



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
Tuesday, October 1, 2024.

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

AGENDA

****Amended****

1. Approve Minutes of September 3, 2024 Meeting.
2. Director's Report on Utility Operations
 - Update on Leachate Acceptance Consideration from the Marathon County Landfill
 - Update LSL Replacement Program
 - Update on Staffing Additions to Water & Sewer
 - Update on Utility Finances
 - Drinking Water Construction Update
 - Wastewater continues to Discharge a Quality Effluent
 - Wastewater Lift Station Update
 - Broken Shaft and Gearbox Replaced Under Warranty
3. Presentation by the Marathon County Health Department Regarding Fluoridation in Drinking Water.
4. Discussion and Possible Action Approving the Utility Operational Budgets Proposed for 2025.
5. Discussion and Possible Action Approving Special Assessments for Homeowners to Abandon their Private Well.
6. Discussion and Possible Action Approving Amendment 2 for Engineering Services for Construction Inspection of the Headworks Screening Project.
7. Discussion and Possible Action Approving the Contract with J.F. Ahern for the Construction of the Headworks Screening Project.
8. Discussion and Update from the Consumer Confidence Report Task Force.
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.

Adjourn.

**Next meeting scheduled for November 4th or November 6th 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: September 27th, 2024 at 8:30 a.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@ci.wausau.wi.us with "Water Commission Public Comment" in the subject line prior to the meeting start. All public comment, either by email or in person, will be limited to items on the agenda at this time. The messages related to agenda items received prior to the start of the meeting will be provided to the Chair.

In accordance with the requirements of Title II of the Americans with Disabilities Act of 1990 (ADA), the City of Wausau will not discriminate against qualified individuals with disabilities on the basis of disability in its services, programs or activities. If you need assistance or reasonable accommodations in participating in this meeting or event due to a disability as defined under the ADA, please call the ADA Coordinator at (715) 261-6622 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 September 3, 2024

A meeting of the Wausau Water Works Commission was called to order at 11:00 a.m. in City Hall on Tuesday, September 3, 2024. In compliance with Wisconsin Statutes, this meeting was posted and receipted for by the Wausau Daily Herald on August 29, 2024.

Members Present: President Diny, Commissioners Robinson, Gehin, Force, Watson Present at 11:04am

Others Present: Scott Boers, Eric Lindman, Ben Brooks, Anne Jacobson, Susan Wojtkiewicz/Donohue, Joe Kafczynski/BecherHoppe, Tonia Westphal/Clark-Dietz

1) Approve Minutes of August 6, 2024 Meetings.

Force motioned to approve minutes. Seconded by Robinson.

Motion Carried 4-0.

2) Director's Report on Utility Operations.

Lindman highlighted the updates on the Lead Service Line Replacement program that CIP/Equiflow were preparing for public communication and outreach relating to 2025 construction season that would include public education to scheduling and reaching out directly to homeowners. Updates on additional utility staffing proposed 1 in water and 2 in sewer goes to City Council Sept. 10th for final approval then we'll advertise for those positions. Minutes from our joint meeting with Finance are on file for reference.

Robinson questioned if the operational budget in September would come to this body and if we could get a presentation on it?

Lindman replied it goes to Finance but would be glad to provide that.

Gehin questioned how many lead service lines have been replaced on the private side?

Lindman replied the exact number not known but beginning of last week was over 200, they are doing 8-10 a day. They are finished with Eau Claire Blvd; they're working on the Southwest side- Edwards/Emter St area.

Director's Report Placed on File.

3) Presentation by Donohue on the GAC (Granular Activated Carbon) Treatment Construction Project.

Wojtkiewicz presented slides in packet page 10-20.

Robinson questioned how many vessels would be used in any given time and if there were any lead/lag or shut down of the units? What the life cycle of each vessel or how often change outs were, if it were volumetric or time based? Are we anticipating the primary/lead vessel need to be changed out annually, and if it's 2-year life cycle, what's the cost for 6 pairs in a year? Was there a difference in the quality of Carbon that impacts the absorptive capacity? Did we spec this carbon we chose?

Wojtkiewicz replied dependent on the flow; could use up to all 12 of them. Once the vessels are in place in use, you would be able to take one pair out at a time and not the whole system to replace the media. We're thinking about a year dependent on data collection. It goes through the Ion Exchange first then through GAC to get rid of the organic carbon before we hit the GAC, then through each pair. There's a header that splits the water 6 ways. You'll flip the lead and lag out. I don't want to quote the cost without having the numbers with me but I could

look those numbers up and give them to Lindman to share with you for the whole system. The purchase of the carbon was handled separately from the equipment to give us the most flexibility and pricing. The materials selected were based on the pilot testing done, there are various types of granular activated carbon with different constituents, different affinities for different PFAS. We selected the Filter Sorb product by Calgon Carbon. Some come more pre-treated than others and some have different operational requirements. When we put the RFP out, we requested pricing on various types of carbon, we were able to get a cost comparison.

Boers replied, operationally, we are looking at minimum of \$700,000 to \$1 million.

Force questioned who the general on this project was and where the vessels came from? What kind of testing would we be doing to determine the veracity of the process, would we be doing those tests or are they sent out, did we avoid 2nd round of resin changeout?

Wojtkiewicz replied Ellis Construction and vessels are from Aqueous Vets. The Department of Natural Resources have not provided us with a specific as far as requirements for testing but there will have to be ongoing testing whether, at some point you'll have breakthrough, that's where the lead-lag will protect you. The city staff are collecting the samples but they must be analyzed by the lab. The city currently utilizes Northern Lakes.

Gehin questioned if we were still feeding sodium silicate for corrosion control?

Boers replied it's added post treatment and we avoided the 2nd changeout. The first round was \$1.1 million.

No Action Taken.

4) Update on the 2023 Compliance Maintenance Annual Report and WDNR Responses.

Brooks highlighted that the DNR stated good job despite the shortage in staffing situation and still achieving 4.0 GPA.

Force questioned if Brooks saw the New York Times Edition on PFAS/Biosolid spreading and wondered if we had PFAS in our biosolids that impacted our land spreading operations?

Brooks replied not that we are aware of, we performed those 6 months of biosolids testing that were provided to you, we are still proceeding with land application in approved fields instead of allowing the public to come and get it. DNR has not approved Class A Status, exceptional quality but still waiting on DNR.

Force questioned if PFAS would impact Class A designation? For the record: Wastewater Plant does not create PFAS, it's coming from other sources?

Brooks replied it shouldn't, the preliminary results we saw were well below take action status and hope it remains the same. Correct. For the record, all our treatment tests indicate we are meeting Class A Status, just waiting on the DNR official classification.

Diny replied what we've already been doing PFAS removal and upcoming GAC filtration, we are significantly minimizing what we're delivering to the plant. Any PFAS is coming from somewhere else.

Lindman stated we are still waiting for our Discharge Permit that hasn't arrived yet, the DNR's backed up.

No Action Needed.

5) Adjourn.

Diny stated last meeting, we wanted to look at improving our communication for the water confidence report, Mr. Force, Miss Watson, and Mr. Boers will work on that. Next meeting is October 1st at 11am. Robinson motioned to adjourn. Seconded by Gehin.

Link to view meeting in its entirety: <https://tinyurl.com/wausaucitycouncil>

Gina Vang, Recording Secretary

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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 – October 2024

Update on Leachate acceptance consideration from the Marathon County Landfill:

- The County Administrator has been talking with the Mayor and asking if the wastewater treatment facility is willing to start taking leachate from the landfill. The last meeting we had with the Marathon County Landfill on this topic was March 2024. The Landfill was going to sample their leachate and include PFAS analytics as part of their testing. Once this was completed the results were going to be shared with Ben and myself for review, we have not yet seen any results. The landfill produces about 25,000-30,000 gallons per day of leachate. We met with landfill staff and their engineer consultants (Tetra Tech) to discuss what needs to be done for the Wastewater Facility to accept leachate and both the city and county submitted projects to the DNR for solid waste funding to perform engineering and construction of infrastructure that would be necessary for long term acceptance of leachate, neither of the projects were funded so this is where things sort of stalled out.
- Our request of the landfill was to have them complete their testing and then we can review the results. Once we have the results, we asked the county to prepare a study, in coordination with us and our engineers, to determine what the effect the leachate concentrations will have on our treatment (effluent and biosolids) to help determine how much we would be able to accept. Once this is done, we would need to determine what our additional costs would be to accept the leachate and establish a rate to be charged to the county. Since none of this has yet to be started, I would say we are probably a couple years away from being able to make any decisions on this. Leachate has high concentrations of many organics and other non-organics that can be problematic for wastewater facilities to process. The higher concentrations of these items need to be reviewed and determinations need to be made how the leachate will affect our treatment processes (liquid & solid), our cost of chemicals and other operational costs. This will be

an engineering study that will take some time and if any new infrastructure is required then we would need to prepare for those additional operational needs and construction of those facilities.

Update LSL Replacement Program:

- City Council held a Committee of the Whole to discuss the LSL Replacement Ordinance. Horsley Witten (hired by EPA LSL Accelerator Program) provided a power point presentation to the council to help provide information on lead in drinking water, regulatory requirements and how an LSL ordinance fits in with new and proposed rules.
- Construction continues to progress and the contractor is now replacing 8-12 services per day.
- Staff and CIP continue to provide information to the DNR related to the agreement and the structured project delivery model the city is using for LSL replacement. It should be noted that the city of New Orleans is proposing to use this same model for their LSL replacements in 2025. Other municipalities in WI are considering this model as well and are waiting for final loan closing and approvals here in Wausau and they will then begin soliciting proposals for a CBP3 project delivery model.
- Since our last meeting we have had an in-person meeting with the DNR top administrators to answer additional questions and inform them of the concept of the CBP3 delivery model and determine what additional information the DNR would like to satisfy any remaining questions.
- Our hope is to have a closing date for the loan in November for the 2024 construction season.
- Wausau Water Works and Community Infrastructure Partners submitted the 2025 funding request, the request was for approximately \$9million principal forgiveness and \$5million loan. The DNR has indicated the 2025 LSL funding list will be available in early October.
- The City is preparing the LSL inventory which is required to be submitted to the DNR no later than October 16, 2024. We have the majority of the information in our GIS system and the format is taking some time to prepare with the DNR required/recommended information. We continue to update our website and adding water service line identification map for the public and will be including upcoming schedules on the website and CIP is updating their Equiflow website to more user friendly and with additional information.
- New press releases are ready to be sent once we get the funding determination from DNR for the 2025 season. There is going to be a larger public outreach moving into the fall in order to help with getting our project started earlier in 2025, improving our inventory and reaching more residents about the program.

Update on Staffing Additions to Water & Sewer:

- All three new positions have been approved by the city council.
- Positions are to begin advertising soon. We hope to have staff onboard before spring to begin training.
- It is the hope the new positions would be trained and able to be added to the on-call list within 6-months of hire. This has not always been the case but having a longer on-call rotation will help with preventing our current employees from being burned out.

Update on Utility Finances:

- Utility finances have been uploaded into WorkDay, both capital and operation.
- It is proposed to have Ehler's come back to the Finance Committee for another discussion on the PILOT payment and how it relates and may affect the general budget. This will be the second presentation with the possibility of a third presentation this fall prior to the 2025 budget approval proposed to be passed in late November.

WATER DIVISION

1. Drinking Water Construction Update: 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 Station project.
3. A new extraction screw shaft and gearbox provided under warranty by Veolia was replaced by August Winters and Sons on September 23, 2024. The original shaft had broken and it was determined by Veolia that a heavy-duty gearbox and shaft were needed. Brad Wendtland along with plant staff innovated a coupler design onto the original shaft to limp the system along until the new shaft and gearbox were installed under warranty.

WATER UTILITY FUND
31-Aug-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	7,647,724									7,647,724	62.18%
Miscellaneous Revenue	15,000	52,188									52,188	347.92%
Interest on Investments		81,290	384,915								466,205	
State Grants				5,142,476							5,142,476	
Proceeds from Long Term Debt	500,000			7,425,547		390,336					7,815,883	1563.18%
Other Financing Sources		34,564										
Revenues	12,814,100	7,815,766	384,915	12,568,023	-	390,336	-	-	-	-	21,159,040	165.12%
Expenses												
Salaries and Wages	1,595,741	846,645									846,645	53.06%
Benefits	629,973	276,251									276,251	43.9%
210 Professional Services	251,800	118,059		112,111	274,782		44,888			1,766	551,606	219.1%
220 Utility Services	534,600	321,584									321,584	60.2%
230 Repair and Maintenance Services-Streets and R	250,000	59,888									59,888	24.0%
240 Repair and Maintenance Services-Other	147,000	66,153									66,153	45.0%
250 Special Services	197,000	85,654									85,654	43.5%
290 Other Contractual Services	17,100	11,199									11,199	65.5%
310 Office Supplies	52,300	24,734									24,734	47.3%
320 Publications, Subscriptions and Dues	13,000	2,881									2,881	22.2%
330 Travel	21,500	16,858									16,858	78.4%
340 Operating Supplies	49,700	35,457									35,457	71.3%
350 Repair and Maintenance Supplies	-	17,696									17,696	
360 Other Repairs and Maintenance Supplies	560,500	51,838									51,838	9.2%
390 Other Supplies and Expense	642,800	55,087									55,087	8.6%
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	504,924									504,924	57.8%
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	14,495									14,495	3623.8%
540 Meter Allocation		-									-	
590: Other Fixed Charges		-									-	
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	30,410		8,855,459	240	868,206		706,312	49,533		10,510,160	615.0%
Expenses	12,779,360	5,716,894	18,345,834	8,967,570	275,022	868,206	44,888	706,312	49,533	1,766	34,976,025	273.7%
Revenues Over/(Under) Expenses	34,740	2,098,872	(17,960,919)	3,600,453	(275,022)	(477,870)	(44,888)	(706,312)	(49,533)	(1,766)	(13,816,985)	

SEWER UTILITY FUND

31-Aug-24

EauClaire Blvd

	City FY24 Amended Budget Detail	Operations	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	7,113,233							7,113,233	72.66%
Miscellaneous Revenue	4,007	14							14	0.35%
Interest on Investments	-	108,696							108,696	
Capital Contributions		32,255							32,255	
Proceeds From Long Term Debt	-							66,190	66,190	
Revenues	9,793,745	7,254,198	-	-	-	-	-	66,190	7,320,388	74.75%
Expenses										
Salaries and Wages	1,018,841	852,827							852,827	83.71%
Benefits	488,828	344,517							344,517	70.48%
210 Professional Services	258,000	27,522						20,671	48,193	18.68%
220 Utility Services	1,251,500	408,533							408,533	32.64%
230 Repair and Maintenance Services-Infrastructure	2,000								-	0.00%
240 Repair and Maintenance Services-Other	254,000	94,513							94,513	37.21%
250 Special Services	83,500	91,223							91,223	109.25%
290 Other Contractual Services	14,000	18,956							18,956	135.40%
310 Office Supplies	14,700	18,687							18,687	127.12%
320 Publications, Subscriptions and Dues	25,800	13,161							13,161	51.01%
330 Travel	36,700	16,802							16,802	45.78%
340 Operating Supplies	21,600	20,853							20,853	96.54%
350 Repair and Maintenance Supplies	77,200	31,527							31,527	40.84%
360 Other Repairs and Maintenance Supplies	215,100	120,322							120,322	55.94%
390 Other Supplies and Expense	128,000	46,937							46,937	36.67%
410 Concrete and Clay Products	-	1,422							1,422	
420 Metal Products	-	19,144							19,144	
440 Plastic Products	-	-							-	
450 Raw Materials - Chemicals	659,000	311,372							311,372	47.25%
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	
540 Meter Allocation									-	
590 Other Fixed Charges		-							-	
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	-		298,244	417,187			1,020,424		1,735,855	
50920:Transfers to Other Funds	-								-	
Expenses	9,631,688	6,775,648	298,244	417,187	-	-	1,020,424	20,671	8,532,174	88.58%
Revenues Over/(Under) Expenses	162,057	478,550	(298,244)	(417,187)	-	-	(1,020,424)	45,519	(1,211,786)	

Memorandum

Date: September 24, 2024

To: Scott Boers, Eric Lindman

From: Susan Wojtkiewicz

**Re: City of Wausau
Drinking Water Treatment Facility PFAS Treatment**

Construction on the PFAS treatment system continues to progress in anticipation of the scheduled substantial completion date of October 11, 2024 and final completion date of November 10, 2024. In addition to the information presented her, Donohue's invoice report includes photos and a progress update for the period August 4 – September 7, 2024.

The 12 PFAS treatment vessels have been disinfected and safe water samples were obtained. Calgon Carbon has delivered and loaded the granular activated carbon into the treatment vessels. Valves on the PFAS treatment system are installed, actuators connected and valves and actuators tested for operation.

The painters have completed work in Structure 120 (PFAS Treatment Building), lighting is installed and operational. HVAC components, including heaters and ceiling fans are installed and operational.



North side of PFAS Treatment Building (Structure 120): lighting in place, painting completed.

The backwash supply pump will be started up on Friday, September 27 and the process of backwashing granular activated carbon to remove fines and stratify the media bed will begin. This process will take approximately one week, continuing during the week of September 30. Testing of the treatment system, pumps and controls will continue through the week of September 30 and into the following week as the contractor demonstrates operation of the system.



PFAS backwash influent and effluent and PFAS influent and effluent piping along with actuated valves in Structure 120.

Photos on the next page illustration completion of some exterior features.



Structure 410 (Sanitary Lift Station) concrete slab complete and bollards painted.



Steps installed on exterior door landings of PFAS Treatment Building.

Invoice Status Report



PFAS Response

City of Wausau, Wisconsin

Donohue Project Number 14066

4

Invoice 14066-28

Period | August 4, 2024 – September 7, 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 Contractor responses to RFPs coagulant room and polymer system modifications and requested changes to RFP based on Contractor responses and field observations.
- Reviewed Pay Application 11 and provided preliminary review of Pay Application 12.
- Prepared Change Order 4 and coordinated City approval and WDNR review and approval.
- 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 Structure 120 concrete landings in lieu of pavement, sump curtain and grating.
- Reviewed contractor responses to requests for proposals for overhead door lighting and power for Structure 100 doors as well as Structure 100 unit heater modifications, Structure 120 concrete landings in lieu of pavement, and sump curtain and grating.
- Attended monthly construction progress meeting and on site meeting 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.
- Prepared and presented project update at September Water Works Commission meeting.

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

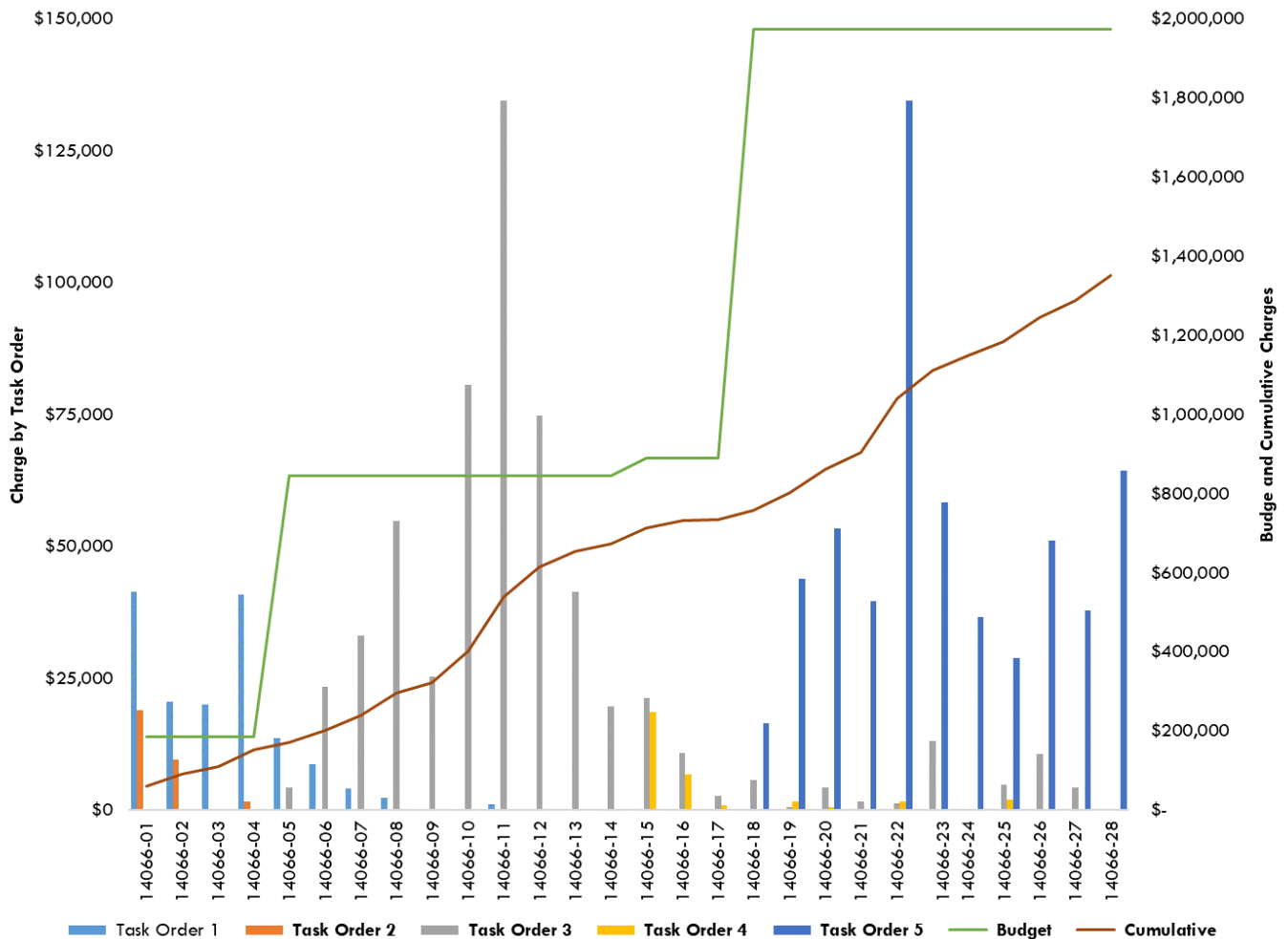
Donohue Project Number 14066

4

Invoice 14066-28
Period | August 4, 2024 – September 7, 2024

Budget Status

Engineering Budget



Invoice Status Report



PFAS Response

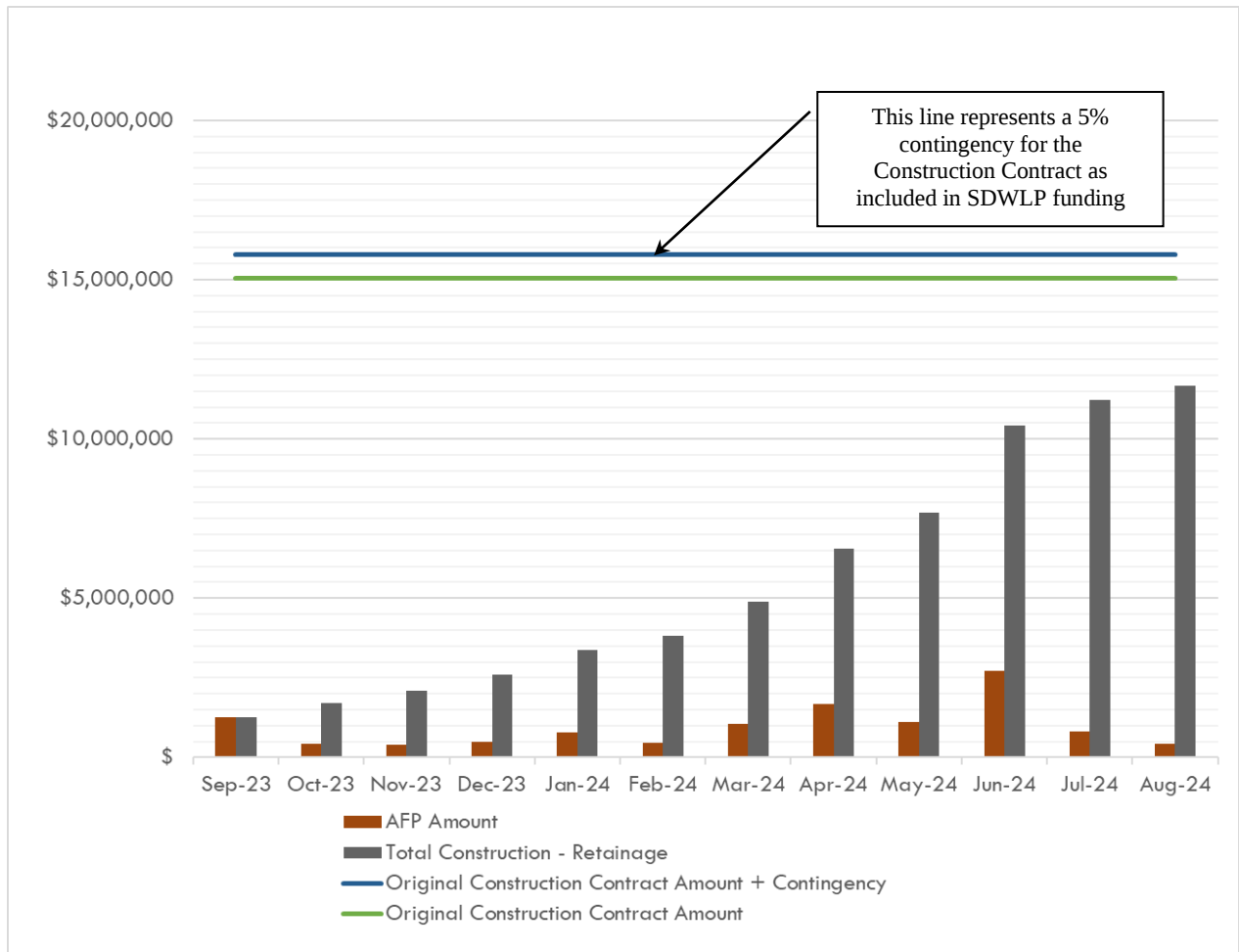
City of Wausau, Wisconsin

Donohue Project Number 14066

4

Invoice 14066-28
Period | August 4, 2024 – September 7, 2024

Construction Budget



Invoice Status Report

PFAS Response

City of Wausau, Wisconsin

Donohue Project Number 14066

4

Invoice 14066-28

Period | August 4, 2024 – September 7, 2024

Construction Photo Log

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



Work continues on PFAS treatment system piping in Structure 120 (PFAS Treatment Building)



20-in PFI and PFE lines through wall of Structure 100 (Process Building).

Invoice Status Report

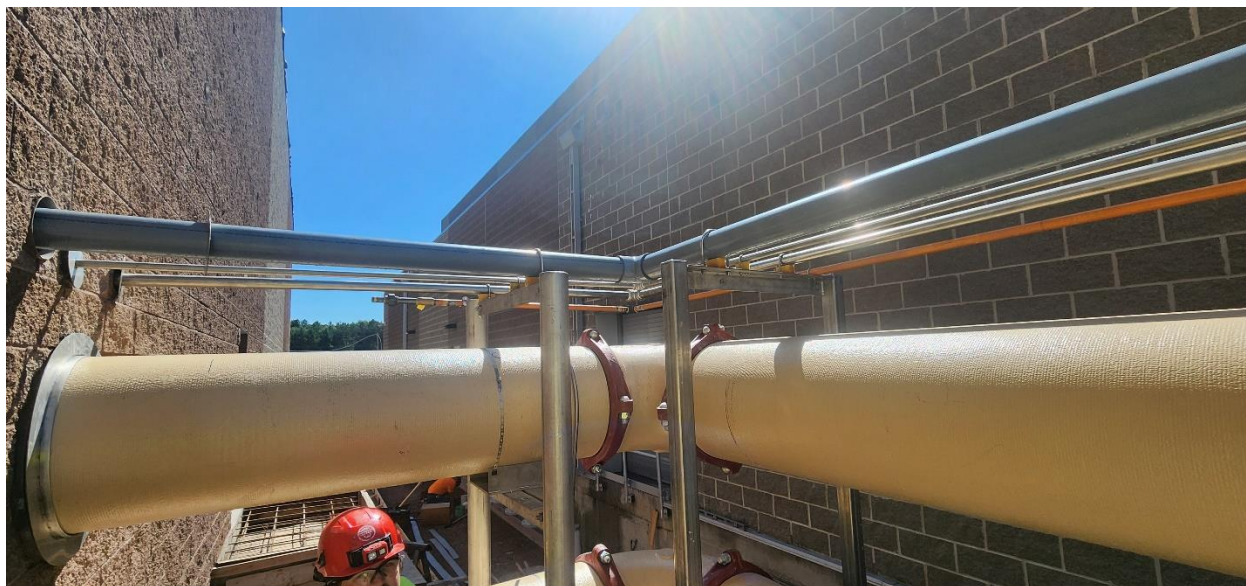
PFAS Response

City of Wausau, Wisconsin

Donohue Project Number 14066

4

Invoice 14066-28
Period | August 4, 2024 – September 7, 2024



Piping stack between Structure 100 (Process Building) and entering Structure 120 (PFAS Treatment Building) on left.



Piping stack between Structure 100 (Process Building) and entering Structure 120 (PFAS Treatment Building) on right, looking west with overflow piping from Structure 100 shown on left.

