: 10/23/24 11:15

Analyte	Result	Qualifier	LOD	LOQ	MCL	Units	Date Prepared	Date Analyzed	Analyst	Method	Lab Cert Code
Semi-Volatiles											
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	ND		0.31	1.0		ng/L	10/25/24 5:53	10/26/24 0:53	JPW	EPA 537.1, Rev 2.0	2
9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	ND		0.47	1.5		ng/L	10/25/24 5:53	10/26/24 0:53	JPW	EPA 537.1, Rev 2.0	2
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.41	1.3		ng/L	10/25/24 5:53	10/26/24 0:53	JPW	EPA 537.1, Rev 2.0	2
hexafluoropropylene oxide dimer acid (HFPO DA)	ND		0.93	3.1		ng/L	10/25/24 5:53	10/26/24 0:53	JPW	EPA 537.1, Rev 2.0	2
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.7	5.8		ng/L	10/25/24 5:53	10/26/24 0:53	JPW	EPA 537.1, Rev 2.0	2
n-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.9	6.4		ng/L	10/25/24 5:53	10/26/24 0:53	JPW	EPA 537.1, Rev 2.0	2
perfluorobutanesulfonic acid (PFBS)	ND		0.72	2.4		ng/L	10/25/24 5:53	10/26/24 0:53	JPW	EPA 537.1, Rev 2.0	2
perfluorodecanoic acid (PFDA)	ND		0.54	1.8		ng/L	10/25/24 5:53	10/26/24 0:53	JPW	EPA 537.1, Rev 2.0	2
perfluorododecanoic acid (PFDoA)	ND		0.62	2.0		ng/L	10/25/24 5:53	10/26/24 0:53	JPW	EPA 537.1, Rev 2.0	2
perfluoroheptanoic acid (PFHpA)	ND		0.54	1.8		ng/L	10/25/24 5:53	10/26/24 0:53	JPW	EPA 537.1, Rev 2.0	2
perfluorohexanoic acid (PFHxA)	ND		0.56	1.8		ng/L	10/25/24 5:53	10/26/24 0:53	JPW	EPA 537.1, Rev 2.0	2
perfluorohexanesulfonic acid (PFHxS)	ND		0.63	2.1		ng/L	10/25/24 5:53	10/26/24 0:53	JPW	EPA 537.1, Rev 2.0	2
perfluorononanoic acid (PFNA)	ND		0.52	1.7		ng/L	10/25/24 5:53	10/26/24 0:53	JPW	EPA 537.1, Rev 2.0	2
perfluorooctanoic acid (PFOA)	ND		0.47	1.5		ng/L	10/25/24 5:53	10/26/24 0:53	JPW	EPA 537.1, Rev 2.0	2
perfluorooctanesulfonic acid (PFOS)	ND		0.48	1.6		ng/L	10/25/24 5:53	10/26/24 0:53	JPW	EPA 537.1, Rev 2.0	2
perfluorotetradecanoic acid (PFTA)	ND		0.54	1.8		ng/L	10/25/24 5:53	10/26/24 0:53	JPW	EPA 537.1, Rev 2.0	2
perfluorotridecanoic acid (PFTrDA)	ND		0.54	1.8		ng/L	10/25/24 5:53	10/26/24 0:53	JPW	EPA 537.1, Rev 2.0	2
perfluoroundecanoic acid (PFUnA)	ND		0.52	1.7		ng/L	10/25/24 5:53	10/26/24 0:53	JPW	EPA 537.1, Rev 2.0	2
Surrogate: (SURR) C13-PFHxA	*78%*		*Limits:*	*70-130%*			*10/25/24 5:53*	*10/26/24 0:53*	*JPW*	*EPA 537.1, Rev 2.0*	2
Surrogate: (SURR) C13-HFPODA	*80%*		*Limits:*	*70-130%*			*10/25/24 5:53*	*10/26/24 0:53*	*JPW*	*EPA 537.1, Rev 2.0*	2
Surrogate: (SURR) C13-PFDA	*88%*		*Limits:*	*70-130%*			*10/25/24 5:53*	*10/26/24 0:53*	*JPW*	*EPA 537.1, Rev 2.0*	2
Surrogate: (SURR) d5-NEtFOSAA	*83%*		*Limits:*	*70-130%*			*10/25/24 5:53*	*10/26/24 0:53*	*JPW*	*EPA 537.1, Rev 2.0*	2

Meeting Summary of October 15, 2024, Leachate acceptance discussion with City of Wausau WWTP and Marathon County Solids Waste.

In attendance were: Eric Lindman, Ben Brooks, Brad Wendtland, Jason Schill (Wausau), Dave Hagenbucher (MCSWD) and Arie Kremen and Jalen Thomas (Tetra Tech).

1. **Summary of Recent Events**

Dave Hagenbucher provided a summary of recent events and meetings between Wausau WWTP and MCSWD
Wausau is still planning on submitting ITA for a project at the WWTP via the Wisconsin CWFP

- Type of project is TBD:

WWTP treats on an average daily flow range of 5,000,000 – 7,000,000 gallons per day.
With an EQ tank, Wausau would likely be interested in low-flow conditions when assessing system performance due to a higher concentration of leachate constituents.
With (RO) Reverse Osmosis treatment you get approximately a 90:10 treated permeate to reject water ratio. Given the large volume of water at the landfill, Tetra has not yet seen any landfills with breakthroughs (10 – 15-year periods). MCSWD would plan on recycling rejected water back into landfills as a long-term solution.

- RO systems have a 90-95% uptime over a 12-month period.

2. **Potential Exemptions for Municipalities Regarding PFOS and PFOA**

- PFOA limits to the river are low and WWTP needs to keep levels low in the effluent water and biosolids.
    - Current concentration is less than upper limit of 8 nanograms per milliliter PFOS in the WWTP's effluent water. (average results are 6.3 nanograms per milliliter)

3. **Possible Short- Medium- and Long-term Solutions for WWTP Acceptance of Landfill Leachate**

Short Term:

- Pilot: Introducing a sample to see how things react.
    - Is there a specific set of data that would be least impactful to the WWTP?

- **The short-term plan would be to treat MCSWD's Area B landfill's leachate during the pilot.**

- Question to Arie: Is it your experience that leachate causes anaerobic conditions?
  - Arie: No, it is not. It is a possibility but not his experience.
- If introduced straight at aeration leachate should not be introduced during low flow conditions at night.
- Still don't know the ideal location of where this tank would go or how the leachate would react to the existing infrastructure. Several ideas were thrown around including at the headworks of the treatment process and directly into the aeration basins. Ben Brooks is opposed to discharging leachate directly into the aeration basin flow stream. This would cause the automated aeration system to go out of control because of the instantaneous air demand.
  - This depends on the process at the plant. Ben shared a print of the Plant's process flow diagram pamphlet.
  - Arie, Ben and Eric would be interested to see the reaction of treatment in the primary clarifiers. By the time of the 2nd-ary clarifiers hopefully, most of the reactions will have happened already
- Comment from David: Wausau will dictate the daily timeline for delivery to the WWTP so that it works best with their operation

Medium Term:

- 100 % acceptance of leachate after pilot and before RO system is online

<u>Long Term</u>

- The WWTP would be a backup; An Equalization Tank would allow for other waste streams for the WWTP such as high strength waste from food waste industry.
  - Arie provided one additional comment about the proposed on-site treatment system: MCSWD would like to have something to fall back on in case the new proposed RO system had issues with extended downtimes. The expected downtime of the RO system is anticipated to be 5%-10%.