Invoice Status Report

PFAS Response

City of Wausau, Wisconsin

Donohue Project Number 14066

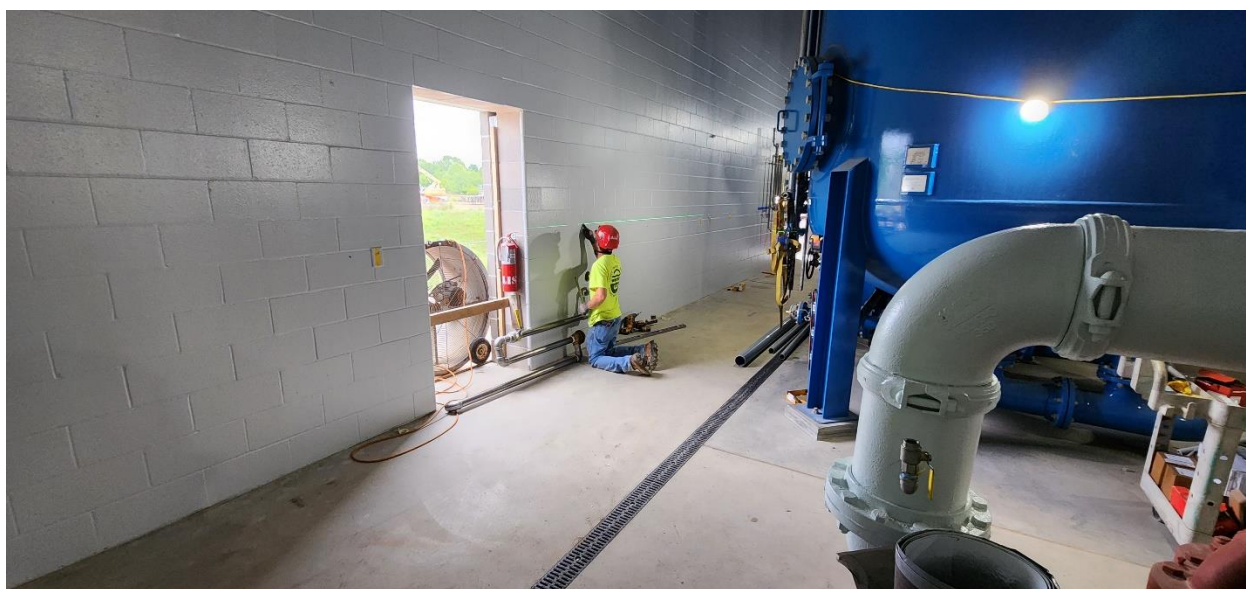
4

Invoice 14066-28

Period | August 4, 2024 – September 7, 2024



Half of concrete poured between Structure 100 (Process Building) and Structure 120 (PFAS Treatment Building).



Mechanical contractor installing small diameter piping in Structure 120 (PFAS Treatment Building).

Invoice Status Report

PFAS Response

City of Wausau, Wisconsin

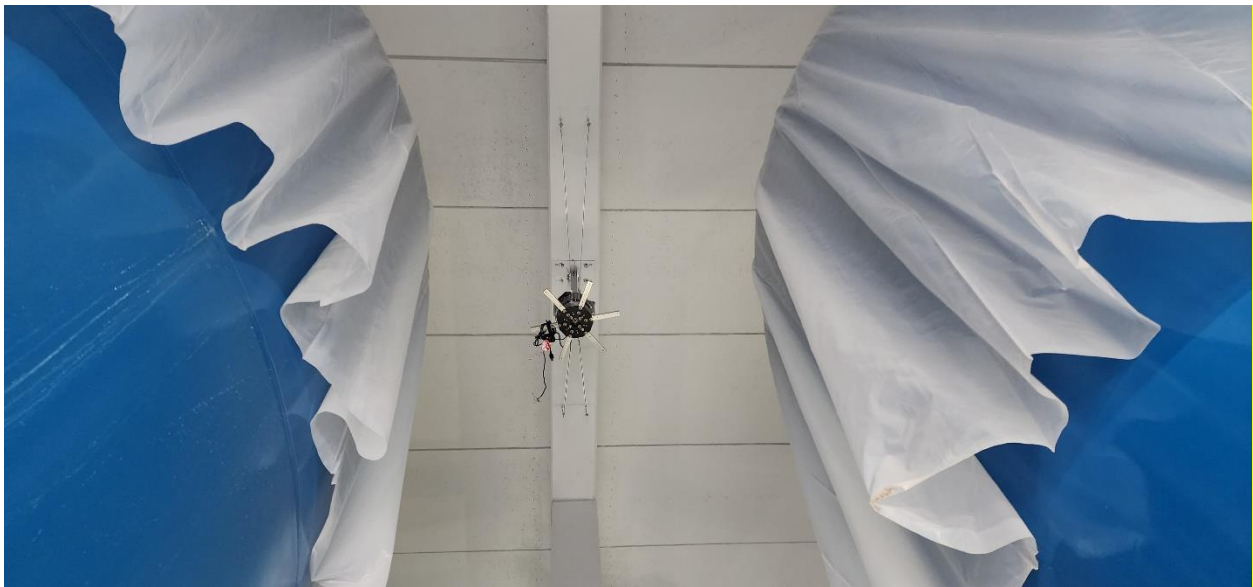
Donohue Project Number 14066

4

Invoice 14066-28
Period | August 4, 2024 – September 7, 2024



Work is taking place in Structure 100 (Process Building) electrical room.



Scaffolding is down, ceiling painted and installation of ceiling fans progressing in Structure 120 (PFAS Treatment Building).

Invoice Status Report

PFAS Response

City of Wausau, Wisconsin

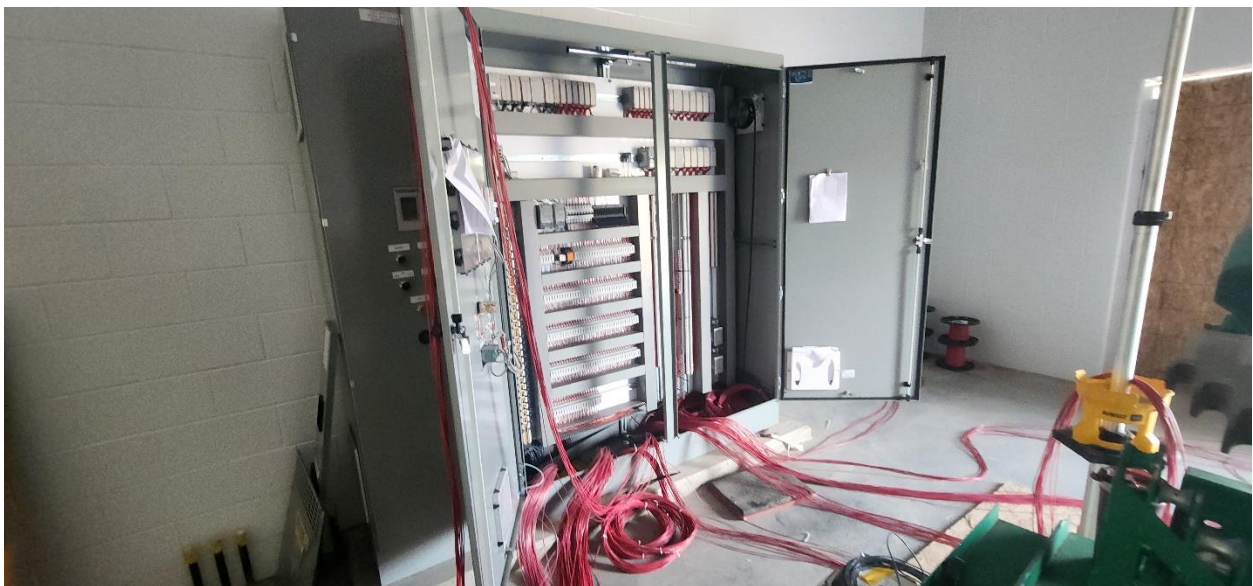
Donohue Project Number 14066

4

Invoice 14066-28
Period | August 4, 2024 – September 7, 2024



Prepping for new concrete slab around Structure 410 (Sanitary Lift Station).



Wiring being pulled to 120-PLC-1 panel in Structure 120 (PFAS Treatment Building).

Invoice Status Report

PFAS Response

City of Wausau, Wisconsin

Donohue Project Number 14066

4

Invoice 14066-28
Period | August 4, 2024 – September 7, 2024



Filtered Water Pump 3 installed, tested and operational.



Structure 120 (PFAS Treatment Building) piping painted.

INVOICE



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:

September 12, 2024

Donohue Project No.:

14066

Invoice No:

14066-28

Project Manager:

Susan Wojtkiewicz

Terms:

Net 30 Days

Billing Period:

08/04/24 - 09/07/24

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	\$	1,351,066.72
Charges Previously Billed	\$	1,286,681.85
Current Charges	\$	64,384.87

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	\$	571,971.59
Charges Previously Billed	\$	571,971.59

Labor (0.0 hours)		
Reimbursable Expenses	\$	-
Permit Fees	\$	-
Subconsultants	\$	-
Total	\$	-

<u>Task Order No. 4</u>	\$	44,920.00
Total Charges to Date	\$	32,145.00
Charges Previously Billed	\$	32,145.00
Labor (hours)	\$	-
Reimbursable Expenses	\$	-
Subconsultants	\$	-
Total	\$	-

<u>Task Order No. 5</u>	\$	1,083,284.00
Total Charges to Date	\$	564,595.87
Charges Previously Billed	\$	500,211.00
Labor (319.50 hours)	\$	60,295.00
Reimbursable Expenses	\$	4,089.87
Subconsultants	\$	-
Total	\$	64,384.87

Current Charges Due	\$	64,384.87
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Please Remit to:

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

<u>Aged Receivables</u>				
<u>Current</u>	<u>31 - 60 Days</u>	<u>61 - 90 Days</u>	<u>91 - 120 days</u>	<u>>120 days</u>
\$64,384.87	\$42,007.23	\$0.00	\$0.00	\$0.00

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.

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.



WISCONSIN DEPARTMENT
of HEALTH SERVICES

Division of Public Health
Oral Health Program

TAP INTO HEALTHY TEETH

COMMUNITY WATER FLUORIDATION TOOLKIT



ACKNOWLEDGMENTS

This toolkit is a product of the Wisconsin Oral Health Coalition (WOHC) of Children's Health Alliance of Wisconsin (Alliance) and was developed in partnership with the Wisconsin Department of Health Services' Oral Health Program (OHP).

The WOHC is a dedicated group of more than 170 individuals, organizations and agencies addressing oral health access issues and working to improve oral health for all residents statewide.

The following individuals contributed to the preparation of this toolkit:

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- Wisconsin Oral Health Coalition Steering Committee

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Thanks to all organizations whose content was used in developing this toolkit.

Art Direction and Design: Mel Andrews, Mel Andrews Design, www.melandrewsdesign.com

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INTRODUCTION

Oral health plays an important role in the overall health of the body throughout a person's life. Community water fluoridation (CWF) is an evidence-based method for the prevention of tooth decay that has improved the oral health of Wisconsin residents since 1946.¹

CWF is the process of adjusting the natural fluoride concentration of a community's water supply to a level that is best for the prevention of tooth decay. The Centers for Disease Control and Prevention (CDC) has recognized CWF as one of the 10 greatest public health achievements of the 20th century.² CWF is credited with significant cavity reduction and the evidence continues to show that CWF not only reduces tooth decay, but that it is safe and cost-effective.³ Even with widespread availability of fluoride from other sources, studies prove CWF continues to be effective in reducing tooth decay by about 25 percent.⁴

Despite the overwhelming scientific evidence that supports the benefits and safety, opposition to CWF still persists. In Wisconsin, we have seen inaccurate information prevent communities from adopting a CWF program or lead some communities to stop this beneficial public health measure. Both of these outcomes ultimately deprive many Wisconsin residents of optimal oral health.

USING THE TOOLKIT

In Wisconsin, the decision to fluoridate is determined at the local level. Community leaders must prioritize both the well-being of their constituents and the financial situation of the community. Community water fluoridation (CWF) may not be a familiar topic for community leaders. There are thousands of evidence-based studies that support both the safety and effectiveness of CWF. Unfortunately, there is a significant amount of misinformation floating around on the internet, which has led to an increase in citizens raising concerns with community leaders.

As a local resident and professional in the community, city officials and community members value your knowledge and expertise. It is important to get involved at the local level and connect with community leaders to make them aware of the local, statewide and national support CWF has, along with the health benefits and cost savings. Many people are now turning to the internet for information and often struggle with identifying credible information. It is essential that the oral health workforce (health professionals, public health practitioners, community leaders, and water operators and engineers) provide accurate and reliable information to the community. Some medical, dental, public health professionals, as well as community leaders, may not be familiar with the research on the public health benefits of CWF or may not feel comfortable educating others about these benefits. Use the Tap into Healthy Teeth Toolkit to find resources that will help start the conversation about CWF in your community.

The toolkit is a compilation of documents and information from multiple sources. It is not intended to be read cover to cover. Instead, it has easy-to-locate information, organized by topic, including a tabbed reference section and a Take Action section. The tabbed reference section is designed to be a quick resource if you need facts that support CWF and research related to a particular concern. Utilize the Take Action section to find ways to engage your organization or community. For more information and resources, visit the Tap into Healthy Teeth website at www.tapintohealthyteeth.org.

FLUORIDE BASICS



FAST FACTS

01

***What is fluoride?***

Fluoride is a mineral that exists naturally in rocks, soil, foods and nearly all water sources.

02

***How does fluoride work to protect teeth?***

Teeth are stronger when fluoride is added to developing tooth enamel. In addition, fluoride can reverse or slow down tooth decay when it is absorbed into the outer tooth surface, remineralizing enamel that has been weakened by acids that cause tooth decay.

03

***Who benefits from fluoride?***

Everyone! Fluoride benefits us when our teeth are developing and throughout our lifetime to keep a healthy balance of minerals in our permanent teeth.

WHAT IS FLUORIDE?

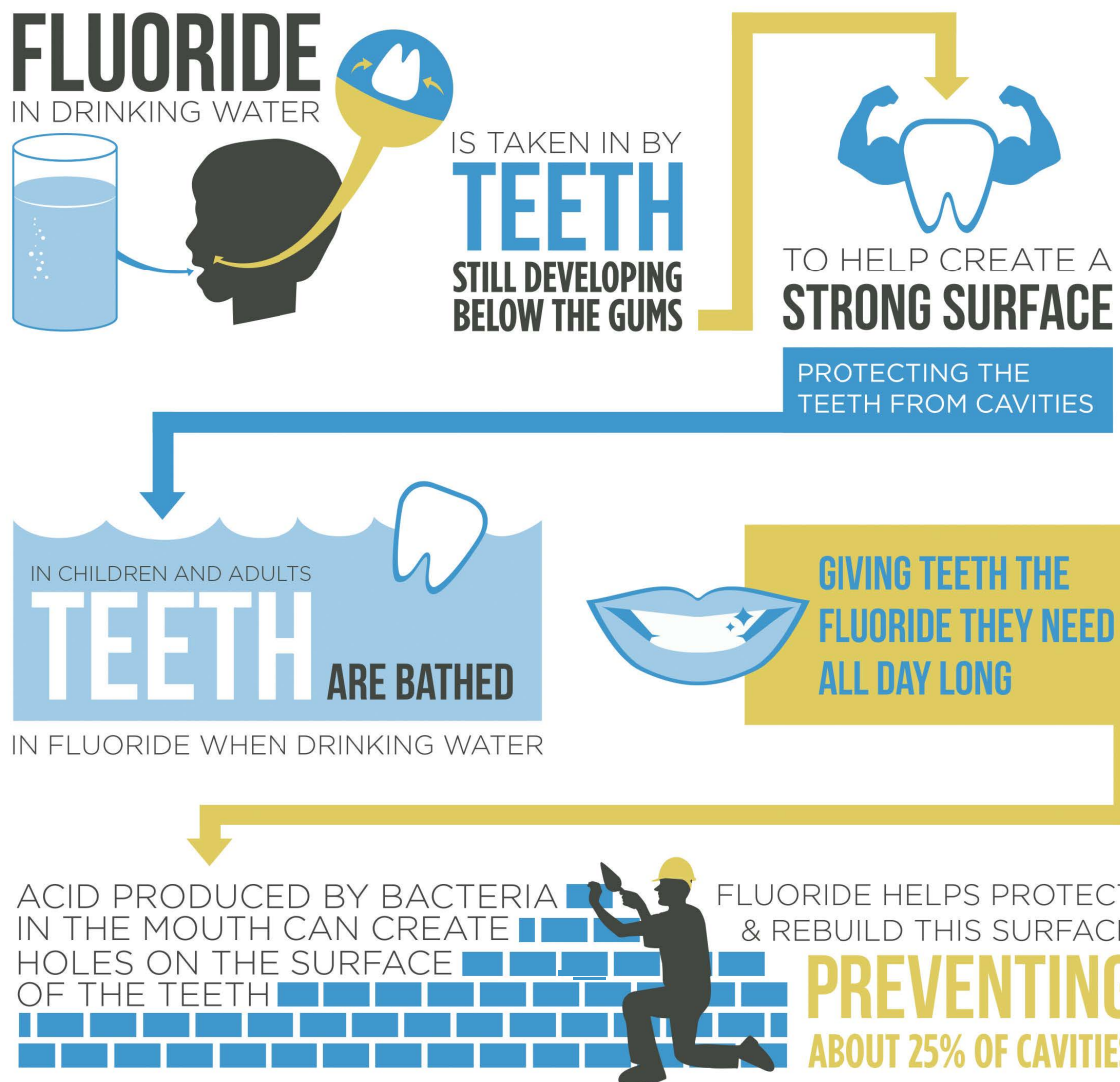
Fluorine is the 13th most abundant element in earth's crust but it is rarely found in its elemental state. The term fluoride refers to all combined forms of the element. Fluoride is a mineral that naturally occurs in rocks, soil, foods and water. However, the level of fluoride in most water sources is too low to protect teeth. That is why many communities choose to fortify their water with additional fluoride to reach the optimal level for reducing tooth decay.

FLUORIDE AT WORK

Tooth decay begins when the outer surface of the tooth, known as the enamel, is attacked by acids. Bacteria in the mouth convert sugars from foods and drinks into acid. This acid begins to dissolve the calcium and phosphate minerals in enamel, a process called demineralization. Once the acids have neutralized, the enamel can be re-mineralized. However, if enamel is frequently exposed to an acidic environment, the loss of minerals can result in a break in the enamel that allows bacteria to penetrate and infect the tooth, a process called tooth decay.

Fluoride is instrumental in preventing, reversing and slowing down the tooth decay process. Teeth benefit from a combination of both systemic and topical fluoride. Systemic fluorides are those that are swallowed via food, water and dietary supplements. When children under the age of eight swallow fluoride, the fluoride is added into the developing enamel of teeth that have not yet erupted in the mouth, resulting in strong teeth that are more resistant to the acids that demineralize enamel. Systemic fluoride also becomes incorporated into saliva, which constantly covers teeth, working to protect teeth topically. This means that fluoride in drinking water works both systemically and topically. Toothpaste, mouth rinses and treatments provided by a dental professional are also topical fluorides. Topical fluoride strengthens teeth, in both children and adults, as it comes into contact with demineralized enamel and is added to the outer enamel surface. This topical exposure to fluoride can reverse early demineralization or slow down the development of tooth decay. The benefits of fluoride in drinking water build on the benefits provided by topical fluoride. Using both forms of fluoride provides maximum protection against tooth decay.

HOW FLUORIDE WORKS



Build a better foundation for healthy teeth and keep your teeth stronger, longer. Fluoride in water. 70 years and going strong. At a faucet near you. Visit www.CDC.gov/Fluoridation for more information.





Chace Wolff, RDH

Walworth County Seal-A-Smile Program Coordinator

Walworth County Health and Human Services –
Public Health Department

The benefits of fluoride in the developing teeth of children are tremendous. Tooth decay continues to be a problem in school-age children. There are approximately 11,409 children in the public schools and 900 in the private schools in Walworth County, a mostly rural county in the southeastern part of the state. Our Seal-A-Smile program refers over 200 children for restorative care each year. It is, therefore, important that families have the opportunity of exposure to community water fluoridation (CWF) for the prevention of tooth decay.

Working as a dental hygienist in the county for 34 years, I have seen and still see the difference in the occurrence of tooth decay in children that grew up without fluoride supplements of any kind, to those children that grew up in a community with adjusted fluoride in their water. As communities grow here, it is important to me that CWF continues to be the foundation in the fight against tooth decay for Walworth County's children.

TESTIMONIAL

The background of the entire page is a close-up, high-speed photograph of water bubbles. The bubbles are of various sizes, from small pinpoints to larger, more defined spheres, and are captured in motion, creating a sense of dynamic energy. The color palette is a range of blues, from deep, dark navy to lighter, almost white highlights where the bubbles catch the light. A solid blue horizontal band is positioned across the upper middle of the page, serving as a backdrop for the title text.

COMMUNITY WATER FLUORIDATION 101

FAST FACTS

01

***What is community water fluoridation?***

Community water fluoridation is the controlled adjustment of fluoride in a public water system to levels recommended for optimal oral health.

02

***What is the recommended optimal fluoride level?***

The recommended optimal fluoride level is 0.7 mg/L.

03

***Who benefits from community water fluoridation?***

Community water fluoridation is a major factor responsible for the decline in prevalence and severity of tooth decay for people of all ages.

WHAT IS COMMUNITY WATER FLUORIDATION?

In the United States (U.S.), one of the most common sources of fluoride comes from fluoridated community drinking water. Community water fluoridation (CWF) modifies the natural fluoride in water to be optimal for oral health. In this way, levels of fluoride in drinking water are not too high or low.

Local water departments add fluoride to their community's public water system. The most common fluoride additive used in Wisconsin and the U.S. is fluorosilicic acid.⁵ Fluoride additives, like fluorosilicic acid, meet Environmental Protection Agency (EPA) safety standards. The EPA is exclusively charged with regulating drinking water additives in the U.S. to ensure the safety of products added to water.⁶ The Food and Drug Administration has jurisdiction over bottled drinking water used in food or food processing.

In addition to fluoride additives meeting EPA standards, fluoride levels are monitored daily by local water departments.⁷ Water departments send monthly samples to the Wisconsin State Laboratory of Hygiene to verify the accuracy of their testing equipment.⁸ Water department staff strive to meet or exceed water quality standards and consistently devote efforts to bring the benefits of optimally fluoridated water to the residents of their community. This dedication results in a community that has better oral health than those communities that do not fluoridate the water supply. Water operators are public health agents that are improving the dental health of their community and saving residents from unnecessary dental disease.

The World Health Organization website states, "fluoridation is the single most important intervention to reduce dental tooth decay, not least because water is an essential part of the diet for everyone in the community, regardless of their motivation to maintain oral hygiene or their willingness to attend or pay for dental treatment."⁹

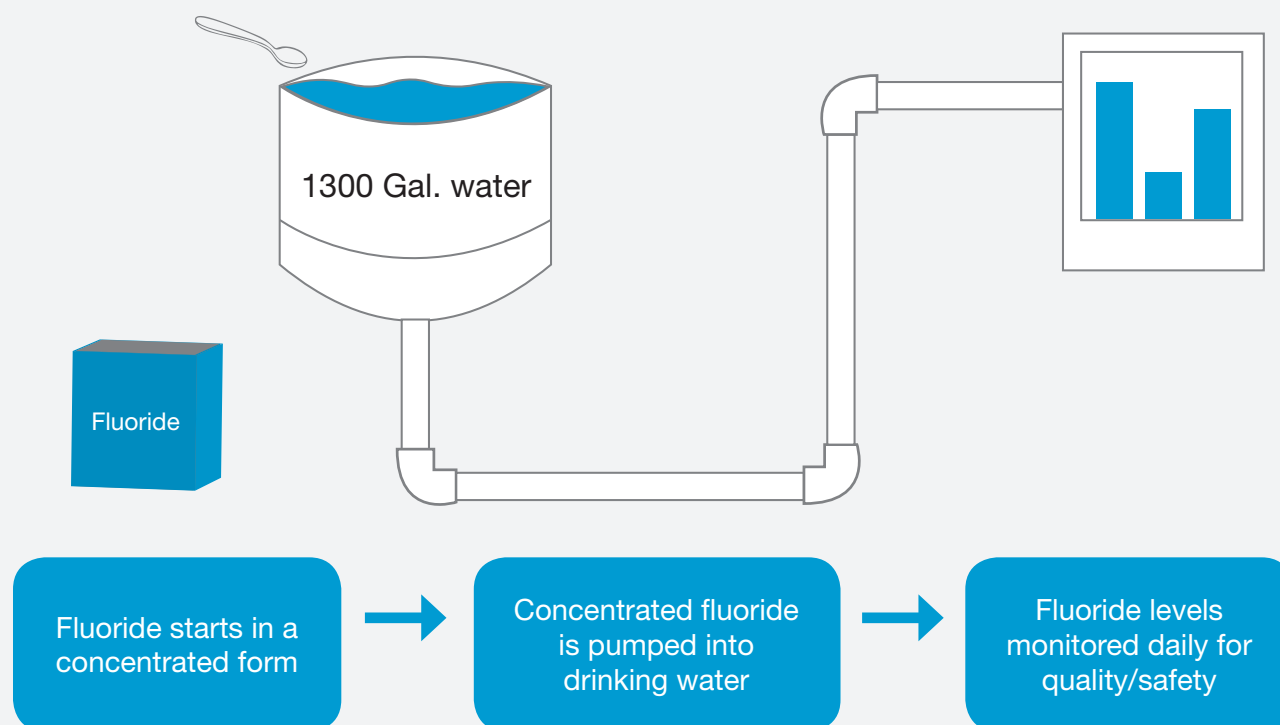


RECOMMENDED OPTIMAL FLUORIDE LEVEL

The recommended optimal level for community water fluoridation (CWF) is 0.7 milligrams per liter (mg/L) of water.¹⁰ The optimal level is so small that if this level were measured in time, it would represent 42 seconds out of two years.¹¹ This recommendation is based on the latest scientific research and guidelines established by the United States (U.S.) Public Health Service, a division of Department of Health and Human Services (HHS). It is the lowest effective level of fluoride that will ensure optimal oral health benefits.

In 2015, HHS updated the recommended optimal level from a range of 0.7 to 1.2 mg/L to a single level of 0.7 mg/L.¹² The change was a result of a panel of scientists reviewing new information related to fluoride intake. The range of 0.7 to 1.2 mg/L was originally set by taking into account different levels of children's fluid intake, according to the average annual temperature in different regions of the country.¹³ Less fluoride was added in warmer, southern climates where it was believed that people drank more water, and more was added in cooler, northern climates where it was believed that people drank less. Over the past several decades, many factors, including the advent of air conditioning, have reduced geographical differences in water intake.

In addition to water intake not varying by climate or region, today, Americans have access to several sources of fluoride; including toothpaste, supplements and mouth rinses. While considering the final recommendation, HHS took into account current levels of tooth decay and dental fluorosis, the lack of geographical differences in water intake, and the Environmental Protection Agency's (EPA) new assessments of cumulative sources of fluoride exposure.¹⁴ The optimal fluoride concentration of 0.7 mg/L provides the best balance of protection from tooth decay while limiting the risk of dental fluorosis.¹⁵ See [tab two](#) "Fluorosis" for more information.



Adapted from image courtesy of Campaign for Dental Health - www.ilikemyteeth.org

This updated fluoride level demonstrates that national health officials are periodically reviewing research and relying on the best science to make recommendations.¹⁶ Updating a recommendation like this is not unusual. In the past, health experts have updated recommendations such as vitamin D intake. These changes for fluoride and vitamin D were made to reflect the most recent research.

WHO BENEFITS?

Everyone benefits from community water fluoridation (CWF) regardless of age, income level or insurance status. It is a common misperception that CWF only benefits children, but it also benefits adults. CWF reduces tooth decay by about 25 percent in both children and adults. By drinking fluoridated water at home, work or school, people get the benefits of fluoride.

Untreated tooth decay can cause pain and infection that can affect a person's ability to eat, speak and sleep. The pain caused by tooth decay can result in missing time from school or performing poorly on tests. Research has linked oral health with how well children and teens perform in school. A 2011 study found that students with poor oral health were nearly three times more likely than their healthy peers to miss school due to dental pain.¹⁷ According to the *2013 Healthy Smiles/ Healthy Growth Wisconsin's Third Grade Children* report, 53 percent of Wisconsin's third graders have experienced tooth decay, with roughly 2,000 having pain or dental infections severe enough to require urgent care.¹⁸ Children benefit from fluoride by having less tooth decay. When children are healthy and able to concentrate in school, our schools also benefit.

Adults benefit from fluoride in several ways. Research shows that people with unhealthy or missing teeth are less likely to be hired for a job.¹⁹ Not only can oral health impact a person's ability to get a good job, CWF prevents tooth decay and ultimately saves money on dental treatment costs. In addition, employers benefit when they have healthy employees who are contributing to productivity and not missing work due to tooth pain or dental visits.

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.²³

Nine studies were analyzed (2007) in the Journal of Dental Research to estimate water fluoridation's impact on adult teeth. This report concluded that water fluoridation reduced decay by 27 percent.²⁰ Similarly, a study of nearly 3,800 adults in Australia (2013) determined that fluoridated water reduced tooth decay throughout the life course.²¹

Fluoridation benefits people of all ages, including older adults. These benefits come in the form of reduced costs during a time in their life when they lack dental insurance. CWF also helps prevent decay on exposed root surfaces of teeth, commonly seen in older adults. For example, the prevalence of decay on root surfaces of teeth is inversely related to fluoride levels in the drinking water.²² In other words, the higher the level of fluoride in water, the lower the level of tooth decay. This finding is important because with increasing tooth retention and an aging population, the prevalence of dental root decay would be expected to be higher in the absence of fluoridation.

Communities benefit by overall better oral health and less burden on the publicly funded dental programs. 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.²³ Communities should take advantage of this simple and proven prevention strategy that has been used to prevent tooth decay for more than 70 years to realize cost savings and reduce the burden of dental disease in the community.

Although there has been a notable decline in tooth decay, it still remains one of the most common chronic diseases of childhood. CWF is a major factor in the overall decline of tooth decay. Even with other available forms of fluoride, the effects of water fluoridation are still measurable. Americans benefit from multiple sources of fluoride. Studies continue to show that water fluoridation prevents tooth decay and saves money for both families and the health care system.²⁴ See page 24 for more information on cost savings.