1. WWTP Permit Requirements – unknown yet. Still waiting on Draft Permit to arrive.
   - There is a 6-month testing period before new permits are issued per Eric
   - WWTP has been waiting a new permit from the WDNR for almost one year.
   1) What are the specific testing requirements for the WWTP's new permit? It's expected that based on the results of these tests the WWTP will know how much they need to cut back on PFOA/PFAS
2. Constituents of Concern
   1) PFOS/PFOA
   2) Ammonia

3) BOD
4) TKN
5) Color/Clarity
6) High concentrations of Alkalinity.
    1. Potential impacts of leachate color on UV disinfection
    2. UV is down for the season in October and turns back on in May
7) Others?

- Marathon's leachate has higher ammonia than what the WWTP is used to
- Concentrations of the constituents would dictate the size of a EQ tank

3. Does the WWTP have aeration capacity for the additional organic constituents in the leachate, primarily BOD and TKN?
    1) Previously, MCSWD was told that additional assessments would be required to confirm this.

4. Any known necessary leachate pretreatment?

Notwithstanding pfos and pfoa there are not concerns of actual ability to treat the leachate. Hight ammonia BOD, TKN, and dark color of leachate discussed again.

4. <u>Landfill Acceptance of PFOS/PFOA Resin</u>

1. Engineering and operations consideration for waste acceptance at MCSWD
    1) See Above – MCSWD would be open to accepting the WWTP's biosolids (purportedly 200 CY a month) and resin filters as part of the arrangement.
2. Special waste acceptance
    1) Filters
        1. Regeneratable PFAS resin filter waste (every 15 years)
        2. GAC (virgin GAC)
    2) Biosolids (Milorganite)
        1. All 6 recent samples of biosolids were below the take-action limit by the WDNR but over the limits of having to notify the public.
        2. Could use as cover for non-driving surfaces but not road surfaces – dependent on loads of constituents and nutrient load.

5. <u>Funding Programs Revisited</u>

- State Funding Opportunities available to the WWTP for projects via the CWFP (ITA due on October 31, 2024)
    - Need to send in full design for application by September 30, 2025, to apply for funding for 2026.
    - Previously discussed metering tanks at the WWTP to regulate the injection of leachate into the influent stream.
    - Other options? (e.g. Introduction to the system via an existing upstream sewer)
- WWTP Pilot Study?
    - When could we do a study for leachate and start trial treatment?

- Need to do to determine a long-term solution. Could start this fall.
  - MCSWD already preparing a plan to test leachate from each hill on site as part of their own basis of design project. Could be helpful as part of the pilot study.

- For the pilot where would we like a location for introduction to the system? - Multiple options discussed
- Before looking at concentrations we need to look at quantities of leachate
- Pilot would be designed to maximize the signal we read (worst case) in order to know how to manage leachate in the worst-case scenario.
- May want to set up a bench test for the testing of the sludge – this would be "very artificial."

6. **<u>WDNR Involvement</u>**
   - Round table discussion of WWTP, MCSWD, WDNR Sold Waste, and WDNR Wastewater?
     - Everyone wants a phone call with the WDNR (Wastewater and Solid Waste Departments) following this meeting.
     - In-person meeting at the WWTP? - Yes
     - Need to develop a proposed pilot program before meeting with the WDNR.
       - Could consider introducing at the beginning of the system (headwork) – test to make sure there would be no adverse effects on the process. Want a signal knowing where the concentrations even start affecting the process.
   - Wausau will need to talk about the denitrification system before the next team meeting.
   - Wausau to provide a PFD to Tetra Tech and MCSWD
   - Tetra Tech to prepare a proposal for preparing a plan for the WDNR.
     - Progress of this proposal to be checked next meeting and course corrected if needed.
   - Reaching out to the WDNR for a meeting will be considered after this next internal meeting with MCSWD and Wausau WWTP
   - Next meeting to discuss pilot program go/no go: Date TBD

WATER UTILITY FUND

30-Sep-24

	City FY24 Amended Budget Detail	Operations	Refinancing	GAC	Treatment Plant	EauClaire Blvd	Solar Project	Water Meters	Miscellaneous Equipment	Booster Generator	Total	% Of Budget
Revenues												
Public Charges for Services	12,299,100	8,578,174									8,578,174	69.75%
Miscellaneous Revenue	15,000	78,235									78,235	521.57%
Interest on Investments		90,498	384,915								475,413	
State Grants				5,568,919							5,568,919	
Proceeds from Long Term Debt	500,000			7,425,547	390,336	924,506					8,740,389	1748.08%
Other Financing Sources		34,564									34,564	
Revenues	12,814,100	8,781,471	384,915	12,994,466	390,336	924,506	-	-	-	-	23,475,694	183.20%
Expenses												
Salaries and Wages	1,595,741	935,365									935,365	58.62%
Benefits	629,973	310,616									310,616	49.3%
210 Professional Services	251,800	136,578		112,110	274,782		45,338			1,766	570,574	226.6%
220 Utility Services	534,600	383,661									383,661	71.8%
230 Repair and Maintenance Services-Infrastructure	250,000	64,705									64,705	25.9%
240 Repair and Maintenance Services-Other	147,000	73,690									73,690	50.1%
250 Special Services	197,000	88,897		1,800							90,697	46.0%
290 Other Contractual Services	17,100	17,384									17,384	101.7%
310 Office Supplies	52,300	27,625									27,625	52.8%
320 Publications, Subscriptions and Dues	13,000	2,881									2,881	22.2%
330 Travel	21,500	18,861									18,861	87.7%
340 Operating Supplies	49,700	38,189									38,189	76.8%
350 Repair and Maintenance Supplies	-	24,262									24,262	
360 Other Repairs and Maintenance Supplies	560,500	88,977									88,977	15.9%
390 Other Supplies and Expense	642,800	86,108									86,108	13.4%
410 Concrete and Clay Products	-	30									30	
420 Metal Products	-	151									151	
430 Wood Products	-	45									45	
440 Plastic Products	-	1,530									1,530	
450 Raw Materials - Chemicals	874,000	581,001									581,001	66.5%
480 Fabricated Materials	104,300	-									-	0.0%
510 Insurance	12,000	57,190									57,190	476.6%
520 Other Permits and Regulatory Fees	600	2,220									2,220	370.0%
530 Rents and Leases	400	716		23,807							24,523	6130.8%
610 Principal Redemption	2,647,120	2,664,241	17,550,000								20,214,241	763.6%
620 Interest	863,926	448,874	795,834								1,244,708	144.1%
690 Other Debt Service	10,000	2,800									2,800	28.0%
Payment In Lieu of Tax	1,590,000	-									-	0.0%
740 Losses	5,000	-									-	0.0%
60000:Capital Outlay	1,709,000	34,243		9,346,287	240	910,506		902,527	49,533		11,243,336	657.9%
Expenses	12,779,360	6,090,840	18,345,834	9,484,004	275,022	910,506	45,338	902,527	49,533	1,766	36,105,369	282.5%
Revenues Over/(Under) Expenses	34,740	2,690,631	(17,960,919)	3,510,462	115,314	14,000	(45,338)	(902,527)	(49,533)	(1,766)	(12,629,675)	