Gretchen Sampson RN, MPH

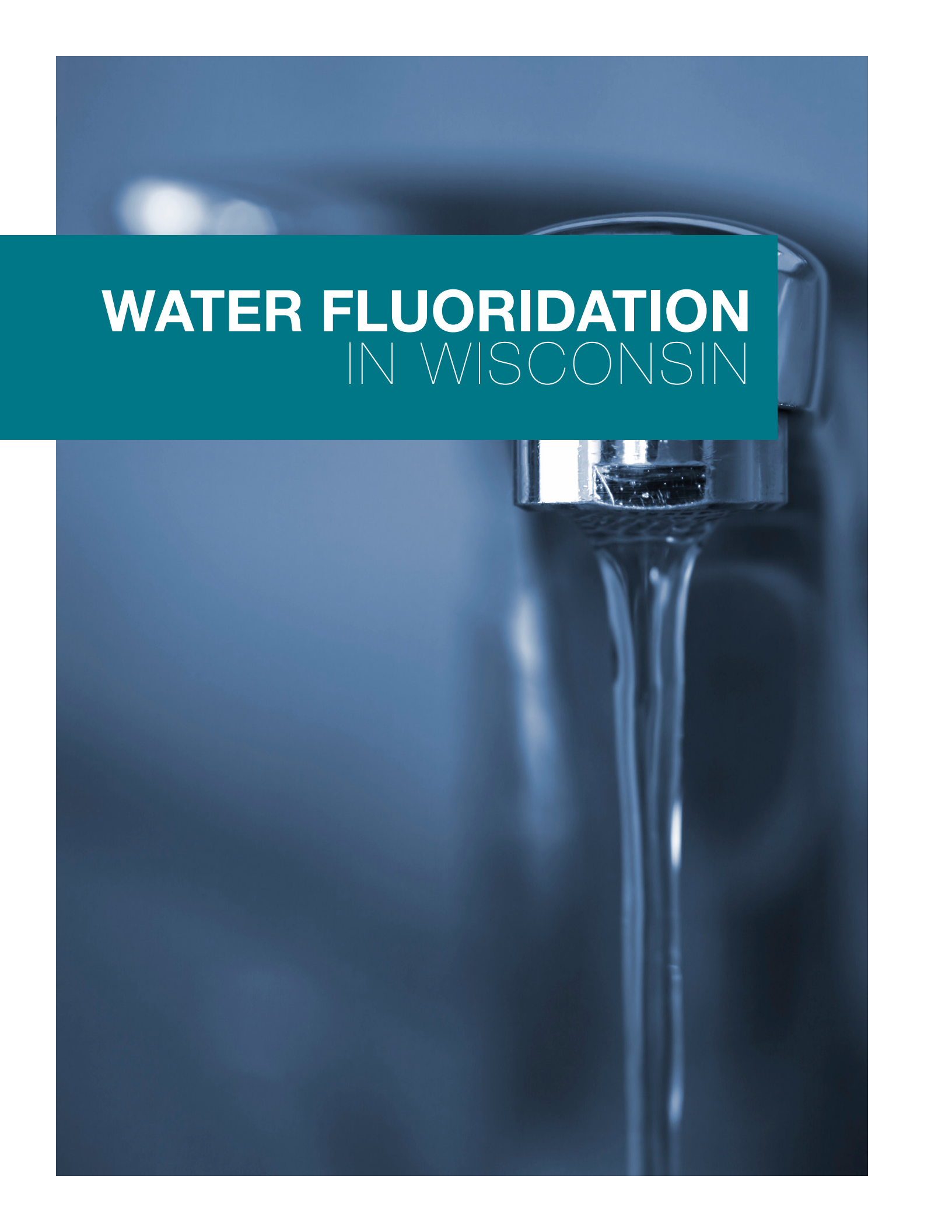
Director/Health Officer
Polk County Health
Department

Polk County is a rural community of 44,000 located in northwestern Wisconsin. Several factors influence the oral health status of Polk residents. Of the 12 public water systems in the county, only half are adjusted for optimal fluoride content. Many residents live in areas of the county with no public water systems and private wells are used. This situation results in only 25.5 percent of the total population having access to optimally fluoridated water. In Polk County, 12.5 percent of residents live below the poverty level and 21 percent of the population is on Medicaid/BadgerCare+. Another barrier to oral health care is the limited number of dentists who accept new Medicaid/BadgerCare+ patients. The result is that only 45 percent of continuously enrolled Medicaid/BadgerCare+ recipients received dental services in 2010. All these elements contribute to dental decay problems in the population.

Community water fluoridation (CWF) is pure prevention and does not involve an active effort to realize the benefits. Poor oral health causes loss of work time, missed school days, pain and suffering, and ultimately high health care costs for treatment. CWF is cost effective and there are estimates that for every dollar spent, \$38 is saved. It is hard to argue with those economics.

I grew up in Wisconsin Rapids in a family of eight children and my dad practiced dentistry for many years. We lived outside of town in an area that was not on city water. Every day my dad would bring home numerous milk jugs full of “city water” for us to use for drinking so that we could have the benefit of fluoridated water. Believe me, with eight kids and two adults, plus all the associated friends that were in our household at any given time that was a lot of water hauling! That effort my dad put forth for our family’s oral health has inspired me to promote CWF in my own community.

TESTIMONIAL

A close-up, low-angle shot of a chrome water faucet with water flowing from it. The background is a blurred, dark blue-grey, suggesting a kitchen sink area. The lighting is soft, highlighting the metallic texture of the faucet and the clarity of the water.

WATER FLUORIDATION IN WISCONSIN

FAST FACTS

01

***When did Wisconsin start fluoridating its municipal drinking water?***

In 1946, the Sheboygan Water Utility became the first public water system in Wisconsin to fluoridate municipal drinking water for the prevention of tooth decay.

02

***What percent of Wisconsin's population on public water systems receive fluoridated water?***

In Wisconsin, approximately 90 percent of the population on public water systems receive fluoridated water.

HISTORY OF WATER FLUORIDATION IN WISCONSIN

Community water fluoridation (CWF) is not a new idea in Wisconsin. It is a health strategy that has been successfully used since 1946 to reduce the pain and cost of tooth decay.²⁵ In the mid 1940s, researchers conducted clinical trials that compared the dental records of fluoridated Grand Rapids, Michigan with those from non-fluoridated Muskegon, Michigan.²⁶ During the 15-year project, researchers monitored the rate of tooth decay among almost 30,000 Grand Rapids schoolchildren.²⁷ After just 11 years, the rate of tooth decay among Grand Rapids children born after fluoride was added to the water supply dropped more than 60 percent. Similar comparisons were made in trials conducted in New York and Ontario, Canada.²⁸

The early clinical data were so impressive in the reduction of tooth decay that other cities began fluoridating. Among these cities was Sheboygan, Wisconsin. In 1946, Sheboygan Water Utility became the first public water system in Wisconsin (and third in the United States) to fluoridate municipal drinking water for the prevention of tooth decay.²⁹

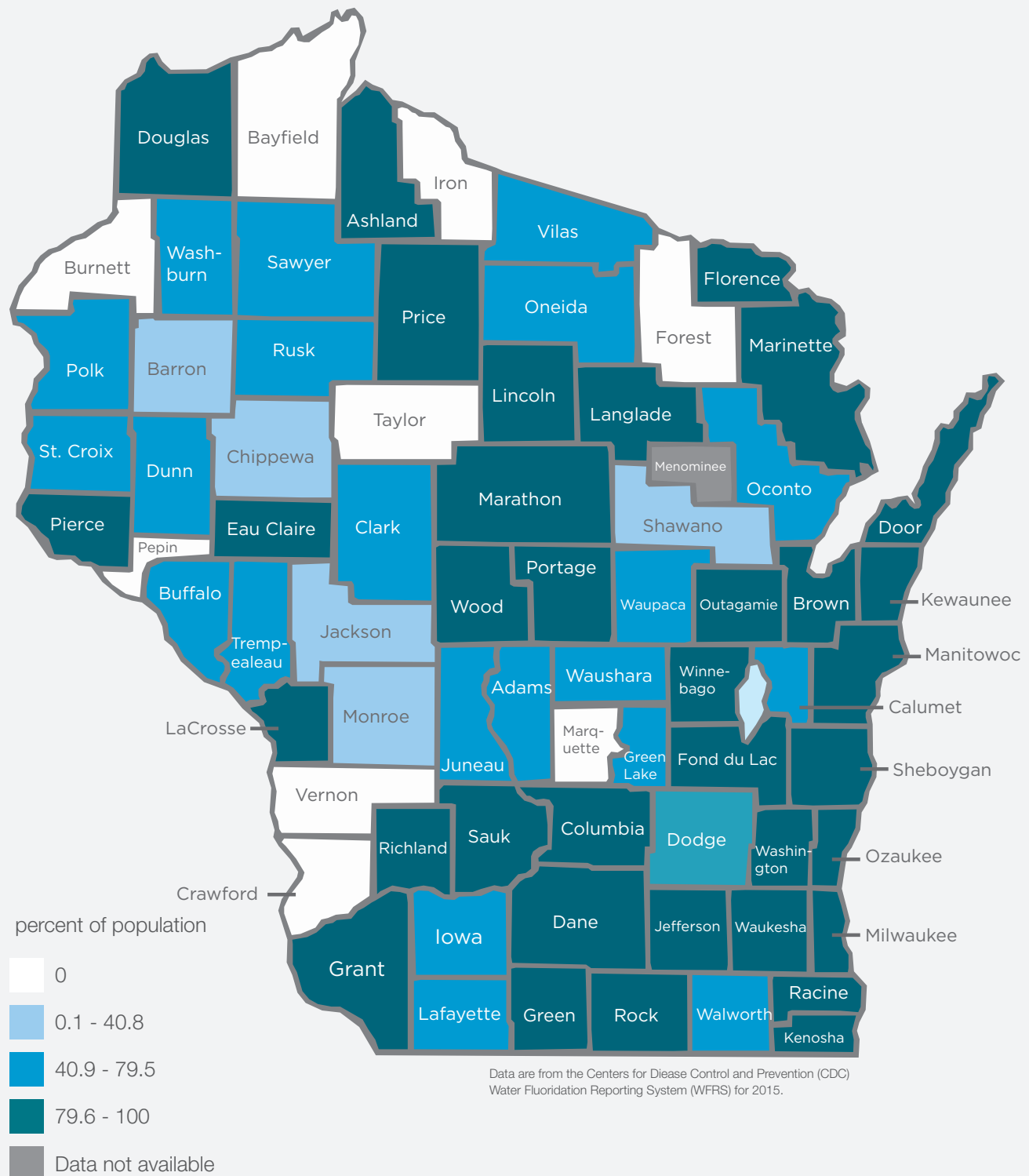
WISCONSIN'S CURRENT FLUORIDATION PRACTICE

A large proportion of Wisconsin's population receives the dental benefits of optimally fluoridated water. Approximately 90 percent of the population in Wisconsin on public water systems has access to fluoridated water.³⁰

The best source of information on fluoride levels in public water systems is the local water utility. All water utilities must provide their consumers with an annual Consumer Confidence Report that provides information on a system's water quality, including its fluoridation level. For a quick and easy way to learn if a community's drinking water is optimally fluoridated for oral health, visit the Centers for Disease Control and Prevention's (CDC) "My Water's Fluoride" website at https://nccd.cdc.gov/DOH_MWF/Default/Default.aspx.

Another resource is the Wisconsin Public Water Supply Fluoridation Census found at <https://www.dhs.wisconsin.gov/oral-health/fluoride-census.htm>.

The following map shows the percent of the population served by public water systems in each Wisconsin county who have access to fluoridated water. In Wisconsin there are 72 counties, 35 of which have 79.5 percent or more of their population with access to fluoridated water. While a large proportion of Wisconsin's population on public water systems receive fluoridated water, it is important to note there are nine counties at zero percent.





Tamim Sifri, DDS

Greater Dane County Society

Madison, Wisconsin has benefited from community water fluoridation since 1948. This program has been beneficial to the oral health of the patients we serve. Like many of Wisconsin's larger cities, Madison has a wealth of diversity in educational and socioeconomic status. Thus, all of our residents - regardless of background - benefit from community water fluoridation every time they turn on the tap. In 2014, the Madison Water Utility Board recognized the overwhelming efficacy, safety and cost-effectiveness of community water fluoridation and voted to continue this program for the future.

TESTIMONIAL

A high-speed photograph of a water splash, showing a large, dynamic splash in the foreground and several smaller droplets suspended in the air above it. The water is clear and blue, set against a light blue background.

COMMUNITY WATER FLUORIDATION BENEFITS

FAST FACTS

01



Is tooth decay still a problem in Wisconsin?

Yes. In Wisconsin more than half (53 percent) of children have experienced tooth decay by the time they reach third grade.³¹

02



Is community water fluoridation still effective?

Yes. Even today, with other available sources of fluoride, community water fluoridation reduces tooth decay by about 25 percent over a person's lifetime.³² Community water fluoridation is the only source that reaches all members of a community regardless of their age, income level or insurance status.

03



Does community water fluoridation save money?

Yes, an analysis found that community water fluoridation saved Wisconsin residents more than \$6.1 million in 2011 by reducing the need for fillings, crowns or other costly procedures.³³

STATE OF ORAL HEALTH IN WISCONSIN

The implications of poor oral health can affect a person's overall health and well-being. Tooth decay can affect basic functions like eating, talking and sleeping. If left untreated, tooth decay can cause pain and lead to tooth loss, resulting in increased school absences and reduced productivity.³⁴ In rare instances, untreated tooth decay can even lead to death. This is exactly what happened in 2007 when a 12-year-old Maryland boy named Deamonte Driver died after bacteria from an abscessed tooth spread to his brain.³⁵

While Wisconsin has made significant progress in improving the oral health of Wisconsinites, untreated tooth decay continues to be a key health concern for the state affecting all populations.³⁶ The Wisconsin Department of Health Services Oral Health Program collects basic screening survey data across the life span. Among Wisconsin Head Start children ages three to five, 26 percent have untreated tooth decay and among third grade children in the state, over 18 percent have untreated decay.³⁷⁻³⁸ In Wisconsin, 15 percent of adults ages 21-74 have untreated tooth decay and 42 percent of older adults living in nursing homes have untreated decay.³⁹

The best approach to preventing tooth decay in Wisconsin is to use evidence-based prevention strategies like community water fluoridation (CWF). In fact, the Community Preventive Services Task Force recognizes CWF as an effective intervention to reduce tooth decay.

The Community Preventive Services Task Force recommends CWF based on strong evidence of effectiveness in reducing tooth decay across the population. Evidence shows the prevalence of tooth decay is substantially lower in communities with CWF.⁴⁰



COMMUNITY WATER FLUORIDATION IS EFFECTIVE

Community water fluoridation (CWF) has proven to be effective in lowering a person's risk of tooth decay. Many years of research and thousands of studies show that CWF is effective at reducing the prevalence and severity of tooth decay in both children and adults. CWF is a public health measure that is a cost effective way for communities to ensure all residents receive the lifelong benefits that fluoridated water provides.⁴¹

Today, water is one of several sources of fluoride Americans have access to; others include toothpaste, supplements and mouth rinses. CWF is the only source of fluoride that reaches all members of a community regardless of their age, income level or insurance status. Most importantly, recent research confirms the need for teeth to be exposed to fluoride steadily over the course of a day — the kind of exposure provided by fluoridated water. As the Centers for Disease Control and Prevention (CDC) explains:

"Water fluoridation prevents tooth decay mainly by providing teeth with frequent contact with low levels of fluoride throughout each day and throughout life. Even today, with other available sources of fluoride, studies show that water fluoridation reduces tooth decay by about 25 percent over a person's lifetime."⁴²

WHAT CAN HAPPEN AFTER COMMUNITY WATER FLUORIDATION STOPS?

A study conducted in Antigo, Wisconsin illustrates what can happen after CWF stops. Antigo, Wisconsin began CWF in June 1949, and ceased adding fluoride in November 1960.⁴³ After five and a half years without adequate fluoride, second grade children had 200 percent more decay, fourth graders 70 percent more and sixth graders 91 percent more than those of the same age groups in 1960. Residents of Antigo re-instituted fluoridation in October 1965, on the basis of the severe deterioration of their children's oral health. The Antigo example shows the rate of tooth decay would undoubtedly be higher without CWF and similar studies have been done across the country and throughout the world showing that CWF reduces tooth decay.⁴⁴ Most recently, a 2002 systematic review published in the American Journal of Preventive Medicine also demonstrated a rise in tooth decay rates when fluoride was removed from a public water system. The article was co-authored by the CDC's Barbara Gooch, and they examined a group of studies and concluded that ceasing CWF would raise tooth decay rates by 17.9 percent.⁴⁵ Thus, even despite access to other sources of fluoride, CWF continues to reduce tooth decay.

LEADING HEALTH ORGANIZATIONS ENDORSE FLUORIDATION'S EFFECTIVENESS

Below are comments from just a few of the more than 100 organizations that endorse fluoridation's effectiveness.

American Academy of Family Physicians

*"The American Academy of Family Physicians supports fluoridation of public water supplies as a safe, economical and effective method to prevent dental caries [tooth decay]."*⁴⁶

American Academy of Pediatrics:

*"Water fluoridation is a cost-effective means of preventing dental tooth decay, with the lifetime cost per person equaling less than the cost of one dental restoration [filling]. In short, fluoridated water is the cheapest and most effective way to deliver antitooth decay benefits to communities."*⁴⁷

American Dental Association:

*"Studies conducted throughout the past 65 years have consistently shown that fluoridation of community water supplies is safe and effective in preventing dental decay in both children and adults. Simply by drinking water, children and adults can benefit from fluoridation's cavity protection whether they are at home, work or school."*⁴⁸

American Public Health Association

*"Recommends that federal, state and local agencies and organizations in the United States promote water fluoridation as the foundation for better health."*⁴⁹

American Water Works Association:

*"The goal of community water fluoridation is to achieve the desired oral health benefit while minimizing potential health risks. That is why water providers undergo thorough and extensive training to safely apply fluoride in the amount recommended by the world's most respected public health authorities."*⁵⁰

Centers for Disease Control and Prevention (CDC):

*"The CDC named the "fluoridation of drinking water" as one of "10 great public health achievements" of the 20th century."*⁵¹

Institute of Medicine

*"Community water fluoridation is credited with significantly reducing caries incidence in the United States, and it was recognized as one of the 10 great public health achievements of the 20th century. Evidence continues to show that community water fluoridation is effective, safe, and inexpensive, and is associated with significant cost savings."*⁵²

World Health Organization

*"People of all ages, including the elderly, benefit from community water fluoridation. Fluoridation of water supplies, where possible, is the most effective public health measure for the prevention of dental decay. The consensus among dental experts is that fluoridation is the single most important intervention to reduce dental caries, not least because water is an essential part of the diet for everyone in the community, regardless of their motivation to maintain oral hygiene or their willingness to attend or pay for dental treatment."*⁵³



Fluoridation saved
Wisconsin residents
more than \$6.1 million
in 2011.

COMMUNITY WATER FLUORIDATION SAVES MONEY

Community water fluoridation (CWF) is a cost-effective health measure for preventing tooth decay. A cost-effectiveness analysis compares the costs and health effects of an intervention to assess the extent to which it can be regarded as providing value for the money.⁵⁴ The cost of CWF depends on the size of the community and the amount of fluoride that needs to be added to the water supply to maintain the optimal level. In one study, the median cost per person per year ranged from \$2.70 among public water systems serving less than 5,000 people to \$0.40 among systems serving greater than or equal to 20,000 people.⁵⁵

CWF may save families money who would otherwise pay for more frequent fillings and other dental treatments. The estimated return on investment for CWF (including productivity losses) ranged from \$4 in small communities of 5,000 people or less, to \$27 in large communities of 200,000 people or more.⁵⁶ In fact, Delta Dental of Wisconsin, a not-for-profit dental service corporation, compared claims data from Delta Dental of Wisconsin members residing in communities with and without CWF. They estimate fluoridation saved Wisconsin residents more than \$6.1 million in 2011 by reducing the need for fillings, crowns or other costly procedures.⁵⁷

In addition, CWF saves money for taxpayers through Medicaid cost savings. Multiple studies have found a cost savings of around \$24 per child, per year in Medicaid costs because of the tooth decay that was prevented by CWF.⁵⁸ Wisconsin has over 430,000 children with Medicaid/BadgerCare+ coverage.⁵⁹ If similar cost saving per child are seen in Wisconsin, and approximately 90 percent of children have access to fluoridated water, then taxpayers are saving an estimated \$9 million per year.



Kelley Moran, MPH, RDH

Director, Dental Hygiene Program

Nicolet Area Technical College

I witnessed the benefits of community water fluoridation on a daily basis, as the director of a dental hygiene program, which provides community oral health outreach activities, and as a former public health dental hygienist, who served as the program coordinator for a multi-county school-based oral health program for many years. The majority of children and families we serve through our county programs have well water in their homes or live in non-fluoridated communities. During our programs, we are able to determine where a child or community member lives based on the presence of treated or untreated tooth decay.

On a personal level, my brother and I were fortunate to be raised in a fluoridated community. Water was our primary beverage growing up; soda and juice were scarce and expensive, not good economical choices for our family. We did not have dental insurance and went to the dentist whenever my parents could afford it. My brother and I fully experienced the benefits of fluoridated community water while growing up and as a result, have had limited restorative dental needs.

TESTIMONIAL

A close-up photograph of a hand pouring water from a glass bottle into a tall glass filled with ice and a lemon slice. The glass sits on a dark wooden surface, and two more lemon slices are visible nearby. The background is blurred, showing more of the wooden surface and some foliage.

SUPPORTERS OF COMMUNITY WATER FLUORIDATION

FAST FACTS

01



Are there organizations that support community water fluoridation?

Yes, more than 100 national and international health, service and professional organizations support community water fluoridation, such as the Centers for Disease Control and Prevention.⁶⁰

02



Do leading health organizations in Wisconsin support community water fluoridation?

Yes, organizations such as the Wisconsin Dental Association, Children's Hospital of Wisconsin and the Wisconsin Department of Health Services support community water fluoridation as a public health measure to improve oral health.

NATIONAL SUPPORTERS

The Centers for Disease Control and Prevention (CDC) has recognized community water fluoridation (CWF) as one of the 10 greatest public health achievements of the 20th century.⁶¹ The CDC's mission is to protect America from health, safety and security threats. To accomplish its mission, the CDC conducts scientific research and provides critical health information, including the safety and effectiveness of CWF.⁶² In fact, the CDC states, "For many years, panels of experts from different health and scientific fields have provided strong evidence that CWF is safe and effective."⁶³

Along with the CDC, all major United States (U.S.) health organizations, such as the American Academy of Pediatrics, the American Dental Association, the American Medical Association, the American Public Health Association, the American Water Works Association and The U.S. Surgeon General give strong endorsements to CWF.

**DEPARTMENT OF HEALTH & HUMAN SERVICES**

Public Health Service

Centers for Disease Control
and Prevention (CDC)
Atlanta, GA 30341-3724

April 2, 2015

**STATEMENT ON THE EVIDENCE SUPPORTING THE SAFETY AND EFFECTIVENESS OF COMMUNITY
WATER FLUORIDATION**

On behalf of the Centers for Disease Control and Prevention (CDC), I am pleased to provide a statement on the evidence regarding the safety and benefits of community water fluoridation. For the record, this statement is not testimony for or against any specific legislative proposal.

Good oral health is an important part of good overall health and an essential part of our everyday lives. Diet, sleep, psychological status, social interaction, school, and work are all affected by impaired oral health. Over the past several decades, there have been major improvements in the nation's oral health that have benefitted most Americans.¹

However, profound disparities in oral health status remain for some population subgroups, such as the poor, the elderly, and many members of racial and ethnic minority groups.¹ Tooth decay is one of the most common chronic diseases among American children with 1 of 4 children living below the federal poverty level experiencing untreated tooth decay.² Untreated decay can cause pain, school absences, difficulty concentrating, and poor appearance—all contributing to decreased quality of life and ability to succeed.³

Tooth decay and its complications are preventable, and several preventive and early treatment options are safe, effective, and economical. The CDC leads national efforts to improve oral health by using proven strategies such as community water fluoridation and school-based dental sealant programs that prevent oral diseases.

An Effective Intervention

Community water fluoridation is "the controlled addition of a fluoride compound to a public water supply to achieve a concentration optimal for dental caries prevention."¹ The process of adding fluoride to public water systems in the United States began in 1945 in Grand Rapids, Michigan. Soon after, dramatic declines in dental caries were noted among school children in Grand Rapids compared with school children from surrounding areas. Since then, community water fluoridation has been adopted by communities across the country, providing the cornerstone of caries prevention in the United States.¹ In 2012, more than 210 million people, or 74.6% of the U.S. population served by public water supplies, drank water with optimal fluoride levels to prevent tooth decay.⁴

Water fluoridation is beneficial for reducing and controlling tooth decay and promoting oral health across the lifespan. Evidence shows that water fluoridation prevents tooth decay by providing frequent and consistent contact with low levels of fluoride, ultimately reducing tooth decay by 25% in children and adults.⁵⁻⁸ Additional evidence shows that schoolchildren living in communities

where water is fluoridated have, on average, 2.25 fewer decayed teeth compared to similar children not living in fluoridated communities.⁹

The safety and benefits of fluoride are well documented and have been reviewed comprehensively by several scientific and public health organizations. The U.S. Public Health Service; the United Kingdom's National Institute for Health Research, Centre for Reviews and Dissemination, at the University of York; and the National Health and Medical Research Council, Australia have all conducted scientific reviews by expert panels and concluded that community water fluoridation is a safe and effective way to promote good oral health and prevent decay.¹⁰⁻¹² The U.S. Community Preventive Services Task Force, on the basis of systematic reviews of scientific literature, issued a strong recommendation in 2001 and again in 2013, for community water fluoridation for the prevention and control of tooth decay.^{9,13}

A Cost-saving Intervention

Although other fluoride-containing products such as toothpaste, mouth rinses, and dietary supplements are available and contribute to the prevention and control of dental caries, community water fluoridation has been identified as the most cost-effective method of delivering fluoride to all members of the community regardless of age, educational attainment, or income level.^{14,15} Analyses have also shown that water fluoridation provides additional benefits across the lifespan beyond what is gained from using other fluoride-containing products.^{8,11,16}

By preventing tooth decay, community water fluoridation has been shown to save money, both for families and the health care system.^{7,17} The return on investment (ROI) for community water fluoridation varies with size of the community, increasing as community size increases, but, as noted by the U.S. Community Preventive Services Task Force, community water fluoridation is cost-saving even for small communities.^{17,18} The estimated annual ROI for community water fluoridation, excluding productivity losses, ranged from \$5.03 in small communities of 5,000 people or less, to \$31.88 in large communities of 20,000 or more people.⁷ The estimated ROI for community water fluoridation including productivity losses was \$6.71 in small communities and \$42.57 in large communities.¹⁹

A study of a community water fluoridation program in Colorado used an economic model to compare the program costs associated with community water fluoridation with treatment savings achieved through reduced tooth decay. The analysis, which included 172 public water systems, each serving populations of 1,000 individuals or more, found that 1 year of exposure to fluoridated water yielded an average savings of \$60 per person when the lifetime costs of maintaining a restoration were included.²⁰ Analyses of Medicaid claims data in 3 other states (Louisiana, New York, and Texas), have also found that children living in fluoridated communities have lower caries related treatment costs than do similar children living in non-fluoridated communities; the difference in annual per child treatment costs ranged from \$28 to \$67.²¹⁻²³

A Safe Intervention

Expert panels consisting of scientists from the United States and other countries, with expertise in various health and scientific disciplines, have considered the available evidence in peer-reviewed literature and have not found convincing scientific evidence linking community water fluoridation with any potential adverse health effect or systemic disorder such as an increased risk for cancer,

Down syndrome, heart disease, osteoporosis and bone fracture, immune disorders, low intelligence, renal disorders, Alzheimer disease, or allergic reactions.^{9,11}

Documented risks of community water fluoridation are limited to dental fluorosis, a change in dental enamel that is cosmetic in its most common form. Changes range from barely visible lacy white markings in milder cases to pitting of the teeth in the rare, severe form. In the United States, most dental fluorosis seen today is of the mildest form, affecting neither aesthetics nor dental function.²⁴ Fluorosis can occur when young children—typically less than 8 years of age, whose permanent teeth are still forming under the gums—take in fluoride from any source.^{9,11}

Conclusion

In the seminal report, *Oral Health in America: A Report of the Surgeon General*, Surgeon General David Satcher observed a “‘silent epidemic’ of dental and oral diseases [...] with those suffering the most found among the poor of all ages.”¹ The report affirms that community water fluoridation is “an inexpensive means of improving oral health that benefits all residents of a community, young and old, rich and poor alike.” Because of its contribution to the dramatic decline in tooth decay over the past 70 years, CDC named community water fluoridation 1 of 10 great public health achievements of the 20th century.¹⁴

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The Wisconsin DHS
supports Community
Water Fluoridation as a
public health measure.

STATE SUPPORTERS

The Wisconsin Department of Health Services (DHS) supports community water fluoridation (CWF) as a public health measure, providing protection against tooth decay for all populations.⁶⁴ The mission of DHS is to protect and promote the health and safety of the people of Wisconsin.⁶⁵

Along with the DHS, other Wisconsin health organizations that support CWF include the Wisconsin Chapter of the American Academy of Pediatrics, the Wisconsin Oral Health Coalition, the Wisconsin Public Health Association, the Wisconsin Dental Hygienists' Association, Wisconsin Primary Health Care Association, Children's Hospital of Wisconsin and the Wisconsin Dental Association. This is just a sample of the many Wisconsin health organizations that support CWF.