SEWER UTILITY FUND

30-Sep-24

	City FY24 Amended Budget Detail	Operations	EauClaire Blvd Mains and Accessories	Transportation Equipment	Metering and Monitoring	Pumping Equipment	Greenwood Northwestern Lift Station	Treatment Plant	Total	% Of Budget
Revenues										
Intergovernmental Revenue	-	-								
Public Charges for Services	9,789,738	8,119,191							8,119,191	82.94%
Miscellaneous Revenue	4,007	25,408							25,408	634.09%
Interest on Investments	-	121,299							121,299	
Capital Contributions		36,255							36,255	
Proceeds From Long Term Debt	-							66,190	66,190	
Revenues	9,793,745	8,302,153	-	-	-	-	-	66,190	8,368,343	85.45%
Expenses										
Salaries and Wages	1,018,841	950,490							950,490	93.29%
Benefits	488,828	384,860							384,860	78.73%
210 Professional Services	258,000	27,782						20,671	48,453	18.78%
220 Utility Services	1,251,500	423,177					32,755		455,932	36.43%
230 Repair and Maintenance Services-Infrastructure	2,000								-	0.00%
240 Repair and Maintenance Services-Other	254,000	102,550							102,550	40.37%
250 Special Services	83,500	94,548							94,548	113.23%
290 Other Contractual Services	14,000	19,043							19,043	136.02%
310 Office Supplies	14,700	21,301							21,301	144.90%
320 Publications, Subscriptions and Dues	25,800	13,748							13,748	53.29%
330 Travel	36,700	17,798							17,798	48.50%
340 Operating Supplies	21,600	22,685							22,685	105.02%
350 Repair and Maintenance Supplies	77,200	37,075							37,075	48.02%
360 Other Repairs and Maintenance Supplies	215,100	131,625							131,625	61.19%
390 Other Supplies and Expense	128,000	51,621							51,621	40.33%
410 Concrete and Clay Products	-	1,422							1,422	
420 Metal Products	-	24,398							24,398	
450 Raw Materials - Chemicals	659,000	347,885							347,885	52.79%
480 Fabricated Materials	5,000	-							-	0.00%
510 Insurance	34,000	83,608							83,608	245.91%
520 Other Permits and Regulatory Fees	42,000	32,088							32,088	76.40%
530 Rents and Leases		90							90	
610 Principal Redemption	3,246,679	3,305,216							3,305,216	101.80%
620 Interest	1,755,240	915,528							915,528	52.16%
690 Other Debt Service	-	800							800	
740 Losses	-								-	
60000:Capital Outlay	-		393,269	417,187			1,020,424		1,830,880	
50920:Transfers to Other Funds	-								-	
Expenses	9,631,688	7,009,338	393,269	417,187	-	-	1,053,179	20,671	8,893,644	92.34%
Revenues Over/(Under) Expenses	162,057	1,292,815	(393,269)	(417,187)	-	-	(1,053,179)	45,519	(525,301)	

WAUSAU WATER WORKS
FOR YOU!

To: Wausau Water Works Commission

From: Scott Boers, Water Operations Superintendent

Date: 10/30/2024

Subject: Request Approval for Vehicle Purchase

All,

Coming into 2024 we had a line item of $85,000.00 in our budget approved for a vehicle purchase. At this same time, we were receiving and having to outlay cash for many items that had been backordered, mainly meters. The fact that no loan had been taken for capital projects and these extra expenses were being incurred, it was not a good time to spend the money not knowing what the budget impacts would be. Since then, the utility has received additional funding to purchase meters and cover project costs freeing up operational cash in the budget.

Currently, the proposed budget for next year doesn't include any vehicle purchase, so we would like to take the opportunity this year to make a purchase, being that funds are available.

REQUEST FOR PROPOSALS (RFP)

Available Options for Regeneration or Disposal of PFAS-Laden Drinking Water Residuals, Media, and Waste (5285)

Date Posted
Friday, September 20, 2024

Due Date
Proposals must be received by 3:00 pm Mountain Time on Friday, November 21, 2024.

WRF Project Contact
Mary Messec Smith, msmith@waterrf.org

Project Sponsors
This project is funded by The Water Research Foundation (WRF) as part of WRF's Research Priority Program.

Project Objectives
This project will inform utility decisions when selecting PFAS waste handling options by exploring the benefits and limitations of the following:

- Availability and efficacy of media reactivation/regeneration methods
- Options for depleted media disposal
- Reduction of solid and liquid waste volume and potential for further pre-disposal treatment
- Leaching and fate of PFAS-laden wastes in municipal waste sites

Budget
Applicants may request up to $300,000 in WRF funds for this project.

Background and Project Rationale
Drinking water treatment of per- and polyfluoroalkyl substances (PFAS) results in multiple waste handling and disposal concerns for utilities. While the default options of incineration, agricultural land application for beneficial use, directing filter backwash to local sewers, and landfilling of wastes in municipal and hazardous waste sites may be appropriate for some utilities, an evolving regulatory landscape is likely to make these options less attractive, leading utilities to explore other available cost-saving options to extend media life, minimize disposal volumes, and reduce liabilities. These options may include media regeneration/reactivation, alternative disposal or destruction methods, or other means of decreasing the volumes or impacts of the PFAS-laden waste, whether solid or liquid. Liability, waste characteristics, and

utility location may affect the cost or availability of reactivation, regeneration, and disposal options. There is a need to understand the benefits and drawbacks of these options, including the efficacy of PFAS removal, desorption from and destruction on media, and regeneration effects on media performance. Additionally, there is a need for a greater understanding of fate of the PFAS-laden waste in disposal sites, particularly concerning the leaching potential from spent media and sludges.

Research Approach

This RFP is intentionally flexible in the research approach to encourage creativity and originality from proposers. Proposers should describe how they will conduct the research to meet the above objectives. The following key aspects are included as a starting point.

Survey.

Utility survey of current or planned regeneration and disposal practices for granular activated carbon (GAC), single-use and regenerable ion exchange (IX) resins, membrane reject, and solids containing powder activated carbon (PAC). This survey may identify the primary technologies for the investigation and discussion of regeneration and disposal options.

Regeneration.

- Validation of effectiveness of various regeneration/reactivation methods in removing organo-fluorine species (PFOA/PFOS and beyond)
- Availability of regional or state facilities and benefits of offsite vs. onsite vs. in-situ
- Potential for regeneration of ion exchange resins, and brine or regenerant solution management, disposal, and fate of separated PFAS
- Fate of PFAS during onsite regeneration of MIEX-like technologies
- Impacts of waste characteristics (volume, concentration, PFAS type) on regeneration
- Conditions likely to impact the cost of regeneration/reactivation
- Technical and economic feasibility for emerging methods for in-situ reactivation of GAC or regeneration of IX media

Disposal.

- Summary of available disposal options and their costs
- Laboratory investigation to determine extent of leaching and behavior/fate of sedimentation or other water treatment plant sludges and spent media in landfills through bench-scale TCLP, WET, and other appropriate testing from various working sites under prescribed test conditions
- Potential utility liability and impacts of disposal in municipal and hazardous waste landfills

Expected Deliverables

Guidance on selecting regeneration methods and waste handling options, including discussion of available regeneration options, their cost, effectiveness, and availability, and a utility survey of current and planned regeneration and disposal practices.

Communication Plan
Please review WRF's *Project Deliverable Guidelines* for information on preparing a communication plan. Conference presentations, webcasts, peer-reviewed publication submissions, and other forms of project information dissemination are typically encouraged.

Project Duration
The anticipated period of performance for this project is 24 months from the contract start date.

Proposal Evaluation Criteria
The following criteria will be used to evaluate proposals:

- Understanding the Problem and Responsiveness to RFP (maximum 20 points)
- Technical and Scientific Merit (maximum 30 points)
- Qualifications, Capabilities, and Management (maximum 15 points)
- Communication Plan, Deliverables, and Applicability (maximum 20 points)
- Budget and Schedule (maximum 15 points)

PROPOSAL PREPARATION INSTRUCTIONS

Proposals submitted in response to this RFP must be prepared in accordance with WRF's *Guidelines for Research Priority Program Proposals* and the *Instructions for Budget Preparation*. The guidelines contain instructions for the technical aspects, financial statements, indirect costs, and administrative requirements that the applicant must follow when preparing a proposal.

Proposals that include the production of web- or software-based tools, such as websites, Excel spreadsheets, Access databases, etc., must follow the criteria outlined for web tools presented in the *Technology Deliverables Guidance*.