WEIGHING SUPPORT FOR COMMUNITY WATER FLUORIDATION IN WISCONSIN

100+

national and international health, service and professional organizations join these and other Wisconsin groups in recognizing the public health benefits of community water fluoridation in preventing dental decay.

Few organizations oppose fluoridation after reviewing 70+ years of scientific research and public health experience.





POSITION STATEMENTS

Many local, state and national organizations have developed position statements in support of community water fluoridation (CWF). Below are a few examples.

There is value in having your own position statement before opposition arises. Having a statement in place lets community members know your organization/group is committed to the health of their community. See the Take Action section for a template of a resolution drafted for use by an organization/governmental entity committed to supporting CWF.

American Academy of Family Physicians

<http://www.aafp.org/about/policies/all/fluoride.html>

American Academy of Pediatrics

<https://www.aap.org/en-us/about-the-aap/aap-press-room/pages/aap-recommends-fluoride-to-prevent-dental-caries.aspx?nfstatus=401&nftoken=00000000-0000-0000-0000-000000000000&nfstatusdescription=ERROR:+No+local+token>

American Dental Association

<http://www.ada.org/en/about-the-ada/ada-positions-policies-and-statements/american-dental-association-supports-fluoridation>

American Dental Hygienists' Association

http://www.adha.org/resources-docs/7614_Policy_Manual.pdf

American Water Works Association

<http://www.awwa.org/about-us/policy-statements/policy-statement/articleid/202/fluoridation-of-public-water-supplies.aspx>

Public Health Madison & Dane County

<http://www.publichealthmdc.com/documents/fluoridationpublicdrinkingwater.pdf>

Wisconsin Oral Health Coalition

<http://www.chawisconsin.org/documents/OH3resolution207.pdf>

Wisconsin Public Health Association

http://c.yimcdn.com/sites/www.wpha.org/resource/resmgr/Docs/Community_Water_Fluoridation.pdf

Visit www.tapintohealthyteeth.org for more examples.



Pradeep Bhagavatula, BDS, MPH, MS

Assistant Professor, Department of Clinical Services

Marquette University School of Dentistry

Over 70 years of research and scrutiny attest to the safety and efficacy of community water fluoridation (CWF) in preventing tooth decay. The ease of delivering fluoride to everyone in the community at a very low cost, and its effectiveness in preventing decay among all the members in a community, regardless of age and income level, are CWF's greatest strengths. Several studies across various states have found that dental treatment costs for tooth decay are lower in fluoridated than non-fluoridated communities.

Research studies have also reported that people with lower access to regular dental care receive greater benefit from CWF than their affluent peers. Hence, people living in communities such as inner-city Milwaukee benefit greatly just by drinking fluoridated tap water.

TESTIMONIAL

A close-up, high-speed photograph of water being poured from a glass. The water is captured mid-pour, creating a dynamic, splashing effect. The background is a soft, out-of-focus blue and white, suggesting a bright, airy environment. A green rectangular banner is overlaid on the upper portion of the image, containing the text.

AN INFORMED DECISION

FAST FACTS

01



How should you respond when a patient, friend or neighbor shares a concern about fluoridation?

Listen carefully and instead of reacting with frustration, validate the concern without validating the conclusion. See the fast facts throughout the toolkit for examples of positive messaging.

02



How do organized groups raise concerns about fluoridation?

They tend to circulate false or misleading claims, use questions to create fear, and misrepresent the conclusions of valid research and the position statements of governmental and health organizations.

03



In Wisconsin, where is the decision to fluoridate determined?

The decision to fluoridate is determined at the local level. Connect with community leaders, who value your knowledge and expertise, to educate them on the benefits of community water fluoridation.

HISTORY OF THE ANTI-FLUORIDATION MOVEMENT

Opponents of community water fluoridation (CWF) continue to disagree on the safety and effectiveness of CWF and whether CWF is a legitimate function of government. The debate over CWF goes back roughly 70 years to when communities began fluoridating water in the 1940s to prevent tooth decay.⁶⁶ In the 1950-60s, some opponents of CWF suggested that CWF was “socialized medicine,” a communist plot to undermine public health.⁶⁷ In recent years, however, opponents blame CWF for a long list of health concerns, often relying on faulty scientific arguments, disguised as evidence-based research.⁶⁸ Critics of CWF also take advantage of influences such as distrust of government, environmental concerns and fears of additives or contaminants in food and water.⁶⁹ The opponents of CWF make a lot of different claims. Instead of countering each claim made by the opposition, focus on the safety, effectiveness and dental benefits of CWF. See the Take Action section for effective communication tips.

RECOGNIZE DIFFERENT VIEWS

It is important not to view everyone who publicly expresses concerns about fluoride as having the same motivation or commitment. Some of these critics have made up their minds that fluoridated water is “poison” and are not open to explanations, data or research. Yet many people who send an email to local officials or show up to share their concerns at a community meeting are repeating what they have read online or heard from a friend or neighbor. Many of them have not had the time to explore the allegations about fluoride to confirm their accuracy. The people in this latter group are often open to new information or clarifications if they are offered in a respectful manner.

Health professionals should listen closely when a patient, friend or neighbor shares a concern about fluoride. Instead of reacting with frustration—“How could you believe a crazy claim like that?”—dentists, hygienists, nurses and physicians should listen carefully and take a different approach to responding.



Health professionals can validate the concern without validating the conclusion. For example:

- “I’m a parent too, so I can imagine your reaction when you read that claim about fluoride and children’s IQ scores. But I’ve looked into that claim, and I can share what we know about it ...”
- “Yeah, that concerned me too when I first read it. Then I looked at the actual study on which that assertion is based, and I found that the website distorted the study’s conclusions ...”

Keep in mind that by raising a concern like this, a patient or neighbor is demonstrating a basic level of trust in you. If they did not think you had helpful knowledge to share, they probably would not have even brought it up. Do not write them off as firm “opponents.” If they feel their concern is dismissed out of hand, they are more likely to embrace that concern. Talking with them can help strengthen and restore their confidence that fluoridation is a smart, safe way to protect teeth.

Despite the vast amount of scientific evidence that demonstrates the safety and effectiveness of water fluoridation, opposition to community water fluoridation persists. The opposition has had success in delaying the adoption of CWF in some communities, and even caused others to stop this beneficial public health measure, depriving tens of thousands of citizens optimal oral health and putting a heavy financial burden on the community’s health care resources.⁷⁰ Most opposition to CWF comes from a small number of very active people. Many times, local leaders receive emails and letters from opponents that are not from the local area.

It is imperative that public health decisions be based on credible scientific facts. While the internet makes access to information easily accessible, it also makes it difficult to identify reliable sources. This information highway has expanded the ability for those that are opposed to fluoridation to share their message. Often opinions are stated as facts and appear credible. It is not uncommon for a well-intentioned person to come across this information and begin to question the benefits of water fluoridation.

There are some organized groups that are opposed to water fluoridation. These activists tend to circulate false or misleading claims about fluoridation by leaving out critical facts, misrepresenting the conclusions of valid research, using questions to create fear, and misrepresenting the positions of governmental and health organizations. According to the Institute for Science in Medicine, several of the leading voices in the anti-fluoride movement have expressed radical views that place them at odds with the scientific and medical community.⁷¹

One of the main organizations opposed to water fluoridation is the Fluoride Action Network (FAN). Many people do not realize FAN's role in water fluoridation opposition. FAN has developed a marketing strategy that includes a well-designed website, use of social media and promotion of a book written by their leader, Paul Connett.

Over the years, hundreds of objections to water fluoridation have been made. According to the American Council on Science and Health, “historically, anti-fluoride activists have claimed, with no evidence, that fluoridation causes everything from cancer to mental disease.” More than 3,200 studies or reports have been published on the subject of fluoridation. Even after all this research, the best that opponents can do is claim that fluoride “could” cause or “may” cause one harm or another. They cannot go beyond speculating because the evidence does not back up their fears.⁷²

The value of water fluoridation is generally accepted by most Americans.⁷³ A 2010 national poll by the Pew Charitable Trusts showed that a majority of Americans support water fluoridation in the United States. Overcoming the misinformation promoted by the opponents to fluoridation is a challenge that will require the involvement of many individuals and organizations.

FLUORIDATION DECISION MAKERS IN WISCONSIN

In Wisconsin, the decision to fluoridate is determined at the local level. Unlike several other states, the State of Wisconsin does not mandate community water fluoridation (CWF). Instead, local officials can begin or discontinue CWF at their discretion, or by a referendum vote. Local leaders have a responsibility to make decisions for the greater public

Despite the vast amount
of scientific evidence
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fluoridation persists.

good. *Health in All Policies: A Guide for State and Local Governments* suggests all decision makers be informed about the health, equity and consequences of policy decisions and recommends the engagement of local public health agencies regarding health related policy decisions. Local officials are elected to make policy decisions on behalf of the entire community, typically making a referendum vote unnecessary. A referendum vote should be the last resort in communities with activity surrounding water fluoridation. For issues decided directly by voters via referendums; ballot wording, timing and monitoring public debates are all important factors.⁷⁴ As a local resident and professional in the community, city officials value your knowledge and expertise. It is, therefore, important to get involved at the local level and connect with local leaders.

AMERICA'S TRADITION OF HEALTH PROMOTION

In the United States (U.S.), we have a tradition of fortifying foods and beverages to protect human health. Water fluoridation is only one example. Milk contains added vitamin D, bread and cereals have folic acid, and iodine is commonly found in table salt. Fluoride is a mineral that is found in all natural water sources; however the level of fluoride in most water sources is too low to protect teeth from decay. That is why many communities choose to fortify their water with additional fluoride to reach the optimal level for reducing tooth decay.

Fluoridation has been thoroughly tested in the U.S. court system, and found to be a proper means of furthering public health and welfare.⁷⁵ In the 1955 case *Froncek v. City of Milwaukee*, the Wisconsin Supreme Court affirmed the ruling of a circuit court, which held that the city's community water fluoridation (CWF) resolution was a public health measure, bearing a real, substantial and reasonable relation to the health of the city.⁷⁶ The U.S. Supreme Court has denied review of CWF cases 13 times, citing that there was no unconstitutional invasion of religious freedom or other individual rights guaranteed by the First, Fifth or Fourteenth Amendments to the U.S. Constitution.⁷⁷

To find out if your local community has any CWF ordinances, visit the Fluoride Legislative User Information Database (FLUID) at Fluidlaw.org. FLUID is a comprehensive database containing legal decisions and current information on federal, state and local policies related to CWF.⁷⁸

EVALUATING RESEARCH QUALITY

When making decisions that could affect the public's health, it is imperative to use evidence-based findings and quality research. It is difficult for most people to do their own research. However, leading health organizations have experts that have the knowledge, expertise and formal training. In fact, they have done a comprehensive review of the research (over 3,000 studies) and determined that community water fluoridation (CWF) is safe and effective.

Community leaders have the responsibility to implement policies that benefit and protect their community. Consequently, community leaders need to ensure they are making decisions about public health issues based on respected scientific sources.⁷⁹ It is recommended that Wisconsin community leaders without this expertise rely on leading health organization experts and the Centers for Disease Control and Prevention (CDC) recommendations.

Opponents of CWF sometimes guise misinformation as objective research. This is disturbing to scholars and harmful to people who unknowingly use such information. Opponents tend to rely on flawed studies or ones that have not gone through peer review. In fact, they have created their own “journal” because their article quality does not make it through the typical review of mainstream peer reviewed scientific journals.⁸⁰ One example is an often used study to link fluoridated water and lower intelligent quotient (IQ) scores. The study was conducted in China, Mongolia and Iran, which have excessively high levels of fluoride in their water. The levels of fluoride in these countries were more than 10 times the level used to fluoridate water in the United States.⁸¹

Another example is the Malin & Till (2015) study, often used to claim that CWF causes higher rates of medically-diagnosed attention-deficit/ hyperactivity disorder (ADHD) in children.⁸² The quality of the Malin & Till evidence is poor with important methodological limitations. The authors’ assessment of the evidence-base is unbalanced, misleading and lacks citation of key studies.⁸³ The results of this study do not support the consistent findings of three scientific reviews, which report no proof of an association between optimal fluoride consumptions and ADHD.⁸⁴ Unfortunately, opponents in Wisconsin continue to quote and use this information to influence friends, family, neighbors and community leaders to remove fluoride.

Key decision makers charged with making decisions around CWF, such as local officials and health professionals, rely heavily on the recommendations of respected organizations that have analyzed the best available scientific research. The more rigorous a study’s research design, the more compelling the research evidence.⁸⁵ Researchers agree that there are a number of key elements that characterize good scientific research (See infographic on page 42). Such compelling evidence produced by good scientific research, in turn enables health professionals and local officials to determine whether or not a practice is beneficial and safe for the public. One example of a public health practice that has been implemented based on the overwhelming weight of credible scientific evidence is CWF. The body of knowledge on CWF’s safety and effectiveness includes the efforts of nationally recognized scientists. These scientists employ the scientific method, draw appropriate balanced conclusions and publish their findings in peer reviewed journals.

A Rough Guide to SPOTTING BAD SCIENCE

Being able to evaluate the evidence behind a scientific claim is important. Being able to recognise bad science reporting, or faults in scientific studies, is equally important. These 12 points will help you separate the science from the pseudoscience.

1. SENSATIONALISED HEADLINES

Aa

Article headlines are commonly designed to entice viewers into clicking on and reading the article. At times, they can over-simplify the findings of scientific research. At worst, they sensationalise and misrepresent them.

7. UNREPRESENTATIVE SAMPLES USED



In human trials, subjects are selected that are representative of a larger population. If the sample is different from the population as a whole, then the conclusions from the trial may be biased towards a particular outcome.

2. MISINTERPRETED RESULTS



News articles can distort or misinterpret the findings of research for the sake of a good story, whether intentionally or otherwise. If possible, try to read the original research, rather than relying on the article based on it for information.

8. NO CONTROL GROUP USED



In clinical trials, results from test subjects should be compared to a 'control group' not given the substance being tested. Groups should also be allocated randomly. In general experiments, a control test should be used where all variables are controlled.

3. CONFLICTS OF INTEREST



Many companies will employ scientists to carry out and publish research - whilst this doesn't necessarily invalidate the research, it should be analysed with this in mind. Research can also be misrepresented for personal or financial gain.

9. NO BLIND TESTING USED



To try and prevent bias, subjects should not know if they are in the test or the control group. In 'double blind' testing, even researchers don't know which group subjects are in until after testing. Note, blind testing isn't always feasible, or ethical.

4. CORRELATION & CAUSATION



Be wary of any confusion of correlation and causation. A correlation between variables doesn't always mean one causes the other. Global warming increased since the 1800s, and pirate numbers decreased, but lack of pirates doesn't cause global warming.

10. SELECTIVE REPORTING OF DATA



Also known as 'cherry picking', this involves selecting data from results which supports the conclusion of the research, whilst ignoring those that do not. If a research paper draws conclusions from a selection of its results, not all, it may be guilty of this.

5. UNSUPPORTED CONCLUSIONS



Speculation can often help to drive science forward. However, studies should be clear on the facts their study proves, and which conclusions are as yet unsupported ones. A statement framed by speculative language may require further evidence to confirm.

11. UNREPLICABLE RESULTS



Results should be replicable by independent research, and tested over a wide range of conditions (where possible) to ensure they are consistent. Extraordinary claims require extraordinary evidence - that is, much more than one independent study!

6. PROBLEMS WITH SAMPLE SIZE



In trials, the smaller a sample size, the lower the confidence in the results from that sample. Conclusions drawn can still be valid, and in some cases small samples are unavoidable, but larger samples often give more representative results.

12. NON-PEER REVIEWED MATERIAL



Peer review is an important part of the scientific process. Other scientists appraise and critique studies, before publication in a journal. Research that has not gone through this process is not as reputable, and may be flawed.



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THE FACTS SUPPORT COMMUNITY WATER FLUORIDATION

Opponents of community water fluoridation often make claims lacking relevant research. They often will skew information or data to support their view and gain support. It is critical that accurate scientific information be shared. This section highlights a few of the common claims used by opponents and the scientific evidence that refutes those claims. For those interested in delving into the science, review the sample of relevant research articles from fluoridescience.org, found at the end of some tabbed sections. These sections are separated by a box and the text is taken directly from fluoridescience.org. These narratives explain in technical terms why the studies often used by opponents of fluoridation lack solid evidence or use only partial findings to make their case.

Fluoridescience.org is a website developed by the Center for Fluoride Research Analysis (Center). The Center is an educational entity dedicated to communicating the quality of fluoride-related studies and is endorsed by the American Association of Public Health Dentistry. The Center utilizes graduate students and an expert committee of mentors with extensive research publication records to review the quality of research publications and other reports.

CANCER

The weight of scientific evidence does not provide adequate evidence for altering public health policy regarding water fluoridation because of cancer concerns. Even with the large amount of scientific evidence, claims continue to be made by opponents regarding a link between cancer and water fluoridation.⁸⁶

Over 50 epidemiological studies have found no association between fluoride and cancer, even after decades of exposure in some populations.⁸⁷ Multiple thorough systematic reviews conducted between 2000 and 2011 all concluded that based on the best available evidence, fluoride (at any level) could not be classified as carcinogenic in humans.⁸⁸ More recent studies, including a large and detailed study in the United Kingdom in 2014, have not changed this conclusion.⁸⁹

Opponents often cite a 2006 study when they raise the cancer issue, but they omit the fact that the author of this study called it “an exploratory analysis.” Instead of measuring the actual fluoride level in bone, this 2006 study relied on estimates of fluoride exposures that could not be confirmed, which undermines the reliability of the data.⁹⁰

The American Cancer Society (ACS) is a health organization focused specifically on cancer. In fact, ACS has worked for over 100 years to create a world with less cancer.⁹¹ In a document entitled, “Fluoride and Drinking Water Fluoridation,” the ACS states, “Scientific studies show no connection between cancer rates in humans and adding fluoride to drinking water.”⁹² The National Cancer Institutes's review of the available research also finds no association between fluoridated water and cancer.⁹³

Recent research has found no link between water fluoridation and cancer. In October 2011, California's Office of Environmental Health Hazard Assessment concluded that fluoride should not be classified as a cancer-causing substance. The expert panel reviewed the existing research and determined that no link exists between water fluoridation and cancer.

Similarly, a 2011 Harvard study found no link between fluoride and bone cancer. This study reviewed hundreds of bone samples, and the study's design was approved by the National Cancer Institute. The study is significant because the National Research Council reported that if there were any type of cancer that fluoride might possibly be linked to, it would probably be bone cancer (because fluoride is drawn to bones).⁹⁴ The fact that this Harvard study found no link to bone cancer strengthens confidence that fluoride is unlikely to cause any form of cancer.

The American Academy of Family Physicians, the Institute of Medicine and many other respected authorities support water fluoridation. The Centers for Disease Control and Prevention reports that, “panels of experts from different health and scientific fields have provided strong evidence that water fluoridation is safe and effective.”⁹⁵

CANCER: SAMPLE OF RELEVANT RESEARCH ARTICLES FROM FLUORIDESCIENCE.ORG⁹⁶

Kim FM, Hayes C, Williams PL et al. An assessment of bone fluoride and osteosarcoma. J Dent Res. 2011;90(10):1171-6.

The purpose of this study was to assess whether fluoride levels in bone were associated with osteosarcoma. A case-control design was used to compare bone fluoride levels in 137 subjects with primary osteosarcoma (cases) with 51 controls that had other malignant bone tumors. The median age of cases was 17.6 years old. The median age of controls was 41.3 years old. The gender distribution also differed with 53 percent of cases being male compared to 71 percent of controls. A subset of 32 cases was matched with controls based on gender and age. The study did not demonstrate an association between fluoride levels in bone and osteosarcoma. This was true even after adjusting for age and gender in the statistical analysis in the unmatched cases and controls.

The study provides assurance that fluoride exposure does not cause osteosarcoma. A limitation in the design is the small number of age-matched cases and controls. Since fluoride exposure over time may be related to bone fluoride accumulation, older subjects would have higher bone fluoride levels than younger subjects. When the age distribution is widely different in the two groups, statistical methods may be unable to adequately control for this. The small number of age-gender-matched cases may lack statistical power to show a difference. Fluoride measured in bone at time of diagnosis may not reflect fluoride exposure during tumor initiation.⁹⁷

Levy M, Leclerc BS. Fluoride in drinking water and osteosarcoma incidence rates in the continental United States among children and adolescents. Cancer Epidemiol. 2012;36(2):e83-8.

The authors conducted an ecological analysis using the cumulative osteosarcoma incidence rate data from the CDC Wonder database for 1999–2006, categorized by age group, sex, and states. States were categorized as low (30 percent) or high (85 percent) according to the percentage of the population receiving community water fluoridation (CWF) between 1992 and 2006. There was no statistical difference in the incidence rates between low and high fluoridation states.

The authors failed to confirm higher incidence rates of osteosarcoma among males in the 5 to 14 year age group, although incidence rates for males in the 15–19 year age group were significantly higher than for females. Also, there was no evidence of “peaking” in male incidence rates or risk ratio between ages 5 and 8 as reported in Bassin’s study described below.

The authors concluded that the water fluoridation status in the continental U.S. has no influence on osteosarcoma incidence rates during childhood and adolescence.⁹⁸

CANCER: SUMMARY OF RELEVANT RESEARCH ARTICLES FROM FLUORIDESCIENCE.ORG⁹⁹

Comber H, Deady S, Montgomery E, Gavin A. Drinking water fluoridation and osteosarcoma incidence on the island of Ireland. Cancer Causes Control. 2011;22:919–24.

The authors compared the incidence of osteosarcoma in Northern Ireland and the Republic of Ireland to examine if differences in incidence between the two regions could be related to their different drinking water fluoridation policies. While an estimated 70 percent of the population in the Republic of Ireland region receives fluoridated water, fluoridation is not implemented in Northern Ireland (NI). Data from the Northern Ireland Cancer Registry (NICR) and the National Cancer Registry of Ireland (NCRI) on osteosarcoma incidence in the respective populations were used to estimate the age standardized and age-specific incidence rates in areas with and without drinking water fluoridation. Osteosarcoma was rare and no significant differences were observed between fluoridated and non-fluoridated areas in either age-specific or age-standardized incidence rates of osteosarcoma. The authors concluded that this study did not support the hypothesis that osteosarcoma incidence in the island of Ireland is related to public water fluoridation.¹⁰⁰

Bassin EB, Wypij D, Davis RB, Mittleman MA. Age-specific fluoride exposure in drinking water and osteosarcoma (United States). Cancer Causes Control. 2006; 17:421–8.

The authors explored age-specific and gender-specific effects of fluoride levels in drinking water and the incidence of osteosarcoma using a matched case–control study design. The study was conducted in 11 hospitals in the United States and included a complete residential history for each patient and type of drinking water (public, private well, bottled) used at each address.

Their analysis, based on 103 cases under the age of 20 and 215 matched controls, showed an increased adjusted odds ratio for boys in the higher fluoride exposure group, reaching a peak of 5.46 (95 percent CI 1.50, 19.90) at age 7 years. This association was not apparent among girls.

The authors concluded that their exploratory analysis found an association between fluoride exposure in drinking water during childhood and the incidence of osteosarcoma among boys but not consistently among girls. The authors urged further research to confirm or refute this observation.¹⁰¹

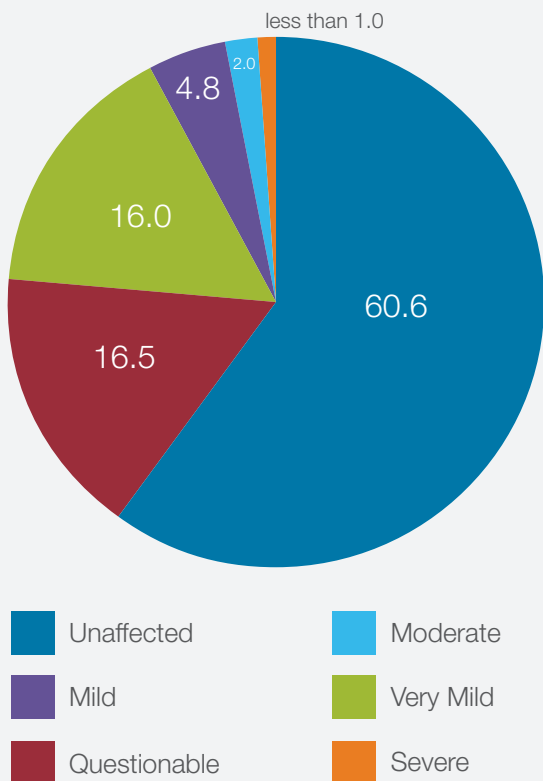
For more information on topic specific cancer research, visit <http://goo.gl/fyKv2C>.

DENTAL FLUOROSIS

Dental fluorosis is the change in appearance of tooth enamel, varying from barely noticeable white spots (mild fluorosis) to staining and pitting (severe fluorosis).¹⁰² Nearly all cases of fluorosis in the United States (U.S.) are mild with 21 percent of the population having mild to very mild fluorosis.¹⁰³ Only about two percent of the U.S. population aged 6-49 has moderate fluorosis and less than one percent has severe fluorosis.¹⁰⁴ Dental fluorosis can only occur when children under the age of eight consume an excessive amount of fluoride.¹⁰⁵ After tooth enamel is completely formed, dental fluorosis cannot develop, even if excessive fluoride is ingested. Mild to very mild fluorosis is usually so subtle that only a dentist or dental hygienist will notice the condition.¹⁰⁶ The majority of those who have the milder forms of dental fluorosis are unaware of this condition. Very mild to moderate fluorosis does not cause pain and it does not affect the health or function of the teeth.

Unfortunately, opponents try to get you to believe otherwise. They often post photos of people with severe dental fluorosis on their websites. These severe cases of fluorosis are not reflective of water fluoridation in the U.S. However, opponents use the photos to create fear and doubt and intentionally leave out information explaining that the photo they are showing is not representative of the majority of fluorosis found in the U.S.

PERCENT DISTRIBUTION OF DENTAL FLUOROSIS AMONG PERSONS AGED 6-49; UNITED STATES, 1999-2004



Notes: Dental Fluorosis is defined as having very mild, mild, moderate, or severe forms is based on Dean's Fluorosis Index. Percentages do not sum to 100 due to rounding. Source: DCD/NCHS, National Health and Nutrition Examination Survey, 1999-2004

According to the American Academy of Pediatrics, optimal exposure to fluoride is important to infants and children. Children who drink fluoridated water as their teeth grow will have stronger, more decay resistant teeth over their lifetime. A 2010 study confirmed that the fluoridated water consumed as a young child makes the loss of teeth less likely as a middle aged adult.¹⁰⁷

Dental fluorosis can occur among some people in all communities, even those that do not fluoridate their community water supply.¹⁰⁸ Experts believe that a key reason for fluorosis is that some young children swallow fluoride toothpaste. Toothpaste contains a concentration of fluoride that is roughly 1,000 times higher than the level in fluoridated water. This is why parents of children under the age of six are encouraged to supervise during brushing.

A study published in 2010 found that mild fluorosis was not an adverse health condition and that it might even have "favorable" effects on overall oral health.¹⁰⁹ The author of the study said there is no reason why parents should be advised not to use fluoridated water in infant formula. Water fluoridation gives children the best possible chance to grow up with healthy teeth.

If it occurs, fluorosis is usually very mild, invisible to the naked eye, and does not damage teeth. On the other hand, tooth decay is a disease which goes well beyond a cosmetic problem. Tooth decay causes pain, trauma and a significant financial burden. The benefits of fluoridation far outweigh any risks.

DENTAL FLUOROSIS: SAMPLE OF RELEVANT RESEARCH ARTICLES FROM FLUORIDESCIENCE.ORG¹¹⁰

Beltrán-Aguilar ED, Barker L, Dye BA. Prevalence and severity of dental fluorosis in the United States, 1999–2004. NCHS data brief, no 53. Hyattsville, MD: National Center for Health Statistics. 2010.

This report describes the prevalence of dental fluorosis in the United States and changes in the prevalence and severity of dental fluorosis among adolescents between 1986–1987 and 1999–2004. The authors analyzed data from the National Health and Nutrition Examination Survey, 1999–2004 and compared the findings with those of the earlier survey. The key findings are:

- Less than one-quarter of persons aged 6–49 in the United States had some form of dental fluorosis.
- Adolescents aged 12–15 had the highest prevalence of dental fluorosis (40.6 percent). The prevalence was lower among older age groups. The lowest prevalence was among those aged 40–49 (8.7 percent). The prevalence of dental fluorosis among children aged 6–11 (33.4 percent) was lower than the prevalence among those aged 12–15 (40.6 percent).
- Children aged 12–15 in 1999–2004 had higher prevalence of dental fluorosis compared with the same aged children in 1986–1987. In 1986–1987, 22.6 percent of adolescents aged 12–15 had dental fluorosis; whereas in 1999–2004, 40.7 percent of adolescents aged 12–15 had dental fluorosis. The estimates for severe alone were statistically unreliable. The prevalence of very mild fluorosis increased from 17.2 percent to 28.5 percent and mild fluorosis increased from 4.1 percent to 8.6 percent. The prevalence of moderate and severe fluorosis increased from 1.3 percent to 3.6 percent.¹¹¹

Levy SM, Broffitt B, Marshall TA, Eichenberger-Gilmore JM, Warren JJ. Associations between fluorosis of permanent incisors and fluoride intake from infant formula, other dietary sources and dentifrice during early childhood. J Am Dent Assoc. 2010;141(10):1190-1201.

The authors described associations between dental fluorosis and fluoride intakes, with an emphasis on intake from fluoride in infant formula.

The authors administered periodic questionnaires to parents to assess children's early fluoride intake sources from beverages, selected foods, dentifrice and supplements. They later assessed relationships between fluorosis of the permanent maxillary incisors and fluoride intake from beverages and other sources. The authors determined effects associated with fluoride in reconstituted powdered infant formulas, along with risks associated with intake of fluoride from dentifrice and other sources.