Eligibility to Submit Proposals
Proposals will be accepted from both U.S.-based and non-U.S.-based entities, including educational institutions, research organizations, governmental agencies, and consultants or other for-profit entities.

WRF's Board of Directors has established a *Timeliness Policy* that addresses researcher adherence to the project schedule. Researchers who are late on any ongoing WRF-sponsored studies without approved no-cost extensions are not eligible to be named participants in any proposals. Direct any questions about eligibility to the WRF project contact listed at the top of this RFP.

Administrative, Cost, and Audit Standards
WRF's research program standards for administrative, cost, and audit compliance are based upon, and comply with, Office of Management and Budget (OMB) Uniform Grants Guidance (UGG), 2 CFR Part 200 Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards, and 48 CFR 31.2 Contracts with Commercial Organizations. These standards are referenced in WRF's *Guidelines for Research Priority Program Proposals* and include specific guidelines outlining the requirements for indirect cost negotiation agreements, financial statements, and the Statement of Direct Labor, Fringe Benefits, and General Overhead. Inclusion of indirect costs must be substantiated by a negotiated agreement or appropriate Statement of Direct Labor, Fringe Benefits, and General Overhead. Well in advance of preparing the proposal, your research and financial staff should review the detailed instructions included in WRF's *Guidelines for Research Priority Program Proposals* and consult the *Instructions for Budget Preparation.*

Budget and Funding Information
The maximum funding available from WRF for this project is $300,000. The applicant must contribute additional resources equivalent to at least 33% of the project award. For example, if an applicant requests $100,000 from WRF, an additional $33,000 or more must be contributed by the applicant. Acceptable forms of applicant contribution include cost share, applicant in-kind, or third-party in-kind that comply with 2 CFR Part 200.306 cost sharing or matching. The applicant may elect to contribute more than 33% to the project, but the maximum WRF funding available remains fixed at $300,000. Proposals that do not meet the minimum 33% of the

project award will not be accepted. Consult the *Instructions for Budget Preparation* for more information and definitions of terms.

Period of Performance
It is WRF's policy to negotiate a reasonable schedule for each research project. Once this schedule is established, WRF and its sub-recipients have a contractual obligation to adhere to the agreed-upon schedule. Under WRF's *No-Cost Extension Policy*, a project schedule cannot be extended more than nine months beyond the original contracted schedule, regardless of the number of extensions granted.

Utility and Organization Participation
WRF encourages participation from water utilities and other organizations in WRF research. Participation can occur in a variety of ways, including direct participation, in-kind contributions, or in-kind services. To facilitate their participation, WRF has provided contact information, on the last page of this RFP, of utilities and other organizations that have indicated an interest in this research. Proposers are responsible for negotiating utility and organization participation in their particular proposals. The listed utilities and organizations are under no obligation to participate, and the proposer is not obligated to include them in their particular proposal.

Application Procedure and Deadline
Proposals are accepted exclusively online in PDF format, and they must be fully submitted before 3:00 pm Mountain Time on Thursday, November 21, 2024.

The online proposal system allows submission of your documents until the date and time stated in this RFP. To avoid the risk of the system closing before you press the submit button, do not wait until the last minute to complete your submission. Submit your proposal at https://forms.waterrf.org/cbruck/rfp-5285.

Questions to clarify the intent of this RFP and WRF's administrative, cost, and financial requirements may be addressed to the WRF project contact, Mary Messec Smith at 303.347.6134 or msmith@waterrf.org. Questions related to proposal submittal through the online system may be addressed to Caroline Bruck at 303.347.6118 or cbruck@waterrf.org.

Utility and Organization Participants

The following utilities have indicated interest in possible participation in this research. This information is updated within 24 business hours after a utility or an interested organization submits a volunteer form, and this RFP will be re-posted with the new information. **(Depending on your settings, you may need to click refresh on your browser to load the latest file.)**

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