Considering only fluoride intake from ages 3 to 9 months, the authors found that participants with fluorosis on the permanent upper incisors (97 percent of which was mild) had significantly greater cumulative fluoride intake from reconstituted powdered infant formula and other beverages with added water than did those without such fluorosis. Considering only intake from ages 16 to 36 months, participants with fluorosis had significantly higher fluoride intake from water by itself and dentifrice than did those without fluorosis. In a model combining both the 3- to 9-months and 16- to 36-months age groups, the significant variables were fluoride intake from reconstituted powdered concentrate formula (by participants at ages 3-9 months), other beverages with added water (also by participants at ages 3-9 months), and dentifrice (by participants at ages 16-36 months).

The authors concluded that greater fluoride intake from reconstituted powdered formulas and other water-added beverages, when participants were age 3-9 months, increased fluorosis risk, as did higher dentifrice intake by participants when age 16 to 36 months. The authors recommended that prevalence of mild dental fluorosis could be reduced by avoiding ingestion of large quantities of fluoride from reconstituted powdered concentrate infant formula and fluoridated dentifrice.¹¹²

Hiroko I, Kumar JV. The association between enamel fluorosis and dental tooth decay in U.S. school children. J Am Dent Assoc. 2009;140:855-62.

The purpose of the study was to investigate the relationship between enamel fluorosis and dental tooth decay at the tooth level. The authors obtained data from a 1986-1987 oral health survey of U.S. school children to determine the prevalence of tooth decay and enamel fluorosis in 7-17 year olds with a history of a single residence. To focus their analysis at the tooth level, they selected the permanent maxillary right first molar as the index tooth.

The result of the investigation showed the mean decayed, missing and filled permanent tooth surfaces (DMFS) in children with enamel fluorosis to be consistently lower than those without enamel fluorosis. Molars without fluorosis had a higher count of DMFS and higher tooth decay prevalence than molars with fluorosis.

The investigators' conclusion was that policy makers should consider the tooth decay preventive benefits associated with milder forms of enamel fluorosis when making policy changes to reduce the degree of fluoride exposure.¹¹³

Levy SM. An update on fluorides and fluorosis. J Can Dent Assoc. 2003;69(5):286-91.

The author reviewed the literature regarding dental fluorosis, its definition, its appearance, its prevalence based on the pre- and post-eruptive use of fluoride. The aesthetic perceptions, and of fluoride levels in foods and beverages. The author also discussed the findings in an Iowa Fluoride Study, the goal of which was to assess the patterns of fluoride intake and dental fluorosis over time. He also summarized the recommendations of the U.S Center for Disease Control and Prevention for using fluoride to prevent and control dental tooth decay in the United States. He stated that the need to balance the benefits of the different modalities of fluoride use with the risk of fluorosis had made decisions concerning the recommendations for its use more complex.

The overriding points highlighted from these studies was that total fluoride intake was the true risk factor for fluorosis, in spite of the acknowledgment that the value was difficult to quantify. Therefore, documented risk factors for children where the beginnings of fluorosis are important, are fluoride in water, in infant formula reconstituted with fluoridated water, dentifrice, and fluoride supplements. For liquid formulas, soy-based formulas tended to be higher in fluoride content than milk-based formulas.

The author stated further that the optimum level of fluoride intake, though not known with certainty, was on an average 0.05 – 0.07 mg/kg of body weight. With sources of fluoride topically being professionally applied gels, varnishes, foams, and dentifrice, and systemic sources being water, certain juices, and supplements, the intake of fluoride could easily exceed the suggested optimum level. From the Iowa Fluoride Study, for example, it was found that about 25 percent of the children

were ingesting an estimated 0.8 mg of fluoride daily, and 10 percent were ingesting more than 1 mg daily based on the days assessments were conducted. Approximately 12 percent of the children had mild fluorosis of the primary teeth.

The author concluded with the recommendation that supplemental fluoride should be prescribed on sound information about the patient, most importantly whether the patient was at high risk for dental tooth decay. Otherwise, fluoridated water and dentifrice should remain the mainstays of fluoride delivery for all.¹¹⁴

Beltrán-Aguilar ED, Griffin SO, Lockwood SA. The prevalence and trends in enamel fluorosis in the United States from the 1930s to the 1980s. J Am Dent Assoc. 2002;133:157-65.

The purpose of this article was to describe the prevalence and severity of enamel fluorosis since the classic epidemiological studies of H. Trendly Dean were published (1930s). The authors selected a sample from a data set compiled by the National Institute for Dental Research (NIDR) in 1986-1987 of U.S school children, ages 12-14, living in a household served by the public water system during the child's first eight years of life. Comparison of the two studies showed an increase in prevalence of dental fluorosis in the 1986-1987 period over the 1930s. The prevalence of fluorosis varied by the type of water system. The highest prevalence was seen in children living in areas whose public water system was naturally fluoridated (4.0 ppm fluoride ions), followed by those living in optimally fluoridated areas (0.7-1.2 ppm fluoride ions). Fluorosis prevalence was lowest in children living in sub-optimally fluoridated areas (< 0.7ppm fluoride ions). The dental fluorosis prevalence rates in the order of highest to lowest were 38.7 percent, 25.8 percent and 15.5 percent. However, the greatest relative increase in the prevalence of fluorosis since the 1930s was observed in children living in areas with sub-optimal water fluoride levels (6.5 percent in 1930 to 15.5 percent in 1986-87). This suggests that other sources of fluoride apart from water fluoridation may have contributed to this increase.

The authors concluded by stating that the increase in the prevalence of fluorosis from the 1930s to the 1980s may be explained by the increased exposure of children to multiple sources of fluoride.¹¹⁵

Various scientific reviews provide compelling evidence that community water fluoridation (CWF) is a safe and effective method for reducing tooth decay. CWF does not cause central nervous system disorders, attention deficit disorders or lowered intelligence quotient (IQ) scores. There is no accepted scientific evidence of a causal relationship between optimally fluoridated water and neurological impairments.¹¹⁶ The average IQ score in America rose 15 points between the 1940s and 1990s.¹¹⁷ This is the same time period when fluoridation rapidly expanded in the U.S.¹¹⁸ A recent study from New Zealand, with CWF programs similar to the U.S., found no link between fluoridated water and low IQ scores. In 2014, New Zealand investigators compared the IQs of research participants who lived in fluoridated areas during the first five years of life to those who did not. The analysis of the study showed no differences in IQ between the two groups.¹¹⁹

Opponents often cite Harvard researchers when trying to explain fluoride and IQ.¹²⁰ What they are citing is a review of 27 studies conducted by Harvard researchers. The researchers reviewed 27 studies from countries such as China, Mongolia and Iran. None of these countries have fluoridation programs similar to the U.S. These 27 studies compared the IQ of children living in areas with high levels of fluoride in their water with those living with low levels of fluoride. The high fluoride areas had more than 10 times the level used to fluoridate the water in the U.S. Many factors, including parents' education and arsenic exposure can affect a child's IQ score. Yet none of these factors were ruled out by the studies. Most of the studies were conducted in China, which has nearly 20 million people living in areas at high risk of arsenic contamination in their drinking water. The Harvard researchers have said that each of the studies they reviewed had flaws that were "in some cases rather serious" and "limit the conclusions that can be drawn."

Opponents cite many "studies" that were poorly designed, gathered unreliable data and were not peer reviewed by independent scientists. The foreign studies that opponents cite involve fluoride levels that are at much higher levels than those used to fluoridate drinking water in the U.S.¹²¹ It is irresponsible to claim these studies have any real meaning for our situation in the U.S. British researchers have pointed out that lower IQ's could be traced to other factors, such as arsenic exposure, the burning of high-fluoride coal inside homes and the eating of contaminated grain.

INTELLIGENCE QUOTIENT: SAMPLE OF RELEVANT RESEARCH ARTICLES FROM FLUORIDESCENCE.ORG¹²²

Whitford GM, Whitford JL, Hobbs SH. Appetitive-based learning in rats: lack of effect of chronic exposure to fluoride. Neurotox Teratol. 2009;31:210-5.

The authors conducted a laboratory study using 32 female rats. These rats were provided with water containing different doses of fluoride (0, 2.9, 5.7, 11.5 mg/kg body weight/day) for eight months. These rats were tested for their ability to learn a response for food.

The authors observed that there was no evidence of learning deficits in any of the fluoride-exposed groups. Although not statistically significant, it was the non-fluoridated control group that took longer to reach criterion for acquiring the bar-press response ((0 fluoride 6.38 ± 0.38 days), (2.9mg/kg 5.75 ± 0.37 days), (5.7mg/kg 5.63 ± 0.46 days), (11.5mg/kg 5.63 ± 0.42)). The authors concluded that there were no significant differences among the groups in learning or performing the response. “Chronic ingestion of fluoride at levels up to 230 times more than that experienced by humans whose main source of fluoride is fluoridated water had no significant effect on appetitive-based learning.”¹²³

Wang SX, Wang ZH, Cheng XT, et al. Arsenic and fluoride exposure in drinking water: children's IQ and growth in Shanyin County, Shanxi Province, China. Environ Health Perspect. 2007;115(4):643-7.

The authors measured the intelligence quotient (IQ) in 720 school-age children, 8-12 years old, residing in rural villages in China. The study was conducted to determine the effect of high arsenic and high fluoride (190 ± 183 microgram/L As and 8.3 ± 1.9 mg/L F) on IQ. A control group of people receiving low arsenic and low fluoride (2 ± 3 micrograms/L As and 0.5 ± 0.2 mg F/L) was used as a comparison group. It should be noted that the level of fluoride in the control group is equivalent to a fluoridated community in the US. Hence, the study population in the high fluoride exposure is not representative of individuals drinking fluoridated water in the US. Also, the authors acknowledged the fact that the distribution of children's IQ is slightly skewed in the control group. The average IQ for the high fluoride group was 100.5, Standard Deviation(SD) ± 15.8 while the average IQ for the control group was 104.8, SD ± 14.7 . The average IQ of Chinese children was reported to be 103.5, SD ± 17.7 . Children exposed to high arsenic had an average IQ of 95.1, SD ± 16.6 .

The authors observed a significant effect of arsenic exposure on children's intelligence. The authors also expressed caution in interpreting the results of the study by acknowledging that children's intelligence, growth and development can be influenced by many factors such as inheritance, nutrition, geography, education and society. The authors stated that they could not rule out the effect of arsenic in the high fluoride group as they did not assess the exposure in a large proportion of children in the high fluoride group.¹²⁴

INTELLIGENCE QUOTIENT: SAMPLE OF RELEVANT RESEARCH ARTICLES FROM FLUORIDESCIENCE.ORG¹²⁵

Bazian Ltd. Independent critical appraisal of selected studies reporting an association between fluoride in drinking water and IQ: a report for South Central Strategic Health Authority. London, UK: Bazian Ltd; 2009 February 11.

According to this report, the studies reporting an association between high fluoride level and IQ were conducted in China, Mexico, Iran and India. These studies used cross-sectional or ecological methods to investigate whether high environmental exposure to fluoride or arsenic or low exposure to iodine was associated with lower IQ.

According to this independent report, the lack of a thorough consideration of confounding as a source of bias means that, from these studies alone, it is uncertain how far fluoride is responsible for any impairment in intellectual development seen. Bazian acknowledged that these confounding factors (parental education, socioeconomic measures and environmental exposures to other chemicals such as arsenic and iodine in water) could explain some or all of the impairment in IQ. The report also mentioned that sources of fluoride exposure that exist in China and India do not exist in the UK, for example, the burning of high fluoride coal and the practice of eating contaminated grain, which can substantially contribute to fluoride exposure.¹²⁶

Choi AL, Sun G, Zhang Y, Grandjean P. Developmental fluoride neurotoxicity: a systematic review and meta-analysis. Environmen Health Perspect. 2012 July 20. [Epub ahead of print].

The authors specifically evaluated by meta-analysis 27 epidemiological studies on the relationship between high fluoride exposure in drinking water and delayed neurobehavioral development in children in rural areas of China, including 2 studies from Iran. The studies cited were carried out from 1989 through 2011 and compared high and reference fluoride exposures. The outcome measured for the individual studies was general intelligence using The Combined Raven's Test - The Rural edition in China (CRT-RC) (16 of the studies), the Weschler Intelligence Tests (3 of the studies), Binet IQ Test (2 of the studies, more specifically the Chinese Binet and the Binet-Siman), Raven's Test (2 of the studies), Japan IQ Test (2 of the studies), the Chinese Comparative Intelligence Test (1 of the studies), and the Mental Work Capacity Index (1 of the studies). The children ranged in age overall from 4 (2 of the studies) to 16 years old, and were not analyzed based on gender, parental education or income. Statistical analyses of the data included finding standardized weighted mean differences of the accumulated scores using fixed-effects and random-effects models, determining the presence of heterogeneity, and performing sensitivity analyses on studies that used similar tests to measure the outcome. The authors found the suggestion of an inverse relationship between high fluoride exposure and children's intelligence. They could not derive an exposure limit because the actual exposures and possible routes of exposure of the individual children were unknown. In addition, they found that the reports were quite brief, that complete information on variables was not available, that each of the articles reviewed had deficiencies and in some, quite serious deficiencies, that there were limitations on methodology, all of which influenced the extent to which any firm conclusion could be drawn from the results. However, they nevertheless stated the following: "Although the studies were generally of insufficient quality, the consistency of their findings adds support to existing evidence of fluoride-associated cognitive deficits, and suggest that potential developmental neurotoxicity of fluoride should be a high research priority."¹²⁷

INFANT FORMULA

Fluoride strengthens infants teeth as they grow, making them more resistant to tooth decay. Getting the right amount of fluoride is critical for people of all ages, including infants. The right amount of fluoride reduces tooth decay by about 25 percent. Fluoride is incorporated into the developing enamel of childrens' teeth, which ultimately makes the enamel stronger and more resistant to tooth decay. The American Academy of Pediatrics recommends breast milk for all infants (except for the few for whom breastfeeding is determined to be harmful). Breast milk is very low in fluoride. Nursing mothers or pregnant women who drink fluoridated water do not pass on significant amounts of fluoride to their child. The American Academy of Pediatrics supports water fluoridation as a safe and effective way to prevent tooth decay.¹²⁸

Parents and caregivers should consult with their pediatrician or family physician on the most appropriate formula for their child. Parents that choose to feed formula to their infant, may have some questions about what type of water to use when mixing the formula. According to the American Dental Association and the Centers for Disease Control and Prevention (CDC), it is safe to mix infant formula with fluoridated water.¹²⁹⁻³⁰

Three types of infant formula are available in the United States powdered formula, which comes in bulk or single-serve packets, concentrated liquid, and ready-to-feed formula. Ready-to-feed formula contains little fluoride and does not cause dental fluorosis. Powdered and concentrated liquid formulas both must be mixed with water. The type of water used to mix the formula determines how much fluoride the infant is getting. According to the CDC, there may be an increased chance for mild dental fluorosis if formula is the child's main source of food and if the water used to mix the formula is fluoridated.¹³¹

It is important to balance the benefits of fluoride with the increased chance for mild dental fluorosis, which is faint, white specks on the teeth. These specks are usually so subtle that only a dental professional will notice the condition. It does not cause pain and does not affect the health or function of teeth. If parents are concerned about mild dental fluorosis and the baby is not eating or drinking anything else besides formula, they can choose to purchase ready-to-feed formula. Another option when mixing infant formula would be to alternate between using fluoridated tap water and low-fluoride bottled water labeled as de-ionized, purified, demineralized, or distilled, and without any fluoride added after purification treatment. The U.S. Food and Drug Administration (FDA) require the label to indicate when fluoride is added.

A 2010 study examined the issue of fluorosis and infant formula, and reached the conclusion that "no general recommendations to avoid use of fluoridated water in reconstituting infant formula are warranted."¹³² The researchers examined the condition's impact on children and concluded that "the effect of mild fluorosis was not adverse and could even be favorable."

INFANT FORMULA: SAMPLE OF RELEVANT RESEARCH ARTICLES FROM FLUORIDESCIENCE.ORG¹³³

Hujoel PP, Zina LG, Moimaz SAS, Cunha-Cruz J. Infant formula and enamel fluorosis: a systematic review. J Am Dent Assoc. 2009;140:841-54.

The authors conducted a systematic review of controlled studies regarding the risk of developing enamel fluorosis associated with use of infant formula.

After evaluating 969 potentially eligible published studies, the reviewers found that the authors of 17 of these 19 studies reported Odds Ratios (OR), and, among these, infant formula consumption was associated with a higher prevalence of enamel fluorosis in the permanent dentition (summary OR 1.8, 95 percent confidence interval [CI] 1.4–2.3). There was significant heterogeneity among studies (I² 66 percent) and evidence of publication bias ($P = .002$). A metaregression analysis indicated that the ORs associating infant formula with enamel fluorosis increased by five percent for each 0.1-part-per-million increase in the reported levels of fluoride in the water supply (OR 1.05, 95 percent CI 1.02–1.09). This suggests that infant formula consumption was associated with a higher prevalence of enamel fluorosis in the permanent dentition, more indicative of the level of the fluoride in the water supply.

The evidence that the fluoride in the infant formula caused enamel fluorosis was weak, as other mechanisms could explain the observed association.¹³⁴

*Levy SM, Broffitt B, Marshall TA, Eichenberger-Gillmore JM, Warren JJ. Associations between fluorosis of permanent incisors and fluoride intake from infant formula, other dietary sources and dentifrice during early childhood. J Am Dent Assoc. 2010;141(10):1190-1201.*¹³⁵

In this paper, the authors describe associations between dental fluorosis and fluoride intake based on a study conducted in Iowa.

The authors administered periodic questionnaires to parents to assess children's early fluoride intake sources from beverages, selected foods, dentifrice, and supplements. They later assessed relationships between fluorosis of the permanent maxillary incisors and fluoride intake from beverages and other sources.

Considering only fluoride intake from ages three to nine months, the authors found that participants with fluorosis (97 percent of which was mild) had significantly greater cumulative fluoride intake (AUC) from reconstituted powdered infant formula and other beverages with added water than did those without fluorosis.

Greater fluoride intakes from reconstituted powdered formulas (when participants were aged three to nine months) and other water-added beverages (when participants were aged three to nine months) increased fluorosis risk, as did higher dentifrice intake by participants when aged 16 to 36 months.¹³⁶

OTHER COMMON MYTHS

THYROID GLAND

Reviews of studies suggest there is no link between optimal fluoride levels and a change in size or function of the thyroid gland.¹³⁷ In fact, the American Thyroid Association's list of the major causes of hypothyroidism does not even include fluoride.¹³⁸ Studies have not found evidence of fluoride being linked to any disorders of the thyroid.¹³⁹⁻⁴⁰

Many major reviews of the relevant scientific literature around the world support this conclusion. Of particular importance are:

- An exhaustive review conducted in 1976 by an expert scientific committee of the Royal College of Physicians of England;
- A systematic review in 2000 by the NHS Centre for Reviews and Dissemination at the University of York; and,
- A 2002 review by an international group of experts for the International Programme on Chemical Safety, under the joint sponsorship of the World Health Organization, the United Nations Environment Programme, and the International Labour Organization.¹⁴¹

COMMUNITY WATER FLUORIDATION IN EUROPE

Fluoridated water is provided to 13 million Europeans, such as residents of Great Britain, Ireland and Spain.¹⁴² Other European countries such as France and Italy have a number of regions with natural levels of fluoride that are high enough to prevent tooth decay.¹⁴³ For some European countries, however, the infrastructure and terrain do not make it practical to engage in community water fluoridation (CWF). Switzerland is one example, and salt fluoridation reaches the majority of Swiss residents. Fluoridated salt, fluoridated milk and fluoride rinse programs are examples of the alternative ways in which nearly all European countries provide fluoride to their people.¹⁴⁴

The United States (U.S.) has used research and implemented strategies that improve population health. Water fluoridation is one example. Many nations have followed our lead. Although there are alternative options to water fluoridation, the World Health Organization states that “fluoridation of water supplies, where possible, is the most

When consuming water with fluoride in it, the low concentration of fluoride becomes incorporated in saliva, providing constant protection throughout the day and helping keep teeth strong.

effective public health measure for the prevention of dental decay.” In many parts of the world, fluoridation is not feasible or a high priority, usually due to the lack of a central water supply, the existence of more life threatening health needs or the lack of trained technical personnel or sufficient funds for implementation and maintenance costs.¹⁴⁵ However, in the U.S., CWF is the best option because it is cost effective, no compliance is required and it serves everyone.

TOOTHPASTE

Most toothpaste purchased today contains fluoride, as a result, some people question the need for getting fluoride from other sources, including fluoride in drinking water. According to the Centers for Disease Control and Prevention (CDC), both drinking water and toothpaste with fluoride provide important and complementary benefits.¹⁴⁶ Fluoride toothpaste contains a much higher concentration of fluoride (1000-1500 ppm) than optimally fluoridated water (0.7 ppm). The equivalent of mg/L when you measure fluoride in toothpaste is ppm. However, the fluoride from toothpaste only stays in the mouth for one to two hours after using toothpaste, leaving the teeth unprotected from acid attacks until toothpaste is used again.¹⁴⁷ Unfortunately, for many people, brushing with fluoride toothpaste is not enough to prevent tooth decay. When consuming water with fluoride in it, the low concentration of fluoride becomes incorporated in saliva, providing constant protection throughout the day and helping keep teeth strong. That low concentration of fluoride in saliva combined with the more concentrated fluoride in toothpaste work together to prevent more tooth decay than using either alone. Think of it this way: we are safest in our cars with seat belts and air bags, too.¹⁴⁸ Research on fluoridated water was carried out well before fluoride toothpaste became available and research has continued since fluoride toothpaste has been used broadly. The CDC reports that schoolchildren living in fluoridated communities on average have 2.25 fewer decayed teeth compared with similar children not living in fluoridated communities.¹⁴⁹ Many other studies show fluoridated water continues to protect against tooth decay. Here are a few examples:

- A study of communities in Illinois and Nebraska (1998) found that the tooth decay rate among children in the fluoridated town was 45 percent lower than the rate among kids in the non-fluoridated communities. This benefit occurred even though more than 94 percent of children in all of these communities were using fluoridated toothpaste.¹⁵⁰
- A New York study (2010) revealed that low-income children in less fluoridated counties needed 33 percent more fillings, root canals and extractions than those in counties where fluoridated water was common.¹⁵¹
- A study of Alaska children (2011) showed that kids living in non-fluoridated areas had a 32 percent higher rate of decayed, missing or filled teeth than kids in fluoridated communities.¹⁵²
- A Nevada study (2010) examined teenagers’ oral health and found that living in a community without fluoridated water was one of the top three factors associated with high rates of decay and other dental problems.¹⁵³



Frank Miller

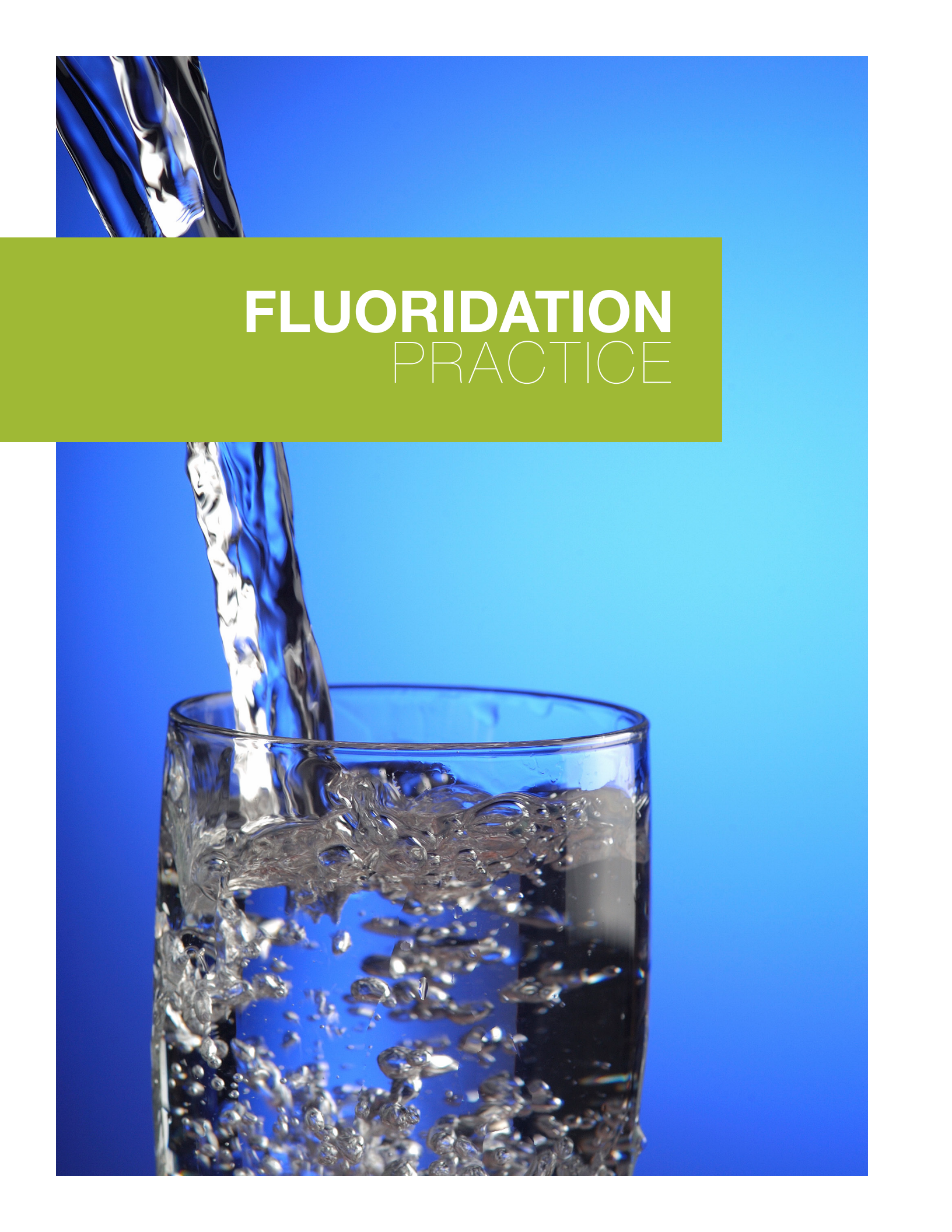
Superintendent

City of Cudahy Water Utility

The Cudahy Water Utility (Utility) feels it is important for public health to feed fluoride to the public drinking water supply and our plant operators feel it is important to feed the recommended levels in order to achieve the best health results for Cudahy. The Cudahy Board of Health has been consistent in its recommendation that the Utility add fluoride to the public water supply and the Utility Commission has always supported that recommendation.

By receiving the Centers for Disease Control and Prevention (CDC) Water Fluoridation Quality Award, the plant operators feel it shows their commitment to public health and to high quality plant operations. When looking for quality resources on fluoride, the plant staff utilizes information from the Wisconsin Department of Health Services, CDC and the American Dental Association.

TESTIMONIAL

A high-speed photograph of water being poured from a faucet into a clear glass. The water is captured mid-pour, creating a dynamic splash with many bubbles and ripples. The background is a solid, vibrant blue. A horizontal green bar is positioned across the upper middle of the image, containing the title text.

FLUORIDATION PRACTICE

FAST FACTS

01



Do most Wisconsin residents living on public water systems have access to the benefits of community water fluoridation?

Yes, in Wisconsin, over three million people, or about 90 percent of the population living on public water systems, have the advantages of fluoridated water.¹⁵⁴

02



In 2010, why was there a change in the recommended optimal fluoride level?

More recent studies show that cooler states do not consume less water per capita than warmer states.¹⁵² Moreover, Americans now have access to more sources of fluoride, such as toothpaste and mouth rinses, than they did when water fluoridation was first introduced in the United States (U.S.).¹⁵⁵

03



What role do water operators play?

Water operators are public health agents, preventing a tremendous amount of tooth decay by adjusting the fluoride concentration of fluoride deficient water supplies to reach the optimal level.

FLUORIDATION PRACTICE IN WISCONSIN

Community water fluoridation (CWF) is the process of adjusting the fluoride content that occurs naturally in a community's water to the best level for preventing tooth decay. Almost all water contains some naturally occurring fluoride, but usually at levels too low to prevent tooth decay.¹⁵⁶ Water operators play an important role in the public's health by ensuring safe water supplies. One component of this responsibility might be adjusting the fluoride concentration of fluoride-deficient water supplies to reach the optimal level. This responsibility plays an enormous role in improving the oral health of residents with access to fluoridated water. In the United States, nearly 75 percent of people on public water systems receive fluoridated water. In Wisconsin, over three million people, or almost 90 percent of the population living on public water systems, have the advantages of fluoridated water.

RECOMMENDED OPTIMAL FLUORIDE LEVELS

In 2015, the United States (U.S.) Public Health Service, a division of Department of Health and Human Services (HHS), updated the recommended optimal level from a range of 0.7 to 1.2 mg/L to a single level of 0.7 mg/L. For community water systems that add fluoride to their water, HHS recommends a fluoride concentration of 0.7 mg/L to maintain tooth decay prevention benefits.¹⁵⁷ While considering the final recommendation, HHS took into account current levels of tooth decay and dental fluorosis, the lack of geographical differences in water intake and the Environmental Protection Agency's new assessments of cumulative sources of fluoride exposure.¹⁵⁸ The optimal fluoride concentration of 0.7 mg/L provides the best balance of protection from tooth decay, while limiting the risk of dental fluorosis.¹⁵⁹ Both the 1962 Public Health Service recommendation and the current updated recommendation for fluoride concentration in community drinking water were set to achieve a reduction in tooth decay while minimizing the risk of dental fluorosis. Implementation of the new recommendation is expected to lead to a reduction of approximately 25 percent (range: 12 percent to 42 percent) in fluoride intake from drinking water alone and a reduction of approximately 14 percent (range: 5 percent to 29 percent) in total fluoride intake.¹⁶⁰



FLUORIDATION REGULATION

The Environmental Protection Agency's (EPA) mission is to protect human health and the environment.¹⁶¹ Under the Safe Drinking Water Act, the EPA sets standards for drinking water quality. The EPA is exclusively charged with regulating drinking water additives in the U.S. to ensure the safety of products added to water for its treatment. Because water fluoridation has been demonstrated as effective in reducing dental tooth decay, the United States Public Health Service, a division of the Department of Health and Human Services (HHS) provides recommendations regarding optimal fluoride concentrations in drinking water for community water systems.¹⁶² The mission of HHS is to enhance and protect the health and well-being of all Americans.¹⁶³ HHS manages programs that impact health, public health, and human services outcomes throughout the life span, especially for those who are least able to help themselves.¹⁶⁴ HHS has the responsibility for administering a wide variety of health and human services and conducting research for the nation. HHS has the largest source of funding for medical research in the world and has the ability to leverage health information and data to improve quality of care to drive innovative solutions to health, public health and human services challenges.

EPA's drinking water standard differs from the HHS recommended optimal fluoridation level because the two benchmarks have different purposes and are set under different authorities. The EPA's enforceable standard for the highest level of fluoride that is allowed in public water systems is 4.0 mg/L.¹⁶⁵ The standard is set to protect against possible health risks from exposure to too much fluoride. The HHS recommended level of 0.7 mg/L is set to promote public health benefits of fluoride for preventing tooth decay, while minimizing the chance for dental fluorosis.¹⁶⁶

WATER FLUORIDATION QUALITY AWARD

Each year, Wisconsin drinking water programs and professional associations related to the drinking water industry have quality award programs. Many water utilities strive to qualify for these awards. Earning these awards represents a high level of operator care and accomplishment. To recognize local drinking water programs providing a consistent level of fluoride in the water supply, the Centers for Disease Control and Prevention (CDC) recognizes public water systems that achieve optimal fluoridation levels with an annual Water Fluoridation Quality Award. For a water system to be eligible, its performance must be documented by the state in the Water Fluoridation Reporting System (WFRS).

The Wisconsin Oral Health Program reviews monthly operating data submitted to the Department of Natural Resources (DNR). The water systems are evaluated to identify those that meet strict standards for accuracy in water fluoride treatment, daily monitoring and reporting. The information from these reports is entered into WFRS and used to identify systems that qualify for the Water Fluoridation Quality Award. Once systems are identified, CDC issues the Water Fluoridation Quality Award. The annual award certificates are mailed to the Wisconsin Oral Health Program, who is responsible for distributing the award certificates to the recipient communities.

WATER FLUORIDATION QUALITY AWARD

Award criteria

Adequate daily samples:

- Sample required to be taken daily
- Must be optimally fluoridating for 12 months within a year
- 75 percent of daily samples must be in the recommended optimal operating range

Optimal fluoride concentration control range:

- Optimal fluoride concentration is 0.7 mg/L
- Monthly average is a minimum of 0.7 mg/L
- Lowest optimal concentration is 0.6 mg/L
- Highest optimal concentration is 0.8 mg/L

Adequate split samples:

- Monthly split sample must be submitted to Wisconsin State Laboratory of Hygiene (WSLH) 12 months out of the year
- Operator and lab split sample results must correlate
- Split +/- tolerance is 0.20 mg/L

To be eligible for the awards, all monthly data must be correctly entered into the DNR Electronic Monthly Operating Report by February 1 of each year.

A high-speed photograph of water droplets falling into a pool of water, creating ripples and splashes. The background is a solid blue color. A green rectangular overlay is positioned in the upper right quadrant, containing the text 'TAKE ACTION' in white.

TAKE
ACTION

WHY GET INVOLVED?

Some medical, dental, public health professionals, as well as community leaders, may not be familiar with the research on the public health benefits of community water fluoridation or may not feel comfortable educating others about these benefits. In Wisconsin, the decision to fluoridate is determined at the local level. Community leaders are concerned with both the well-being of their constituents and the financial situation of the community. Some may have concerns about CWF related to what they have heard from a concerned citizen or read online. Many of them may not have had the time to explore the potentially false allegations about fluoride made by community members.

As a local resident and professional in the community, city officials and community members value your knowledge and expertise. It is important to get involved at the local level and connect with community leaders to make them aware of the local, statewide and national support CWF has, along with the health benefits and cost savings. Community leaders are hearing about this topic from community members and often times they are misinformed. It is critical that accurate scientific information be shared. Many people are now turning to the internet for information and often struggle with identifying credible information. It is essential that the oral health workforce (health professionals, public health practitioners, and water operators & engineers) and other advocates provide accurate and reliable information to the community before they turn to the internet. Use the “Take Action” section to find resources that will help start the conversation about CWF in your community. [Pages 69 to 74](#) outline proactive strategies and [pages 75 to 85](#) will guide you to responding to a local concern.

COMMUNICATION STRATEGIES

Being up-to-date on community water fluoridation (CWF) science as well as having a keen awareness of strategies used by those opposed to CWF may seem daunting. The first step in taking action on CWF in your community is to educate yourself on communication strategies. Some community members and leaders may not be familiar with the topic and others may be relying on inaccurate information. A tactic often used by those opposed to CWF is to take words out of context. For example, while scientifically correct the word “chemical” can have a negative

It is essential that the oral health workforce (health professionals, public health practitioners, and water operators and engineers) and other advocates provide accurate and reliable information to the community before they turn to the internet.



connotation. Instead of using the term chemical, a better approach would be to point out that fluoride is a naturally occurring mineral found in almost all water supplies and adjusted to the right amount to prevent tooth decay.

Be prepared for other individuals and/or groups who want to turn the topic of CWF into a debate. When talking about CWF do not engage in a back and forth discussion. It perpetuates the myth that CWF is a debatable topic. There is no debate to be had. As demonstrated throughout this toolkit, the science and facts support CWF. To form comfortable, productive conversations about CWF use plain language, keep the message positive and simple, and acknowledge concerns.

BE PROACTIVE

Provide CWF education before it becomes a topic of concern in your community. Be proactive and start the conversation with community members and leaders to make them aware of the local, statewide and national support CWF has, along with the health benefits, and cost savings. While in the office or out in the community start brief conversations with patients, community members, other health professionals and community leaders about CWF. Educate as many people as possible. For example, parents and caregivers are especially concerned for the well-being of their children and want what is best for them. Talking with them and explaining the benefits of CWF can help strengthen their confidence that fluoridation is a smart, safe way to protect teeth. Visit <http://tapintohealthyteeth.org/health-professionals/#patient> for a parent and caregiver handout explaining the importance

and safety of fluoride in an easy to follow question and answer format. Leave handouts in your patient waiting rooms or office reception area so that patients and community members can leave with accurate information in hand. Infographics can be a useful tool for sharing information and data on CWF. An infographic uses images and minimal text to visually display information. See the “Weighing Support for Community Water Fluoridation in Wisconsin” infographic on pg. 33 of the Toolkit. Visit <http://tapintohealthyteeth.org/health-professionals/> for additional, free resources that can be printed and shared. Discuss with the local health officer the possibility of the local board of health having a position statement. If a position statement is already in place, you are immediately prepared to respond to questions from community leaders, patients, etc. See pg. 34 of the toolkit for more information on position statements.

USE PLAIN LANGUAGE

When talking about CWF it is important to use plain language and avoid clinical or complex engineering terms. For example, use the term cavities instead of caries and fillings instead of restorations. When talking about the fluoride added to public water systems, instead of using the term optimal level say “the right amount to benefit teeth.” Use the term additive instead of chemical. Visit <http://tapintohealthyteeth.org> for resources that offer tips for how to most effectively talk about CWF.

KEEP MESSAGE SIMPLE & POSITIVE

The benefits of CWF are proven through rigorous scientific study. Individuals and organizations opposed to CWF often frame CWF as a debatable topic and use fear and doubt to gain support. Rather than responding to this, keep your message about CWF simple and positive by focusing on the scientifically proven benefits and widespread support from all major health organizations. See the fast facts throughout the toolkit for examples of positive messaging.

ACKNOWLEDGE CONCERNS

Many people with concerns about CWF are repeating what they have read online or heard from a friend or neighbor. Some of them have not had the time to explore the allegations about fluoride to confirm their accuracy and others may not have the ability to critically review the information. Listen closely when a patient, community member, friend or neighbor shares a concern about fluoride. Acknowledging the concerns of others gives you an opportunity to share sound information. It is important to be attentive and to avoid using conversation stoppers. For example, try using the phrase “I understand your concerns and I had the same ones until I looked into the issues further.” This phrase can be used at any point in the conversation when concerns are raised. Visit the “Recognize Different Views” section on pg. 37 for other examples of how to validate the concern without validating the conclusion.

ELEVATOR SPEECHES

An elevator speech is a concise, yet convincing statement used to generate interest in a topic. The speech should last a short elevator ride, no longer than one minute. Having a prepared elevator speech on the topic of community water fluoridation (CWF) allows proponents of CWF to be ready at any time to succinctly state the benefits of CWF and its importance for the community. An elevator speech may be used when seeing a local leader or decision maker out in the community. It may also be used when talking to patients, clients or community members about the importance of CWF. See below for one minute messages developed by the Wisconsin Oral Health Coalition about the oral health benefits of optimally fluoridated water.

ELEVATOR SPEECH I:

Why drink fluoridated tap water? Fluoridated water has many oral health benefits. Throughout a person's life, fluoride helps prevent cavities and rebuilds damaged tooth enamel. Adolescents and adults benefit when fluoride in the water becomes part of their saliva. Small amounts of fluoride in the saliva help protect teeth from cavities all day long. When children's teeth are developing, fluoride from tap water protects the teeth as they are forming to make them stronger. Most brands of bottled water do not have the right amount of fluoride to protect teeth from decay. Only fluoridated tap water gives the full benefits of good oral health and is better for the environment, cheaper and easier to access than bottled water.

ELEVATOR SPEECH II

(Utilize if a community is considering ending CWF):

Community water fluoridation should be continued in [city/municipality]. Fluoridation reduces tooth decay by approximately 25 percent over a person's lifetime. By ending water fluoridation, [this city] will see an increase in tooth decay, especially among children. This will result in expensive dental treatment, including fillings, crowns and other costly procedures that could have been prevented. Opponents to fluoridation have misconceptions about the safety and efficacy of this practice. Research over the past 70 years confirms that fluoridation, as practiced in the United States, is safe and provides substantial oral health benefits to all members of the public. We have made so much progress in reducing tooth decay among our residents. Let us not turn back the clock by ending fluoridation. I support water fluoridation for the health and well-being of this community.

POSITION STATEMENTS

Developing a policy statement/position statement/resolution on community water fluoridation (CWF) is a way for organizations or groups to show their commitment to the health of their community. Any organization, whether you are a local board of health, medical office or even the local grocery store, can have a position statement. Having a statement in place lets community members know the organization/group supports proven strategies to improve public health and they are dedicated to strengthening their community. Once a position statement is in place, be sure to share it with the community. Utilize social media, place it on a website, send out a press release or distribute it with other mailings. For examples of CWF resolutions, see [pg. 34](#) of the toolkit or visit the Tap into Healthy Teeth website at: <http://tapintohealthyteeth.org/helpful-links/>.

SOCIAL MEDIA

Utilizing social media networks can be an effective tool to promote the safety, effectiveness and cost-saving benefits of community water fluoridation (CWF). Social media is an increasingly popular and fast method of sharing information with a wide audience. In fact, the Centers for Disease Control and Prevention (CDC) states, *“Using social media tools has become an effective way to expand reach, foster engagement and increase access to credible, science-based health messages.”*¹⁶⁹ As social media has become increasingly popular, it is often where people turn to seek out information, including information on health related topics. This trend requires integrating social media into how we educate and communicate messages about CWF. There is especially one organization opposed to CWF that utilizes social media very effectively to communicate with the public. Traditional methods of communication (print materials, etc.) are still effective for some audiences, but in order to ensure accurate information and resources are available to the general public, trusted health professionals need to share information via various social media outlets. Presenting information in various formats will expand the reach of key messages and ultimately, help improve the availability of reliable and trusted content.

One way to share information is to use your existing website and simply provide links to CWF information. This ensures that visitors to your website are directed to credible sources of information. We recommend these websites:

- <http://tapintohealthyteeth.org/>
- <http://ilikemyteeth.org/>
- <http://www.cdc.gov/fluoridation/>

Badges or buttons, which are small web graphics or images created specifically for organizations to post on their websites, direct visitors to additional information. This is another option for sharing CWF information that requires little resources. Many national partners offer these as a way to share information, promote activities and increase awareness. Using badges or buttons allows viewers to see a visually appealing picture that when clicked, takes them directly to the information. To add a button or badge to your website, social networking profile or blog, simply copy and paste the code assigned to the image. There are several websites that offer specific code to embed a button on your website.

Widgets, offered by some well-respected health organizations, allow you to display featured content directly on your web page, blog or social network profile. The content can easily be embedded in your website. Once the widget has been added to your website, there is no technical maintenance required as the organization that created the widget updates the content automatically. Visit <http://tapintohealthyteeth.org/helpful-links/> to see examples of a button from the CDC and a widget from the Campaign for Dental Health.

Social networking sites are online communities used by millions of people to interact with family, friends and acquaintances. They offer a way to engage with other users, share content and learn. Some examples of popular social networking sites include Facebook, LinkedIn and Twitter. Using these sites may allow you to reach a wider audience. It is important to consider your overall communication strategies and objectives prior to launching one of these sites. Other considerations include who will write posts that engage the audience, how frequently information will be communicated, and how you will encourage the audience to share and cross-promote your posts. One example of a social media campaign is Fluoride Fridays, from the Wisconsin Dental Association (WDA). They use Facebook and Twitter to educate the oral health community and general public about the science behind CWF. An alternative option to creating your own campaign would be to follow the WDA and other organizations that support CWF and routinely “like,” “share” and “retweet” what they have posted.

The CDC has developed *The Health Communicator's Social Media Toolkit* for a beginner audience, designed to provide guidance and share lessons on using social media. Visit *The Health Communicator's Social Media Toolkit*, at <http://www.cdc.gov/socialmedia/tools/guidelines/socialmediatoolkit.html>. Here you will find more detailed information on social media tools, buttons and badges, RSS feeds, Podcasts, online video sharing, eCards, content syndication, image sharing, blogs, etc.

Use the fast facts throughout the toolkit for examples of positive messaging to share through social media. Also, see the examples of social media messages developed by Children's Dental Health Project (below).

SOCIAL MEDIA MESSAGES

OVERALL MESSAGES

Learn why @CDCgov named water fluoridation one of "10 great public health achievements" <http://1.usa.gov/1gl6SLY> #factsfavorfluoridation

#Fluoride toothpaste helps prevent tooth decay, but fluoridated water adds more protection <http://bit.ly/1n7ilWM> #factsfavorfluoridation

A toast to healthier teeth: 3/4 of Americans on public water systems get fluoridated water <http://bit.ly/1HSPbWo> #factsfavorfluoridation

FLUORIDATION IS SAFE AND EFFECTIVE

After reviewing 161 studies, expert panel found that #factsfavorfluoridation <http://bit.ly/OiIYLf> #fluoride

Studies prove that adults also benefit from drinking fluoridated water <http://bit.ly/15MXLqV> #factsfavorfluoridation #fluoride

British study links hospital visits for severe tooth decay to lack of water fluoridation <http://bit.ly/ZSxgxD> #factsfavorfluoridation

IT'S INEXPENSIVE AND SAVES MONEY

@CDCgov: Fluoridation is "least expensive way" for all ppl in a city to get fluoride's benefits <http://1.usa.gov/1j28kdd> #factsfavorfluoridation

Is water fluoridation expensive or not? Learn more at <http://bit.ly/1vYwDPs> #factsfavorfluoridation #fluoride

These messages were prepared by the Children's Dental Health Project.

For more social media messages visit:

<http://www.ilikemyteeth.org/wp-content/uploads/2015/01/Social-Media-Kit-70-Years-of-CWF.pdf>

ADDRESSING COMMUNITY WATER FLUORIDATION CONCERNS?

1. Gather Information

- a. Connect with community leaders (local health officer, city leaders, water operator, etc.) to share what you know and learn more about the concern.
 - i. Use the Community Assessment Worksheet (pg. 76) to track information.

2. Develop a Plan

- a. Contact the Wisconsin Oral Health Coalition at <http://tapintohealthyteeth.org/contact/> for support coordinating efforts to address community water fluoridation (CWF) activity.
- b. Reach out to local health professionals and community members to attend meetings and/or write letters of support or make phone calls to community leaders.

3. Take Action

- a. Coordinate local efforts. Track what activity each person or organization has committed to doing.
- b. Send a letter of support to decision makers. See pg. 83 for guidance on letters of support.
- c. If the topic of CWF is on a public meeting agenda:
 - i. Draft testimony and have someone review it to ensure a strong, clear message that focuses on the values of the community. See below for guidance on public testimony.
 - ii. Provide resources to those who will be attending a meeting or contacting community leaders. Visit <http://tapintohealthyteeth.org> for CWF resources.
 - iii. Ensure local advocates have a copy of the meeting agenda and the time/location prior to the meeting.

4. Monitor

- a. Monitor community news and council agendas to remain informed of future activity

PUBLIC TESTIMONY

Providing public testimony is an effective way to help decision makers understand how an issue or policy affects the community. As a local resident and a professional in the community, city officials respect your knowledge and expertise. Providing testimony at a public meeting is a valuable way to connect with community leaders and make them aware of the support community water fluoridation (CWF) has, along with educating them about the health benefits and cost savings. When providing public testimony at a community meeting make sure you have all of the meeting details in advance. Not all meetings are created equal, different communities and groups (city council, water utility, etc.) may have varying formats. Gather as much information as you can in advance of the meeting. To help you prepare for providing public testimony, utilize the community assessment worksheet (pg. 76), reference the Communication Strategies section (pg. 69), and review the sample testimony (pg. 77) developed by the Campaign for Dental Health for a health professional (dentist, dental hygienist, physician, nurse, etc.) speaking in support of CWF at a city council or local board meeting.

COMMUNITY ASSESSMENT WORKSHEET

Does my community currently fluoridate their public water supply?

☐ Yes

☐ No

If yes, are they considering discontinuing CWF?

☐ Yes

☐ No

If they are considering discontinuing CWF, what is the primary reason?

☐ Health Concerns

☐ Financial Concerns

☐ Other

Other Comments:

What entity or individual in this community is the decision-maker re: CWF?

Who is leading the effort to discontinue CWF in the community?

Is a meeting planned to discuss CWF in the community?

☐ Yes

☐ No

If yes, please note the following details:

Meeting Date _____ Meeting Location _____

Who is the convening body?

☐ City Council

☐ Water Utility

☐ Other

Other Comments:

Is the public allowed to attend?

☐ Yes

☐ No

If yes, is the public allowed to present information or provide comment?

☐ Yes

☐ No

If yes, what are the details (how long can you speak, do you need permission to be on the agenda or can you show up the day of to speak, can you present a PowerPoint, etc.)?

Will a vote be taken on CWF at this meeting?

☐ Yes

☐ No



Remarks to a City Council or Local Board

Health Professional Version

(+/- 5 minutes, 40 seconds)

NOTE: This version is written for a health professional (dentist, dental hygienist, physician, nurse, etc.). **Read these remarks carefully to ensure that all of the details are appropriate for you and your community.**

Consider adding or deleting a few sentences to help make these remarks more closely reflect your views. Consider adding a personal story, but keep it as brief as possible. Be sure to deliver these remarks a couple of times and time yourself while speaking these remarks aloud. Your city council or other local body will probably have a time limit on remarks from the public, so make sure you keep your remarks within that limit. Be sure to stress certain phrases and to insert pauses when appropriate to draw attention to the key points. Don't speak in a hurry.

George Washington defeated the British, but he couldn't defeat tooth decay. By the time he took office as our nation's first president, Washington had lost all but one of his teeth. He suffered from frequent toothaches, and he wore dentures that made it difficult for him to eat. It was nearly 150 years after George Washington's death before American researchers discovered a successful way to protect teeth from decay. *It's called fluoride.* And it's been a part of American life for 70 years.

But before I talk about fluoride, let's consider what's at stake. As a [dentist/nurse/pediatrician/etc.] in our community, I can tell you that children today have much less tooth decay than they had 40 or 50 years ago. Still, tooth decay is the most common chronic childhood disease — even more common than asthma. By the way, you heard

me right: tooth decay is *a disease*. It's not like a cold or a flu, which often goes away with time and bed rest. Like other diseases, tooth decay gets progressively worse unless it is treated. Of course, the *best* approach is to prevent it from happening in the first place.

Within the past 5 years, studies have shown that children with dental problems are more likely to miss school and are more likely to earn below-average grades in school. But this isn't just about kids.

Adults will find it much harder to get a good job if they show up at an interview with unhealthy or missing teeth. In other words, the consequences of poor dental health can easily move *right from their mouths to their wallets*.

Now, for the good news. We have learned a lot about how to prevent cavities over the past 70 years. We've learned that protecting teeth is a lot like protecting passengers in cars. Sure — seatbelts are great, but should we do without airbags in cars? Should we drive without speed limits? It takes a multi-layered approach to protect passengers in a car, and it takes a multi-layered approach to protect teeth in a mouth.

Brushing with fluoride toothpaste is important. And so is eating a healthy diet by limiting sugar and carbohydrates. But fluoridated water is a *crucial part* of the approach to prevent cavities.

Don't take my word for it. Simply look at the research. Thousands of studies demonstrate the benefits and safety of fluoridated water. A number of those studies have been conducted within the past 5 years. For example, a Nevada study found that living in a community *without* fluoridated water was one of the three highest risk factors for dental problems. And a New York study compared low-income children in counties where fluoridation was prevalent with counties where it wasn't. The number of fillings, extractions and other dental treatments was *33% higher* for children in the less fluoridated counties.

The evidence is so strong that *all* leading health and medical organizations recommend fluoridation. The Centers for Disease Control and Prevention — the CDC — endorses fluoridation. So does a long line of U.S. Surgeons General, regardless of the party of the president who appointed them. Fluoridation supporters include the American Academy of Pediatrics, the American Dental Association and the American Medical Association. [Mention your own affiliation/membership in these organizations, if appropriate.]

The list of supporters is very long. *In fact, there is no major, national medical or scientific organization that opposes it.*

Perhaps I could see someone questioning the safety or effectiveness of fluoridation if this were a brand-new idea. *But it isn't.* For 70 years, fluoridation has been used safely and effectively to reduce tooth decay. This made-in-America approach has been so successful that tens of millions of people are using it around the globe — in countries like Britain, Spain, Canada, Brazil, Ireland, Australia and Singapore.

Let's not kid ourselves. Ending water fluoridation would invite more tooth decay into our community where it would create more pain and more shame. Why on earth would we do such a thing?

I know you all have seen or heard a variety of claims made about fluoride. If you look into those claims, most of them can be traced back to a handful of websites. They look reputable, but if you scratch beneath the surface, you learn how unreliable and inaccurate they are.

I want to point out that 3 common claims opponents make have been examined by PolitiFact, an independent, non-partisan fact-checker. It found that all 3 of these claims were false or misleading.

Is fluoride safe? *You bet it is.* I say that not only as a [dentist, nurse, pediatrician, etc.], but as a father of two children. These days, parents like me have a lot of things to worry about, but I can say with confidence that fluoride is not one of them. If you all voted to end fluoridation, *that* would truly be something to worry about. Ending fluoridation would impose a hidden tax on many parents because they would need to make up for this missing source of fluoride by purchasing fluoride supplements for their kids and many more would have to pay the cost of the increased amount of dental care their children would require.

Most communities in the U.S. fluoridate their drinking water. They respect and follow the science. They value health and wellness. Ending fluoridation could portray our community as backward and behind the times. What effect could this have on local businesses? How could this change the way our community is viewed or perceived by others around the state? I'm proud of our community, and I would hate to see that happen.

Don't deprive the children and adults in this community of fluoridated water — something we know is safe and effective.

Please preserve fluoridation, a “Made-in-America” practice that has improved health all across our country. Thank you.

[Or consider using the following text as your closing paragraph:]

Council members have an important decision to make. Will you stand with the most respected health and medical organizations? I certainly hope so. Fluoridation has made such a big difference in reducing dental problems. I support it, and I sure hope you will support it too. Thank you.

#

LETTER OF SUPPORT

A letter of support lets decision makers know where you stand. As a local resident and a professional in the community, city officials respect your knowledge and expertise. Writing a letter of support for community water fluoridation (CWF) can help to increase support in your community and educate decision makers on the health benefits and cost savings of CWF. A well-crafted letter of support should be polite, use available facts and data, and concisely explain why you care about the issue. When a rollback attempt is occurring, the time window is often short and you want to prepare your letter as soon as possible. When sending letters of support key points to consider are:

- When should I send my letter of support?
 - o Ideally, after learning more about how to respond and what to say. The Wisconsin Oral Health Coalition (WOHC) can provide support; connect with the WOHC at <http://tapintohealthyteeth.org/contact/>.
 - o After having someone review the letter to ensure a strong, clear message that focuses on the values of the community.
 - o Several days in advance of an upcoming meeting so the recipient(s) have time to review.
- Who should I send my letter of support to?
 - o The group or individual who makes decisions related to CWF in the community. This could be a city council, water utility board, etc.
 - o Other groups or individuals working to educate the community on CWF. For example, the health officer or local board of health.
- What additional resources should I provide with my letter?
 - o Resources to address any specific concerns about CWF.
 - o Resources targeted to the audience of your letter.
 - o Visit <http://tapintohealthyteeth.org> for attachments or fact sheets to include with your letter.

See the example letter on [pg. 84](#) developed by the WOHC for an organization or individual wishing to support CWF, when addressing a city council or local board. Consider personalizing this letter of support by adding or deleting a few sentences. Contact the WOHC at <http://tapintohealthyteeth.org/contact/> for an editable document.

LETTER OF SUPPORT

(Date)

(Inside Address)

Dear *(Name)*:

Having healthy teeth is a significant factor in determining whether children in our/this community are able to eat, sleep, speak and learn. It's a key factor in whether the adults in our/this community can interview successfully for good-paying jobs.

Community water fluoridation helps to protect teeth from decay for people of all ages. It has been proclaimed by the Centers for Disease Control and Prevention (CDC) as one of 10 great public health achievements of the 20th century. According to the best available scientific evidence, community water fluoridation is safe, effective and economical in preventing tooth decay. Our community should maintain water fluoridation so that our residents continue receiving these decay-preventing benefits.

Community water fluoridation saves money. On an individual basis, the lifetime, per-person cost of community water fluoridation is less than the cost of one dental filling. The estimated return on investment for community water fluoridation (*including productivity losses*) ranged from \$4 in small communities of 5,000 people or less, to \$27 in large communities of 200,000 people or more. The benefits from water fluoridation build on those from fluoride in toothpaste. Fluoride toothpaste alone is insufficient, which is why pediatricians and dentists often prescribe fluoride tablets to children living in non-fluoridated areas. Simply by drinking water, people can benefit from water fluoridation's cavity protection, regardless of age, education, race or socio-economic status.

As a *(dentist, pediatrician, public health administrator, parent, citizen)*, my first concern is the health of my *(patients/family/community members)*. Discontinuing community water fluoridation may reduce expenses for the city in the short term. However, it will inevitably lead to higher dental costs for community members, as individuals and families pay for tooth fillings, extractions and emergency room services. We cannot afford to end community water fluoridation.

The bottom line is that community water fluoridation remains the single most effective public health measure to prevent tooth decay. That is why organizations such as the American Dental Association, Centers for Disease Control and Prevention, American Academy of Pediatrics, and the Wisconsin Department of Health Services, along with more than 100 major health and medical organizations recognize the public health benefits of community water fluoridation. Additional information regarding community water fluoridation is available from ilikemyteeth.org.

On behalf of my *(community, patients, family)*, I support community water fluoridation and I encourage *(name of community)* to continue this valuable prevention program for the benefit of all residents.

Sincerely,

(Your name, title)

SUBJECT MATTER EXPERTS

The Wisconsin Oral Health Coalition (WOHC) is here to support you in your efforts related to community water fluoridation (CWF). We can answer questions about CWF, provide resources, connect you to local CWF leaders that can offer assistance and educational opportunities, provide evidence-based science to support the safety and effectiveness of CWF, and provide support if you are working to promote CWF in your community. Connect with the WOHC at <http://tapintohealthyteeth.org/contact/>.

For more information on the public health benefits of CWF, you may contact the State of Wisconsin Oral Health Program at <https://www.dhs.wisconsin.gov/oral-health/contacts.htm>.

FOR MORE INFORMATION:

For more information on the oral health benefits of community water fluoridation (CWF), visit: <http://tapintohealthyteeth.org>. We encourage you to link to our website and to share it with patients and community members, as an accurate and easy-to-use tool to get timely information on CWF.

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2025 Water Operating Budget

Revenues

Intergovernmental Charges for Services	0
Intergovernmental Revenue	1,000,000
Miscellaneous Revenue	128,000
Public Charges for Services	12,899,565
Other Financing Sources	3,810,000
Total Revenues	17,837,565

Expenses

Personnel Services	1,973,712
Contractual Services	1,949,150
Operating Expenses	1,261,100
Chemicals/Building Materials	2,291,050
Fixed Charges	254,100
Debt Service	4,045,127
Capital Outlay	4,130,000
Other Financing Uses	1,590,000
Total Expenses	17,494,239

Net	343,326
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2025 Water Capital Budget

	Total	Operations	Debt Proceeds	ARPA	TID Financing
Cherry Street, W Wausau Ave to Randolph St	760,000		760,000		
W Randolph St, Burek Ave to Merrill Ave	950,000		950,000		
Fulton St N 1st Street to N 7th Street	550,000		550,000		
1st St/ River Dr, McIndoe St to 300' N of Fultor	90,000		90,000		
2nd Street, Short Street to Dekalb St	200,000		200,000		
Downtown Mall Redevelopment	50,000				50,000
SCADA Equipment	360,000			360,000	
Elm Booster Station	60,000	60,000			
Reservoir Interior and Exterior Coatings	310,000	310,000			
Meter Replacement	800,000			800,000	
Total	4,130,000	370,000	2,550,000	1,160,000	50,000

WATER BUDGET

Row Labels	Sum of Prior Year Actuals	Sum of Adopted Budget	Sum of 2025 Budget Request	Sum of Budget Change	Sum of Percentage Change
43691 State Grant			(1,000,000)	(1,000,000)	
46416 Wastewater Unmetered Sales	-	-	(8,000)	(8,000)	
46420 Wastewater Sample Analysis	-	-	(8,000)	(8,000)	
46426 Wastewater Clean Up	(23,386)	-	(24,000)	(24,000)	
46450 Water Revenues	(105,862)	-	(63,000)	(63,000)	
46451 Water Metered Residential Sales	(4,327,662)	(5,747,000)	(5,743,300)	3,700	-0.06%
46452 Water Metered Commercial Sales	(1,268,426)	(1,534,600)	(1,735,760)	(201,160)	13.11%
46453 Water Metered Industrial Sales	(1,144,250)	(1,388,000)	(1,790,400)	(402,400)	28.99%
46454 Water Metered Public Authority Sales	(445,744)	(408,000)	(436,200)	(28,200)	6.91%
46455 Water Metered Multifamily Residential Sales	(511,663)	(653,000)	(723,300)	(70,300)	10.77%
46456 Water Metered Irrigation Sales	(720,102)	(494,000)	(228,200)	265,800	-53.81%
46457 Water Bulk Sales	(10,199)	(12,500)	(38,700)	(26,200)	209.60%
46458 Water Private Fire Protection Service	(175,086)	(196,000)	(178,400)	17,600	-8.98%
46459 Water Public Fire Protection Service	(1,335,671)	(1,664,000)	(1,781,200)	(117,200)	7.04%
46461 Water Ground Water Recovery	(9,753)	-	(9,000)	(9,000)	
46462 Water Interdepartmental Sales	(12,140)	-	(3,300)	(3,300)	
46463 Water Late Payment Charges	(50,542)	(94,000)	(90,500)	3,500	-3.72%
46464 Water Rents from Property	-	(54,000)	-	54,000	-100.00%
46465 Return on Net Investment in Meters Charged to Sewer Department	(48,344)	(34,000)	-	34,000	-100.00%
46466 Water Inspection Services	(3,093)	-	(5,000)	(5,000)	
46468 Water Cross Connection Income	(1,158)	(4,000)	-	4,000	-100.00%
46469 Water Sale of Scrap Income	(6,820)	(10,000)	(25,000)	(15,000)	150.00%
46470 Water Turn on Charges Income	-	(4,000)	-	4,000	-100.00%
46471 Water Construction Meter Rental and Haulers Income	(846)	-	(1,250)	(1,250)	
46473 Water Private Well Permits	(1,300)	(2,000)	-	2,000	-100.00%
46477 Water Rain Barrel Sales	(1,300)	-	(1,055)	(1,055)	
46478 Rents from Water Property	-	-	(6,000)	(6,000)	
48110 Interest Income	(461,717)	(15,000)	(78,000)	(63,000)	420.00%
48120 Unrealized Gain(Loss) on Investments	(86,207)	-	-	-	
48130 Interest on Special Assessment	(87)	-	-	-	
48440 Recoveries Damage to Other Property	(4,395)	-	-	-	
48900 Other Miscellaneous Revenues	(8,541)	-	(50,000)	(50,000)	
49110 Proceeds from Bonds	(3,160,115)	(500,000)	(2,550,000)	(2,050,000)	410.00%
49120 Proceeds from Notes	(17,550,000)	-	-	-	
49300 Capital Contributions	(1,189,852)	-	(1,260,000)	(1,260,000)	
Total Revenue	(32,664,262)	(12,814,100)	(17,837,565)	(5,023,465)	
51111 Salaries and Wages	1,116,865	1,489,821	1,331,842	(157,979)	-10.60%
51120 Overtime	29,360	105,920	53,506	(52,414)	-49.48%
51140 Shift Differential	165	-	165	165	
51196 Tool Allowance	500	2,500	1,500	(1,000)	-40.00%
51312 On Call Pay	6,733	-	6,986	6,986	
51361 Sick Leave Payout	27,877	-	-	-	
51370 Uniform Allowance	388	-	-	-	
51510 Social Security	84,435	120,431	108,384	(12,047)	-10.00%
51520 Retirement Employers Share	66,818	102,279	93,066	(9,213)	-9.01%
51541 Dental Insurance	6,722	9,577	7,394	(2,183)	-22.80%
51547 Social Security	-	-	-	-	
51550 Life Insurance	354	361	240	(121)	-33.42%
51553 Flex Plan Administration	150	-	-	-	

WATER BUDGET

Row Labels	Sum of Prior Year Actuals	Sum of Adopted Budget	Sum of 2025 Budget Request	Sum of Budget Change	Sum of Percentage Change
51560 Workers Compensation	25,328	37,669	36,496	(1,173)	-3.11%
51590 Other Employer Contributions	29,758	17,501	14,869	(2,632)	-15.04%
51592 Medicare	-	1,644	(1,743)	(3,387)	-206.03%
51593 Health Insurance	240,948	338,011	321,009	(17,002)	-5.03%
52000 Fleet Services - Internal	75	25,000	25,000	-	0.00%
52120 Legal Services	-	4,000	45,000	41,000	1025.00%
52130 Accounting and Audit Services	-	8,000	-	(8,000)	-100.00%
52131 Financial, Banking and Investment Services	13,287	7,800	7,800	-	0.00%
52133 Indirect Cost Expense	-	60,000	-	(60,000)	-100.00%
52140 Technology Services	9,691	46,000	89,000	43,000	93.48%
52141 Technology Services - Phone Support	-	25,000	10,000	(15,000)	-60.00%
52150 Architectural, Engineering and Planning Services	1,486,362	50,000	50,000	-	0.00%
52160 Janitorial and Custodial Services	16,865	-	35,000	35,000	
52163 Contractor Services	3,328	-	60,000	60,000	
52164 Contractual Services	13,832	-	20,000	20,000	
52174 Hardware and Software Maintenance Services	27,345	-	45,000	45,000	
52192 Other Professional Services	164,588	118,000	153,000	35,000	29.66%
52193 Environmental Testing Services - Non-Capital	32,250	130,000	170,000	40,000	30.77%
52199 IT - Equipment and Hardware	1,765	-	1,500	1,500	
52210 Water	59,892	-	90,000	90,000	
52220 Electric	403,487	476,000	450,000	(26,000)	-5.46%
52230 Sewer	-	4,400	4,700	300	6.82%
52240 Natural / Propane Gas	79,914	27,200	89,000	61,800	227.21%
52250 Telephone, Internet and Cable	18,938	27,000	27,150	150	0.56%
52291 Other Utility Services	2,974	-	-	-	
52310 Road Maintenance Services	159,352	250,000	250,000	-	0.00%
52409 Motor Vehicles Repairs Services	13,163	-	33,000	33,000	
52420 Machinery/Equipment Maintenance Services	54,849	82,000	131,000	49,000	59.76%
52443 Elevator Maintenance Contractual Services	5,821	-	17,000	17,000	
52450 Grounds Repair & Maintenance Services	18,641	-	32,000	32,000	
52460 Building Repair & Maintenance Services	901	-	5,000	5,000	
52470 Building Equipment Maintenance Services	5,462	40,000	65,000	25,000	62.50%
52581 Interpreting/Translation Services	1,361	-	2,000	2,000	
52920 Radio Services	-	-	10,000	10,000	
52930 Fire Protection	3,171	-	6,000	6,000	
52932 Copier Charges	2,664	-	3,500	3,500	
52960 Landfill Services	591	-	1,500	1,500	
52970 Refuse Collection	3,061	1,600	3,000	1,400	87.50%
52971 Recycling Collection and Disposal	1,588	500	3,000	2,500	500.00%
52990 Sundry Contractual Services	2,974	15,000	15,000	-	0.00%
53110 Postage and Courier	26,587	24,400	42,700	18,300	75.00%
53130 Printing and Forms	7,449	17,700	19,500	1,800	10.17%
53132 Training Supplies	244	-	1,000	1,000	
53141 Small Office Equipment	353	-	-	-	
53143 Equipment & Supplies - IT	393	-	500	500	
53190 Office Supplies	8,529	10,200	17,000	6,800	66.67%
53191 Books & Directories	149	-	200	200	
53210 Publication Of Legal Notices	595	1,000	1,000	-	0.00%
53240 Membership Dues	14,879	12,000	12,000	-	0.00%
53241 Licenses and Certifications	769	-	23,200	23,200	
53250 Registration Fees/tuition	2,970	-	20,000	20,000	

WATER BUDGET

Row Labels	Sum of Prior Year Actuals	Sum of Adopted Budget	Sum of 2025 Budget Request	Sum of Budget Change	Sum of Percentage Change
53320 Employee Auto Allowance	-	500	500	-	0.00%
53321 Personal Auto Mileage	438	-	1,000	1,000	
53330 Other Transportation Costs	240	-	5,100	5,100	
53331 Vehicle Lease/Rental	8,405	-	-	-	
53340 Commercial Travel	9,419	6,500	22,500	16,000	246.15%
53350 Meals	-	2,500	2,500	-	
53360 Lodging	10,247	12,000	18,000	6,000	50.00%
53410 Meeting Expenses	5,551	20,500	29,600	9,100	44.39%
53420 Lab and Medical Supplies	32,315	20,000	52,000	32,000	160.00%
53430 Food Supplies	312	-	1,000	1,000	
53440 Household and Janitorial Supplies	5,557	-	9,500	9,500	
53441 HVAC supplies	167	-	2,000	2,000	
53460 Clothing and Uniforms	12,492	9,200	14,100	4,900	53.26%
53462 Tool Allowance-Employees	754	-	3,500	3,500	
53494 Technology Supplies	401	-	-	-	
53510 Gasoline and Diesel Fuel	38,300	-	60,000	60,000	
53512 Motor Vehicle Fluids - Oil, Grease, Antifreeze, Windshield Wash	1,114	-	5,000	5,000	
53520 Motor Vehicle Parts & Supplies	14,766	-	20,000	20,000	
53521 Tires & Tubes	6,206	-	15,000	15,000	
53524 Vehicle Batteries	3,218	-	3,500	3,500	
53545 Pavement Marking Supplies	2,260	-	4,000	4,000	
53620 Consumable Tools/Supplies	1,467	-	2,500	2,500	
53623 Shop Equipment-Tools-Supplies	26,002	1,000	41,600	40,600	4060.00%
53624 Welding Supplies	264	-	500	500	
53630 Machinery and Equipment Parts	114,782	343,500	150,000	(193,500)	-56.33%
53631 Radio Parts & Supplies	67	-	500	500	
53632 Sign Parts/supplies	647	-	2,200	2,200	
53640 Painting Supplies	492	-	10,900	10,900	
53641 Traffic Signal and Street Light Supplies	195	1,000	3,000	2,000	200.00%
53650 Plumbing and Electrical Supplies	2,584	-	16,000	16,000	
53665 Safety Supplies	3,347	-	4,500	4,500	
53670 Repair Parts Water Meters	33	4,000	2,500	(1,500)	-37.50%
53680 Repair Parts Water Lines	6,101	211,000	220,000	9,000	4.27%
53915 Freight	533	-	500	500	
53917 Vehicle Registration	165	-	500	500	
53936 Other Supplies	205,023	642,800	400,000	(242,800)	-37.77%
54110 Concrete Pipes/fittings	50,640	-	80,000	80,000	
54160 Concrete and Cement Products	11,341	-	12,500	12,500	
54220 Metal Pipe/Fittings	54,503	-	-	-	
54250 Small Hardware/Wire/Nails	145	-	50	50	
54290 Other Metal Products	(6,667)	-	-	-	
54310 Lumber	46	-	500	500	
54410 Plastic Pipe	581	-	1,000	1,000	
54520 Sand and Gravel	-	2,000	3,000	1,000	50.00%
54530 Granite	4,851	7,000	7,000	-	0.00%
54540 Sodium Chloride	20,140	-	50,000	50,000	
54541 Salt Brine	20,540	-	-	-	
54560 MAG - Lime	169,194	500,000	50,000	(450,000)	-90.00%
54561 Silicate Of Soda	63,585	120,000	150,000	30,000	25.00%
54562 Aluminum Sulfate	12,292	25,000	30,000	5,000	20.00%
54563 Chlorine	78,868	130,000	130,000	-	0.00%

WATER BUDGET

Row Labels	Sum of Prior Year Actuals	Sum of Adopted Budget	Sum of 2025 Budget Request	Sum of Budget Change	Sum of Percentage Change
54564 Fluoride	17,112	20,000	25,000	5,000	25.00%
54566 Other Chemicals	175,012	50,000	180,000	130,000	260.00%
54567 Ammonia	19,037	20,000	30,000	10,000	50.00%
54568 Sodium Permangante	225,572	-	500,000	500,000	
54569 GAC Media			1,000,000	1,000,000	
54570 VOC Media			30,000	30,000	
54620 Small Appliances	76	-	-	-	
54830 Hot Mix	-	92,300	-	(92,300)	-100.00%
54840 Cold Mix	-	12,000	12,000	-	0.00%
55185 Insurance Pollution Liability	-	12,000	-	(12,000)	-100.00%
55225 Insurance Allocation	47,022	-	58,000	58,000	
55330 Equipment Rent	19,953	-	15,500	15,500	
55350 Office Machines & Equipment Leased	720	-	1,500	1,500	
55390 Other Rents/Leases	250	400	500	100	25.00%
55915 Administration Pool			173,000	173,000	
55915 Administration Pool - Charge Out	170,373	-	-	-	
55930 Fees & Permits	2,235	600	5,600	5,000	833.33%
56110 Bond Principal	2,486,759	2,647,120	3,059,044	411,924	15.56%
56210 Bond Interest	887,976	863,926	986,083	122,157	14.14%
56905 Debt Issuance Expenses	38,000	-	-	-	
56910 Debt Service Charges	800	10,000	-	(10,000)	-100.00%
57410 Bad Debt Expense	4,216	5,000	-	(5,000)	-100.00%
58132 IT Equipment and Hardware - Capital	2,770	-	-	-	
58133 Software - Capital	-	440,000	-	(440,000)	-100.00%
58231 Streets/curb/gutter - state	117,456	-	-	-	
58241 Sidewalk replacement program	85,317	-	-	-	
58323 Water Pumping Plant Other Power Production Equipment - Capital	3,821	-	-	-	
58331 Water Treatment Plant Structures and Improvements - Capital	2,707,577	-	-	-	
58332 Water - WTP Sand or Other Media Filtration Equipment - Capital	744,670	-	-	-	
58343 Water Transmission and Distribution Mains - Capital	331,683	1,109,000	2,600,000	1,491,000	134.45%
58346 Water Meters - Capital In Stock	687,632	-	800,000	800,000	
58347 Water Meters - Capital Installed	(114,477)	-	-	-	
58390 Water General Plant Structures and Improvements - Capital	24,500	-	-	-	
58392 Water General Plant Transportation Equipment - Capital	161,073	160,000	-	(160,000)	-100.00%
58394 Water General Plant Tools, Shop and Garage Equipment	14,500	-	-	-	
58398 Water General Plant Miscellaneous Equipment	83,372	-	-	-	
59210 Transfer To General Fund	1,559,057	1,590,000	1,590,000	-	-6.29%
64011 Investment Maturity/Withdrawal	4,566	-	-	-	
68343 Water Transmission and Distribution Mains-Contributed	917,421	-	-	-	
68345 Water Services-Contributed	184,933	-	-	-	
68348 Water Hydrants-Contributed	87,498	-	-	-	
58342 Water Distribution Reservoirs and Standpipes - Capital			310,000	310,000	
58397 Water General Plant Communication Equipment			360,000	360,000	
58325 Water Pumping Plant Electric Pumping Equipment - Capital			60,000	60,000	
Total Expenses	16,999,915	12,779,360	17,494,239	4,714,879	1176.13%
Total (Profit) Loss	(15,664,348)	(34,740)	(343,326)	(308,586)	

2025 Wastewater Operating Budget

Revenues	
Public Charges for Services	11,460,173
Miscellaneous Revenue	146,789
Other Financing Sources	8,997,390
Total Revenues	<u>20,604,352</u>
Expenses	
Personnel Services	1,726,455
Contractual Services	1,894,691
Operating Expenses	581,156
Chemicals/Building Materials	674,000
Fixed Charges	149,765
Debt Service	5,092,289
Capital Outlay	10,482,390
Total Expenses	<u>20,600,746</u>

2025 Wastewater Capital Budget

	Total	Operations	Debt Proceeds	Clean Water Fund	TID financing	DNR Principal Forgiveness	ARPA
Cherry Street, W Wausau Ave to Randolph St	780,000		780,000				
W Randolph St, Burek Ave to Merrill Ave	660,000		660,000				
Fulton St N 1st Street to N 7th Street	350,000		350,000				
1st St/ River Dr, McIndoe St to 300' N of Fulton St	40,000		40,000				
2nd Street, Short Street to Dekalb St	200,000		200,000				
Downtown Mall Redevelopment	300,000				300,000		
Dump Truck/Sludge Hauling Equipment	120,000	120,000					
Cherry Street, W Wausau Ave to Randolph St	1,100,000	440,000	560,000				
Cellular/Wi-Fi Amplification Project	300,000	300,000					
Slipline Project - Sewer Rehabilitation	525,000	525,000					
Washington Siphon Project	723,500				723,500		
Headworks Screening Project	5,383,890			1,375,167		3,208,723	800,000
	10,482,390	1,385,000	2,590,000	1,375,167	1,023,500	3,208,723	800,000

WASTEWATER BUDGET

Accounts	Sum of Prior Year Actuals	Sum of Adopted Budget	Sum of 2025 Budget Request	Sum of Budget Change	Sum of % Change
42001 Special Assessments Sewer Mains and Lines	(49,000)	-	-	-	
43700 Grants from Local Governments	(2,000)	-	-	-	
46410 Sewage Service	(69,573)	-	(68,595)	(68,595)	100.00%
46411 Wastewater Metered Residential Sales	(6,037,685)	(5,522,680)	(6,037,685)	(515,005)	8.53%
46412 Wastewater Metered Multifamily Residential Sales	(696,089)	(657,800)	(696,089)	(38,289)	5.50%
46413 Wastewater Metered Commercial Sales	(1,690,015)	(1,443,190)	(1,690,015)	(246,825)	14.60%
46414 Wastewater Metered Industrial Sales	(1,815,242)	(1,277,300)	(1,815,242)	(537,942)	29.63%
46415 Wastewater Public Authority Sales	(464,096)	(279,500)	(464,096)	(184,596)	39.78%
46416 Wastewater Unmetered Sales	(23,496)	(19,190)	(23,496)	(4,306)	18.33%
46417 Waste Water Late Payment Charges	(59,708)	(89,371)	(59,708)	29,663	-49.68%
46418 Other Wastewater Operating Revenues	(45,188)	-	(45,188)	(45,188)	100.00%
46419 Wastewater Sale of Scrap	-	-	-	-	
46420 Wastewater Sample Analysis	(17,753)	(16,007)	(17,753)	(1,746)	9.83%
46423 Pretreatment Assessment Permits	(39,490)	(40,007)	(39,490)	517	-1.31%
46425 Septic Haulers Sewage Treatments	(131,636)	(84,676)	(131,636)	(46,960)	35.67%
46426 Wastewater Clean Up	-	(55,007)	(55,007)	-	0.00%
47494 Wastewater Treatment for City of Schofield	(316,173)	(305,010)	(316,173)	(11,163)	3.53%
47495 Wastewater Treatment for Stettin	-	-	-	-	
48110 Interest Income	(146,789)	-	(146,789)	(146,789)	100.00%
48130 Interest on Special Assessment	(1,249)	-	-	-	
48307 Sale of Recyclable Materials	-	(4,007)	-	4,007	
48440 Recoveries Damage to Other Property	(51,623)	-	-	-	
49110 Proceeds from Bonds	(2,816,292)	-	(3,965,167)	(3,405,167)	100.00%
49300 Capital Contributions	(1,533,622)	-	(5,032,223)	(5,032,223)	100.00%
Total Revenue	(16,006,719)	(9,793,745)	(20,604,352)	(10,250,607)	

WASTEWATER BUDGET

Accounts	Sum of Prior Year Actuals	Sum of Adopted Budget	Sum of 2025 Budget Request	Sum of Budget Change	Sum of % Change
51111 Salaries and Wages	1,076,701	991,881	1,150,823	38,874	3.77%
51120 Overtime	2,113	26,960	12,287	(14,673)	-119.42%
51140 Shift Differential	102	-	102	102	100.00%
51196 Tool Allowance	2,500	2,500	2,500	-	0.00%
51312 On Call Pay	2,359	-	2,453	2,453	100.00%
51361 Sick Leave Payout	438	-	-	-	
51370 Uniform Allowance	300	-	-	-	
51510 Social Security	79,518	77,123	88,740	2,432	3.06%
51519 Retirement Employers Share			-	-	
51520 Retirement Employers Share	63,718	66,406	82,251	7,501	10.15%
51541 Dental Insurance	7,899	7,264	8,487	1,223	14.41%
51550 Life Insurance	309	191	240	49	20.52%
51560 Workers Compensation	45,002	58,195	35,073	(26,964)	-86.34%
51590 Other Employer Contributions	31,900	11,756	14,449	2,693	18.64%
51592 Medicare	-	818	625	(193)	-30.96%
51593 Health Insurance	266,412	264,575	328,425	63,850	19.44%
52000 Fleet Services - Internal	9,915	-	12,000	12,000	100.00%
52120 Legal Services	-	4,000	4,000	-	0.00%
52130 Accounting and Audit Services	-	60,000	60,000	-	0.00%
52131 Financial, Banking and Investment Services	1,013	-	-	-	
52140 Technology Services	9,691	44,000	78,711	(23,000)	-109.52%
52150 Architectural, Engineering and Planning Services	366,963	115,000	108,000	(7,000)	-6.48%
52160 Janitorial and Custodial Services	13,348	-	18,660	18,660	100.00%
52163 Contractor Services	725	-	-	-	
52174 Hardware and Software Maintenance Services	27,345	-	-	-	
52192 Other Professional Services	49,880	57,000	49,800	(31,000)	-119.23%
52193 Environmental Testing Services - Non-Capital	42,814	59,500	62,500	3,000	4.80%
52210 Water	28,887	37,000	29,000	(8,000)	-27.59%
52220 Electric	424,033	440,000	415,000	(25,000)	-6.02%
52240 Natural / Propane Gas	227,578	202,000	155,000	(47,000)	-30.32%
52250 Telephone, Internet and Cable	16,298	7,500	15,120	7,620	50.40%
52290 Meter Expenses	825	565,000	565,000	-	0.00%
52291 Other Utility Services	27,526	-	22,000	22,000	100.00%
52409 Motor Vehicles Repairs Services	13,544	-	12,100	12,100	100.00%
52411 Towing & Storage Services	85	-	-	-	
52420 Machinery/Equipment Maintenance Services	10,504	210,000	210,000	-	0.00%
52429 Inspection Services	-	-	3,500	3,500	100.00%
52450 Grounds Repair & Maintenance Services	13,305	2,000	12,000	10,000	83.33%
52460 Building Repair & Maintenance Services	3,731	-	5,000	5,000	100.00%
52470 Building Equipment Maintenance Services	60,650	44,000	30,000	(14,000)	-46.67%
52560 Other Special Services	19,647	2,000	4,000	2,000	50.00%
52581 Interpreting/Translation Services	723	-	-	-	
52930 Fire Protection	280	-	3,000	3,000	100.00%
52932 Copier Charges	4,181	-	1,800	1,800	100.00%
52960 Landfill Services	390	6,000	1,500	(4,500)	-300.00%
52970 Refuse Collection	14,018	7,500	13,000	5,500	42.31%
52971 Recycling Collection and Disposal	30	500	-	(500)	
52990 Sundry Contractual Services	19,861	-	4,000	4,000	100.00%
53110 Postage and Courier	26,398	5,000	24,500	1,000	16.67%

WASTEWATER BUDGET

Accounts	Sum of Prior Year Actuals	Sum of Adopted Budget	Sum of 2025 Budget Request	Sum of Budget Change	Sum of % Change
53130 Printing and Forms	4,107	8,200	4,250	(7,700)	-1540.00%
53141 Small Office Equipment	-	500	500	-	0.00%
53143 Equipment & Supplies - IT	427	-	500	500	100.00%
53190 Office Supplies	2,006	1,000	1,500	500	33.33%
53210 Publication Of Legal Notices	838	500	500	-	0.00%
53240 Membership Dues	9,587	6,000	6,000	-	0.00%
53241 Licenses and Certifications	2,318	6,000	-	(6,000)	
53250 Registration Fees/tuition	1,533	13,000	8,000	(5,000)	-62.50%
53260 Advertising	-	300	300	-	0.00%
53320 Employee Auto Allowance	-	1,200	1,200	-	0.00%
53321 Personal Auto Mileage	961	-	500	500	100.00%
53330 Other Transportation Costs	-	-	20,800	20,800	100.00%
53331 Vehicle Lease/Rental	20,518	35,000	20,518	(14,482)	-70.58%
53340 Commercial Travel	897	-	-	-	
53350 Meals	127	500	500	-	0.00%
53360 Lodging	2,415	-	1,088	1,088	100.00%
53410 Meeting Expenses	1,964	2,000	2,500	500	20.00%
53420 Lab and Medical Supplies	11,529	8,000	10,500	2,500	23.81%
53430 Food Supplies	-	-	-	-	
53440 Household and Janitorial Supplies	2,387	-	1,300	1,300	100.00%
53441 HVAC supplies	235	-	1,000	1,000	100.00%
53460 Clothing and Uniforms	11,638	8,100	13,000	4,900	37.69%
53462 Tool Allowance-Employees	224	3,500	3,500	-	0.00%
53510 Gasoline and Diesel Fuel	31,377	18,200	18,200	-	0.00%
53512 Motor Vehicle Fluids - Oil, Grease, Antifreeze, Windshield Wash	1,860	-	-	-	
53513 LP Gas - Vehicles	203	1,000	400	(600)	-150.00%
53520 Motor Vehicle Parts & Supplies	21,733	58,000	51,500	(6,500)	-12.62%
53521 Tires & Tubes	91	-	-	-	
53524 Vehicle Batteries	1,165	-	-	-	
53525 Hydraulic Hose & Fittings	100	-	-	-	
53545 Pavement Marking Supplies	2,192	-	3,000	3,000	100.00%
53620 Consumable Tools/Supplies	9,738	-	28,000	28,000	100.00%
53623 Shop Equipment-Tools-Supplies	7,928	-	5,000	4,000	100.00%
53624 Welding Supplies	1,632	-	-	-	
53630 Machinery and Equipment Parts	89,759	210,100	203,600	(6,500)	-3.19%
53631 Radio Parts & Supplies	4,184	-	5,000	5,000	100.00%
53632 Sign Parts/supplies	25	-	-	-	
53640 Painting Supplies	226	-	-	-	
53650 Plumbing and Electrical Supplies	15,707	-	13,500	13,500	100.00%
53665 Safety Supplies	3,351	5,000	4,000	(1,000)	-25.00%
53670 Repair Parts Water Meters	33	-	-	-	
53680 Repair Parts Water Lines	-	-	-	-	
53915 Freight	21	-	-	-	
53917 Vehicle Registration	-	-	-	-	
53936 Other Supplies	56,328	128,000	126,500	(1,500)	-1.19%
54160 Concrete and Cement Products	1,290	-	1,500	1,500	100.00%
54220 Metal Pipe/Fittings	2,900	-	-	-	
54250 Small Hardware/Wire/Nails	100	-	-	-	
54290 Other Metal Products	4,013	-	20,000	20,000	100.00%
54410 Plastic Pipe	704	-	1,000	1,000	100.00%

WASTEWATER BUDGET

Accounts	Sum of Prior Year Actuals	Sum of Adopted Budget	Sum of 2025 Budget Request	Sum of Budget Change	Sum of % Change
54541 Salt Brine	603	-	-	-	
54560 MAG - Lime	196,858	252,000	210,000	(42,000)	-20.00%
54562 Aluminum Sulfate	161,688	175,000	286,000	111,000	38.81%
54563 Chlorine	1,455	10,000	3,500	(6,500)	-185.71%
54565 Polymer	179,374	222,000	145,000	(77,000)	-53.10%
54566 Other Chemicals	156	-	2,000	2,000	100.00%
54567 Ammonia	69,235	-	-	-	
54830 Hot Mix	-	5,000	5,000	-	0.00%
55120 Insurance Equipment Premium	-	9,000	9,000	-	0.00%
55151 Insurance Building & Contents	17,434	25,000	20,000	(5,000)	-25.00%
55225 Insurance Allocation	69,783	-	70,765	70,765	100.00%
55330 Equipment Rent	166	-	8,000	8,000	100.00%
55350 Office Machines & Equipment Leased	720	-	-	-	
55390 Other Rents/Leases	1,198	-	-	-	
55915 Administration Pool - Charge Out	158,240	-	-	-	
55930 Fees & Permits	84,885	42,000	42,000	-	0.00%
56110 Bond Principal	3,162,206	3,246,679	3,381,005	134,326	3.97%
56210 Bond Interest	1,827,082	1,755,240	1,711,284	(43,956)	-2.57%
56910 Debt Service Charges	800	-	-	-	
57410 Bad Debt Expense	4,486	-	-	-	
58347 Water Meters - Capital Installed	114,477	-	-	-	
58413 Wastewater - Collecting Mains and Accessories - Capital	2,373,212	-	3,578,500	8,962,390	100.00%
58421 Wastewater Collecting System Pumping Plant Structures and Improvements - Capital	-	-	1,100,000	700,000	100.00%
58423 Wastewater Collecting System Pumping -Electric Pumping Equipment - Capital	2,917	-	-	-	
58424 Wastewater Collecting System Pumping Installations Other Power Pumping Equipment - C	9,514	-	-	-	
58431 Wastewater Treatment and Disposal Plant Structures and Improvements - Capital	425,771	-	300,000	380,000	100.00%
58432 Wastewater Treatment Preliminary Treatment	-	-	5,383,890	-	
58439 Wastewater Treatment Plant Flow Metering and Monitoring Equipment	20,198	-	-	-	
58493 Wastewater Plant Transportation Equipment - Capital	-	-	120,000	120,000	100.00%
58501 Wastewater Sand Filtration and Disinfection Structures and Improvements - Capital	53,674	-	-	-	
59110 Transport Cost Pool - Charge-Out	-	-	-	-	
59210 Transfer To General Fund	515,943	-	-	-	
Total Expenses	12,795,904	9,631,688	20,600,746	10,402,857	
Net (Profit) Loss	(3,210,814)	(162,057)	(3,606)	152,250	



To: Wausau Water Works Commission

From: Scott Boers, Water Operations Superintendent

Date: 9/24/2024

Subject: Adoption of A Special Assessment to help private well owners abandon their well

All,

Wausau Municipal Code requires all private wells to be permitted or properly abandoned. Although there is grant funding from the DNR to help well owners abandon their wells, the grants are income dependent and not everyone qualifies.

Currently, we have well owners who do not qualify for the abandonment grants but have wells that do not meet the safety requirements for permitting. These owners don't feel they have the funds to hire a Plumber to bring the well into compliance, but also do not have resources available to pay for an abandonment.

The penalty for not complying with the well code is a fine and city initiated well abandonment paid for by special assessment against the property. The utility may also have concerns over cross connections to the system from an unsafe well and need to disconnect service. To avoid these issues and alleviate the time/resources necessary to go through this process for both the well owner and the city, we are proposing to offer special assessment for those who will abandon their well up front.

The proposed process would be for the homeowner to contract for the well abandonment, the city would cover the cost of abandonment to the contractor, and the amount of that cost assessed to the property, spread out over five years.

Thank you for your consideration of this topic.



**AMENDMENT NO. 2 to
ENGINEERING SERVICES AGREEMENT
Facility Plan Amendment for Screening Improvements (Project)
Original Agreement Executed May 1, 2023**

This Amendment is by and between:

City of Wausau (Owner)
407 Grant Street
Wausau, WI 54403

and

Donohue & Associates, Inc. (Donohue)
3311 Weeden Creek Road
Sheboygan, WI 53081

Who agree to amend the original Agreement, as follows:

PART I – B. SCOPE OF SERVICES

The services have been modified to include the following additional activities:

Administration

#	Task	Assumptions															
105	Project Management and Construction Contract Administration Consult with the Owner and act as Owner’s representative as provided in the General Conditions of the Contract Document as included in the Project Manual. Coordinate engineering services of all engineering disciplines, monitor the budget and schedule, and keep Owner and Wisconsin Department of Natural Resources (WDNR) informed of Work progress and issues. Prepare and submit monthly invoices and progress reports. The progress reports will be in letter format and summarize activities completed to date, financial and schedule status, and identify any potential problems, critical issues, and planned corrective actions.	Construction Administrator (CA) hours<table><tr><th>Months</th><th>Hours/Week</th><th>Hours</th></tr><tr><td>4</td><td>4</td><td>64</td></tr><tr><td>4</td><td>2.5</td><td>40</td></tr><tr><td>16</td><td>1.5</td><td>96</td></tr><tr><td colspan="2">Total Hours</td><td>200</td></tr></table>	Months	Hours/Week	Hours	4	4	64	4	2.5	40	16	1.5	96	Total Hours		200
Months	Hours/Week	Hours															
4	4	64															
4	2.5	40															
16	1.5	96															
Total Hours		200															

Pre-Construction Services

#	Task	Assumptions
205	Construction Contract Execution and Notice to Proceed Prepare and provide the Contract Documents for Contractor signature. Prepare and provide a Contract Execution Letter to the Contractor. After the Contractor provides an executed Agreement with the proper bonds and insurance certificate(s), prepare and provide the Contract Documents for Owner signature.	
210	Conformed to Contract Documents Prior to the Pre-Construction Meeting, produce and provide Conformed to Contract (CTC) Documents. The CTC Documents will incorporate design changes issued and authorized by Addenda during the Bid Phase. They will also include the Owner-Contractor executed Agreement, the Contractor's certificate(s) of insurance, and the Contractor's bonds. Issue the Notice to Proceed to the Contractor.	
215	Pre-Construction Conference Conduct one Pre-Construction Conference prior to commencement of the Work at the Project site and prepare and distribute agenda and meeting notes.	

Construction Services

#	Task	Assumptions															
305	Construction Progress Meetings Attend monthly progress meetings, as appropriate, during construction. The Contractor will schedule and conduct the meetings. The Contractor will prepare and distribute the agenda and notes documenting the meetings.	24 meetings 8 on site 16 on-line (remote)															
310	Observation of Construction Provide part-time, on-site observation to observe as an experienced and qualified design professional the progress and quality of the Work. Such visits and observations are not intended to be exhaustive or to extend to every aspect of the Contractor's Work in progress or to involve detailed inspections of the Contractor's Work in progress beyond the responsibilities specifically assigned to the Engineer in this Agreement and the Contract Documents, but rather are to be limited to spot checking and general observation of the Work based on the exercise of professional judgment. The purpose of the visits to, and representation by the Resident Project Representative (RPR) at the Project site, will be to enable Donohue to better carry out the duties and responsibilities assigned to and undertaken by Donohue during the Construction Phase. Donohue shall not, during such visits or as a	Days on site by Resident Project Representative (RPR) <table border="1"> <thead> <tr> <th>Months</th><th>Days/Week</th><th>Days</th></tr> </thead> <tbody> <tr> <td>3</td><td>3</td><td>36</td></tr> <tr> <td>4</td><td>2</td><td>32</td></tr> <tr> <td colspan="2">Miscellaneous</td><td>5</td></tr> <tr> <td colspan="2">Total Days</td><td>73</td></tr> </tbody> </table>	Months	Days/Week	Days	3	3	36	4	2	32	Miscellaneous		5	Total Days		73
Months	Days/Week	Days															
3	3	36															
4	2	32															
Miscellaneous		5															
Total Days		73															

	result of such observations of the Contractor's Work in progress, supervise, direct, or have control over the Contractor's Work, nor shall Donohue have authority over or responsibility for the means, methods, techniques, sequences, or procedures of construction selected by the Contractor, for safety precautions and programs incident to the Contractor's Work, or for any failure of the Contractor to comply with Laws and Regulations applicable to the Contractor furnishing and performing the Work. Accordingly, Donohue neither guarantees the performance of the Contractor nor assumes responsibility for the Contractor's failure to furnish and perform its Work in accordance with the Contract Documents. b. Donohue will prepare and forward to the Owner a copy of field and inspection reports. Reports shall include items such as date of observation, contractors on-site, construction activities, discussions of and decisions made concerning construction, observations made, testing witnessed, information relative to questions of extras or deductions, and photos taken. c. Donohue will take pictures of actual construction and deliver to the Owner copies of construction photos in digital format.																	
315	Designer Site Visits Designers will visit the site to observe the progress and quality of the Work. Such visits and observations are not intended to be exhaustive or to extend to every aspect of the Work in progress or to involve detailed inspections of the Work in progress beyond the responsibilities specifically assigned to Donohue in the Contract Documents.	Days on site <table><tr><th>Engineer</th><th>Visits</th></tr><tr><td>Process</td><td>2</td></tr><tr><td>Structural</td><td>1</td></tr><tr><td>Mechanical</td><td>1</td></tr><tr><td>Electrical</td><td>1</td></tr><tr><td>Controls</td><td>1</td></tr><tr><td>Miscellaneous</td><td>2</td></tr><tr><td>Total</td><td>8</td></tr></table>	Engineer	Visits	Process	2	Structural	1	Mechanical	1	Electrical	1	Controls	1	Miscellaneous	2	Total	8
Engineer	Visits																	
Process	2																	
Structural	1																	
Mechanical	1																	
Electrical	1																	
Controls	1																	
Miscellaneous	2																	
Total	8																	
320	Contractor Requests for Clarifications and Interpretations Provide written responses to the Contractor's written Requests for Information (RFI). Provide the necessary clarifications and interpretations of the Contract Documents as appropriate to the orderly completion of the Work. Such clarifications and interpretations will be consistent with the intent of and interpretations reasonably inferable from the Contract Documents.	10 RFIs at 2 hours each for CA and 2 hours each for engineers																
325	Change Orders, Work Change Directives, and Cost Proposal Requests Provide input to Owner regarding Change Orders and Work Change Directives. Prepare Cost Proposal Requests, Change Orders, and Work Change Directives as required for Owner review and approval.	10 items at 2 hours each for CA and 2 hours each for engineers																

330	Shop Drawings and Samples Provide a technical review and approve or take other appropriate action in respect to Shop Drawings and Samples and other data the Contractor is required to submit, but only for conformance with the information given in the Contract Documents and compatibility with the design concept of the Project as a functioning whole as indicated in the Contract Documents. Such reviews and approvals or other action will not extend to means, methods, techniques, sequences, or procedures of Construction or to safety precautions and programs.	- Contractor satisfies submittal requirements in two submittals or less 65 submittals at 1.5 hours each for engineers, 0.5 hour each for CA								
335	Substitutes and “or-equal” Evaluate and determine the acceptability of substitute or “or-equal” materials and equipment proposed by a Contractor.	3 items at 2 hours each for CA and 2 hours each for engineers								
340	Applications for Payment Review and provide input to Owner regarding monthly applications for payment and accompanying supporting documentation from the Contractor. Coordinate WDNR Clean Water Fund pay requests with WDNR and Owner.	24 applications at 1 hour each for RPR, 2 hours each for CA review and processing (Owner, Contractor, and WDNR) + 10 hours for CA to negotiate revisions								
345	Punchlist Preparation, Review, and Documentation Review the Work to produce a punch list following the Contractor’s request for Substantial Completion or Partial Utilization of portions of the Work. Review will evaluate the installed condition for conformance with Contract Documents. Review the Work to confirm the Contractor has completed the punch list items.	10 hours for documentation - Days on site <table><tr><td>Step</td><td>Days</td></tr><tr><td>Pre-Final</td><td>3</td></tr><tr><td>Final</td><td>2</td></tr><tr><td>Total</td><td>5</td></tr></table>	Step	Days	Pre-Final	3	Final	2	Total	5
Step	Days									
Pre-Final	3									
Final	2									
Total	5									
350	Record Documents Receive annotated record documents from the Contractor, which are to be assembled by the Contractor in accordance with the Contract Documents to obtain final payment. Prepare Record Drawings showing appropriate record information based on the project annotated record documents received from the Contractor. Deliver archive from Document Management web site, containing all files submitted between Contractor and Donohue.									

Commissioning Services

#	Task	Assumptions
405	Vendor Provided Training and Operation and Maintenance Materials Review vendor provided training and operation and maintenance materials to confirm compliance with the	15 O+M manuals and 7 training manuals

	contract documents. Forward materials to the Owner that meet the requirements of the Contract Documents.									
420	Start-up Services Prepare a Contractor Startup Checklist to aid the Contractor in preparing for and conducting the required equipment check-out and start-up. Review the Contractor Startup Checklist with the Contractor and Owner to receive their input and revise the checklist accordingly. Participate in the Contractor/Vendor check-out and start-up of the appropriate unit process systems.	Days on site <table><tr><th>Services</th><th>Days</th></tr><tr><td>Checkout</td><td>3</td></tr><tr><td>Startup</td><td>5</td></tr><tr><td>Total</td><td>8</td></tr></table>	Services	Days	Checkout	3	Startup	5	Total	8
Services	Days									
Checkout	3									
Startup	5									
Total	8									
430	Post Start-up Services Conduct up to 4 on-site visits to provide operational assistance after the various unit process systems have been in operation. Additionally, teleconferencing and email will be used for further communications.	10 remote hours 4 days on site: 2 days by CA, 2 days by Operations								
440	Standard Operating Procedures Provide a standard operating procedure (SOP) for the new screening and screenings handling system. Submit draft for Owner review. Submit final that addresses Owner comments.									

Applications Engineering and Additional Design Engineering

#	Task	Assumptions
505	AE Programming: PLC, SCADA, and Historian Programming Provide programming for process control system components provided by the Contractor in accordance with the SCADA Configuration Standards developed with the Owner during the most recent wastewater treatment facility upgrade. Programming includes, but is not limited to, PLCs, OITs, SCADA graphics, Historian configuration, trending, reporting software, alarming software, Asset Centre, and interfacing with power monitors, VFDs, vendor provided control panels, and instruments.	
510	Field I/O Testing, Startup, and Functional Testing Work with the Contractor to perform field I/O testing of all signals. Contractor shall be responsible for preparing test procedures and signoff sheets. Donohue will verify functionality of each I/O point to ensure the signal provided is indicated in the PLC, HMI graphics, and alarm notification as required. Provide startup and functional testing of equipment.	2 visits of 2 days on site
515, 520, 525, 530, 535, 540	Additional Design Engineering While producing Bidding Documents for the screening system improvements, the Owner asked Donohue to provide additional engineering services to add <i>additional</i> Work to the Bidding Documents. This Work include [1] adding a service platform to Structure 770, [2] enhancing the existing floor finishes in Structure 100, [3] adding a crane to remove the	

	RWW pumps in Structure 100, and [4] adding a ADA ramp and the associated site improvements to accommodate the ramp at Structure 100. Researched alternative conveyor configurations, conveyor technologies, and conveyor manufacturers to identify a suitable conveyor strategy that would convey dry/compacted screenings form the lower level to grade level. After weeks of investigation, no conveyor manufacturer was willing to provide the necessary assurances that this strategy would perform as desired. Designed multiple building configurations to accommodate the initially preferred screening and screenings handling strategy as well as the final screening and screenings handling strategy.	
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PART III – A. COMPENSATION

Compensation for the services set forth in Part I shall be increased \$396,658, resulting in a total contract amount of \$618,348. Attachment 1 provides a breakdown of hours, expenses, and fees for this Amendment. Contracting totals are summarized below.

Original Contract	\$18,515
Amendment 1	\$203,175
Amendment 2	\$396,658
Total	\$618,348

APPROVED FOR OWNER

By: _____

Printed Name: _____

Title: _____

Date: _____

APPROVED FOR DONOHUE

By: _____

Printed Name: Michael W. Gerbitz, PE

Title: Senior Vice President

Date: _____

Attachment 1
Amendment No. 2 Hours, Expenses, and Fees Worksheet

Levels of Effort (Hours) by Task

	Project Roles	Principal	CA	RPR	Engineers	Operations	AE Programmer	Admin
		Gerbitz	Marzahl	Hermesen	Varies	Crouse	Porter	Treft
Team Members								
100 Administration								
105	Project Management and Contract Administration	5	200					12
Totals		5	200	0	0	0	0	12
200 Pre-Construction Services								
205	Construction Contract Execution		3					
210	Conformed to Contract Documents		3		6			
215	Pre-Construction Conference		8					
Totals		0	14	0	6	0	0	0
300 Construction Services								
305	Construction Progress Meetings		80					
310	Observation of Construction			584				
315	Designer Site Visits		8		64			
320	Contractor Requests for Clarifications and interpretations		20		20			
325	Change Orders, Work Change Directives, and Cost Proposals		20		20			
330	Shop Drawings and Samples		30		98			30
335	Substitutes and Or Equals		6		6			
340	Applications for Payment		70		24			
345	Punchlist Preparation, Review, and Documentation		50					
350	Record Documents		5		20			
Totals		0	289	584	252	0	0	30
400 Commissioning Services								
405	Vendor Provided Training and O+M Materials					16		
410	Start-Up Services					64		
415	Post Start-Up Services		26			25		
420	Standard Operating Procedure					35		
Totals		0	26	0	0	140	0	0
500 Applications Engineering and Additional Design Engineering								
505	AE Programming (Remote)						230	
510	On-Site Startup for AE Programming						60	
515	Design - Added Structure 770 Platform				30			
520	Design - Enhanced Existing Floor Finishes				30			
525	Design - Added Pump Crane				10			
530	Design - Added ADA Ramp and Site Modifications				20			
535	Design - Advanced Multiple Conveyor Alternatives				40			
540	Design - Produced Multiple Screen Building Alternatives				40			
Totals		0	0	0	170	0	290	0
Total Hours All Phases		5	529	584	428	140	290	42

Labor Fees and Expenses by Task

Total Hours	Labor Fee	Expenses	Totals
217	\$40,480		\$40,480
217	\$40,480	\$0	\$40,480

Total Hours	Labor Fee	Travel Expenses	Totals
3	\$570		\$570
9	\$1,620		\$1,620
8	\$1,520		\$1,520
20	\$3,710	\$0	\$3,710

Total Hours	Labor Fee	Travel Expenses	Totals
80	\$15,200	\$2,360	\$17,560
584	\$110,960	\$7,665	\$118,625
72	\$12,720	\$2,360	\$15,080
40	\$7,300		\$7,300
40	\$7,300		\$7,300
158	\$25,463		\$25,463
12	\$2,190		\$2,190
94	\$17,500		\$17,500
50	\$9,500	\$1,225	\$10,725
25	\$4,450	\$1,500	\$5,950
1,155	\$212,583	\$15,110	\$227,693

Total Hours	Labor Fee	Travel Expenses	Totals
16	\$2,800		\$2,800
64	\$11,200	\$2,735	\$13,935
51	\$9,315		\$9,315
35	\$6,125	\$500	\$6,625
166	\$29,440	\$3,235	\$32,675

Total Hours	Labor Fee	Travel Expenses	Totals
230	\$47,150		\$47,150
60	\$12,300	\$2,900	\$15,200
30	\$5,250		\$5,250
30	\$5,250		\$5,250
10	\$1,750		\$1,750
20	\$3,500		\$3,500
40	\$7,000		\$7,000
40	\$7,000		\$7,000
460	\$89,200	\$2,900	\$92,100

Attachment 1
Amendment No. 2 Hours, Expenses, and Fees Worksheet

Labor Fee Summary by Phase								Total Labor Hours and Fee Summary			
	Project Roles	Principal	CA	RPR	Engineers	Operations	AE Programmer	Admin	Labor Hours	Labor Fee	Total Fee
	Team Members	Gerbitz	Marzahl	Hermesen	Varies	Crouse	Porter	Treft			
Hourly Labor Charge-Out Rates		\$280	\$190	\$190	\$175	\$175	\$205	\$90			
Administration		\$1,400	\$38,000	\$0	\$0	\$0	\$0	\$1,080	217	\$40,480	\$40,480
Pre-Construction Services		\$0	\$2,660	\$0	\$1,050	\$0	\$0	\$0	20	\$3,710	\$3,710
Construction Services		\$0	\$54,910	\$110,960	\$44,013	\$0	\$0	\$2,700	1155	\$212,583	\$227,693
Commissioning Services		\$0	\$4,940	\$0	\$0	\$24,500	\$0	\$0	166	\$29,440	\$32,675
Applications Engineering and Additional Design Engineering		\$0	\$0	\$0	\$29,750	\$0	\$59,450	\$0	460	\$89,200	\$92,100
Totals		\$1,400	\$100,510	\$110,960	\$74,813	\$24,500	\$59,450	\$3,780	2018	\$375,413	\$396,658

Estimated Construction Cost **\$3,300,000**

Summary by Tasks and Contracting Mechanism. The % values are % of Construction.		
Planning (Original Agreement)		\$18,515
Original Design, Bidding, and Funding Services (Amendment 1)		\$203,175
Additional Design Services (Part of Amendment 2)		\$29,750
Total Design, Bidding, and Funding Services	7.1%	\$232,925
Pre-Construction Services (Part of Amendment 2)		\$3,710
Construction and Funding Services (Part of Amendment 2)		\$268,173
Commissioning Services (Part of Amendment 2)		\$32,675
Total Construction and Funding Services	9.2%	\$304,558
Total Design, Bidding, Funding, and Construction Services	16.3%	\$537,483
Applications Engineering / Programming (Part of Amendment 2)		\$62,350
Grand Total		\$618,348

Summary by Tasks as % of Construction Cost		
Planning		\$18,515
Design, Bidding, and Funding	7.1%	\$232,925
Construction and Funding	9.2%	\$304,558
Applications Engineering / Programming		\$62,350
Grand Total	16.3%	\$618,348



Donohue & Associates, Inc.
3311 Weeden Creek Road | Sheboygan, WI 53081
920.208.0296 | donohue-associates.com

September 20, 2024

Mr. Eric Lindman
City of Wausau
407 Grant Street
Wausau, WI 54403

Re: Bid Evaluation and Letter of Recommendation
City of Wausau
Wastewater Treatment Facility – Screening Improvements

Dear Mr. Lindman

Pursuant to the Official Notice to Bidders, bids for the above-referenced Project were received through QuestCDN via their online electronic VirtuBid™ on September 17, 2024 at 3:00 p.m. local time and publicly opened during the Board of Public Works meeting at 3:15 p.m. and read aloud. Donohue has reviewed the three Bids received for the Work, and have enclosed a copy of the apparent low bid for your information and reference.

The Bid Form included the Base Bid and two Alternates. In evaluating Bids for the lowest Bid price, the City will consider the sum of the Base Bid plus either Alternate 1 or Alternate 2. The City has the flexibility and authority to accept any Alternates it deems to be in the best interest of the City, taking into consideration financial impacts and the needs of the Project. The Bid Tabulation is provided in the table below.

Bid Tabulation			
Bidder	1	2	3
Contractor Name	J.F. Ahern Co.	August Winter & Sons, Inc.	Staab Construction Corporation
Lump-Sum Base Bid Price	\$1,280,693.10	\$1,785,525.00	\$1,987,000.00
Alternate 1 Price	\$2,044,306.90	\$1,916,858.00	\$1,570,000.00
Alternate 2 Price	\$3,044,306.90	\$1,990,040.00	\$1,500,000.00
Acknowledged Receipt of Addenda (1 issued)	Yes	Yes	Yes
Bid Security	Yes	Yes	Yes
Required Forms Provided ⁽¹⁾	Yes	Yes	Yes
Subcontractor Listing Provided	Yes	Yes	Yes
Bid Executed	Yes	Yes	Yes

1. Forms include Disclosure of Ownership, Form 8700-294, Form 8700-294A, Form 6100-4

In order to determine the total bid price from each bidder, both bid alternates were reviewed and either recommended for acceptance or rejection.

Alternate 1 – Hydro-Dyne Screening System

This Alternate includes a fine screening system (two center-flow fine screens, screenings sluice system, and two washer compactors) manufactured by Hydro-Dyne Engineering, Inc. and

modifications to the existing headworks building to accommodate the new screening system. The City prefers the screen manufacturer in this alternate due to their reputation in the industry as well as maintenance features that will ease the plant operator's efforts. This alternate also allows the City to remove a portion of their existing building that has been deteriorating for the past several years.

Alternate 2 - Saveco Screening System

This Alternate includes a fine screening system (two center-flow fine screens, screenings sluice system, and two washer compactors) manufactured by Saveco North America, Inc. and modifications to the existing headworks building to accommodate the new screening system. This alternate also requires structural modifications to the screen channels to install the equipment. The Saveco screening system has less favorable maintenance features requiring more labor-intensive operator intervention.

The following table summarizes Donohue's recommendation of the bid alternate acceptance and rejection. This project requires that the City accept either Alternate 1 or Alternate 2 to have a complete project. The total bid price at the bottom row of the Bid Comparison table identifies J.F. Ahern Co. as the apparent low Bidder after Bid alternate recommendations are considered.

Bid Comparison				
Contractor Name	Donohue Alternate Recommendation	J.F. Ahern Co.	August Winter & Sons, Inc.	Staab Construction Corporation
Lump-Sum Base Bid Price	Included	\$1,280,693.10	\$1,785,525.00	\$1,987,000.00
Alternate 1 Price	Accept	\$2,044,306.90	\$1,916,858.00	\$1,570,000.00
Alternate 2 Price	Reject	-	-	-
Total Bid Price based on Alternates		\$3,325,000.00	\$3,702,383.00	\$3,557,000.00

Based on Donohue's recommendations to accept Bid Alternate 1 and reject Bid Alternate 2, the recommended contract award amount is \$3,325,000. It is Donohue's opinion that the apparent low Bidder, J.F. Ahern Co. submitted a responsive bid and is also qualified and capable of performing the Work of the Project. Donohue's opinion of probable construction cost for the Project was \$3,298,000. The low bid is approximately 0.8% higher than our estimate.

It is therefore Donohue's recommendation to award the Project to J.F. Ahern Co. in the amount of \$3,325,000.

We are presenting this evaluation and recommendation for your review and consideration and will be pleased to answer any questions you have concerning the information provided herein. If this recommendation is acceptable, and after a contract award is made, please sign and date the attached Notice of Award and scan and e-mail it back to me.

Sincerely,



Amber Marzahl, P.E.
Project Manager

Mr. Eric Lindman

Page 3 | September 20, 2024

Copy: Ben Brooks, Wausau
Stephen Matthias, Donohue

ARTICLE 9 – BID SUBMITTAL

SUBMITTED ON September 17th, 20 24.

State Contractor License No. 6210. (If applicable)

If Bidder is:

An Individual

Name (typed or printed): N/A

By: _____ (SEAL)
(Individual's signature)

Doing business as: _____

Business address: _____

Phone No.: _____ FAX No.: _____

A Partnership

Partnership Name: N/A (SEAL)

By: _____
(Signature of general partner – attach evidence of authority to sign)

Name (typed or printed): _____

Business address: _____

Phone No.: _____ FAX No.: _____

A Corporation

Corporation Name: J. F. Ahern Co. (SEAL)

State of Incorporation: Wisconsin

Type (General Business, Professional, Service, Limited Liability): Mechanical Contractor

By: _____
(Signature – attach evidence of authority to sign)

Name (typed or printed): James R. Jarvis

Title: Executive Vice President

Attest: K. Ebbens (CORPORATE SEAL)
Krista J. Ebbens (Signature of Corporate Secretary)

Business Address: 855 Morris St., Fond du Lac, WI 54935

Phone No: 920.921.9020 FAX No.: 920.907.5819

Date of Authorization to do business is July 1880

A Joint Venture

Name of Joint Venture: N/A

First Joint Venturer Name: _____ (SEAL)

By: _____
(Signature of joint venture partner – attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

Business address: _____

Phone No.: _____ FAX No.: _____

Second Joint Venturer Name: N/A (SEAL)

By: _____
(Signature of joint venture partner – attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

Business address: _____

Phone No.: _____ FAX No.: _____

Phone and FAX Number, and Address for receipt of official communications:

(Each joint venturer must sign. The manner of signing for each individual, partnership, and corporation that is a party to the joint venture should be in the manner indicated above.)

CERTIFICATE

State of Wisconsin)
)
County of Fond du Lac)

Krista Ebbens, being duly sworn, deposes and says that she is the Corporate Secretary of J. F. Ahern Co., a corporation organized and existing under the laws of the State of Wisconsin and having its principal place of business at 855 Morris Street, City of Fond du Lac, State of Wisconsin; that she has custody of the books of the corporation and that following is a true and correct excerpt of a resolution adopted by the Board of Directors of the Corporation on November 1, 2022 and that the following resolution is still in force and effect:

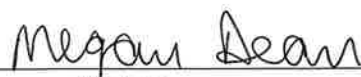
Be It Resolved, that John E. Ahern, III, Chairman and Chief Executive Officer; Anthony J. Ahern, President and Chief Operating Officer; Jace T. Hierlmeier, Executive Vice President; James R. Jarvis, Executive Vice President; Grant E. Nadler, Executive Vice President; Timothy M. Schneider, Executive Vice President; Adam J. Wunderlin, CFO/Treasurer; Krista J. Ebbens, General Counsel/Corporate Secretary; Shawn M. Anhalt, Assistant Secretary; and Kristana M. Laufenberg, Assistant Secretary, are hereby authorized to sign lien waivers, bids and contracts for and on behalf of J. F. Ahern Co.

Witness my hand and seal of the Corporation this 12th day of September, 2024.



Corporate Secretary
Krista J. Ebbens

Sworn to before me this
12 day of September, 2024



Notary Public



My commission expires: February 1, 2026

THE STATE OF WISCONSIN

EXAMINING BOARD OF ARCHITECTS, LANDSCAPE ARCHITECTS, PROFESSIONAL ENGINEERS, DESIGNERS, PROFESSIONAL LAND SURVEYORS, AND REGISTERED INTERIOR DESIGNERS

Hereby certifies that

J F AHERN CO

was granted a license to practice as a

ARCHITECTURAL OR ENGINEERING CORP - CERTIFICATE OF AUTHORIZATION

in the State of Wisconsin in accordance with Wisconsin Law

on the 10th day of July in the year 1970.

The authority granted herein must be renewed each biennium by the granting authority.

In witness thereof, the State of Wisconsin

*Examining Board of Architects, Landscape Architects, Professional Engineers, Designers, Professional Land
Surveyors, and Registered Interior Designers*

*has caused this certificate to be issued under
the seal of the Department of Safety and Professional Services*



Dan Hereth, Secretary



Tony Evers, Governor



SUBCONTRACTOR LISTING

The following is a listing of proposed Subcontractors having a direct contract with the Contractor.

1. **R Industries**
2. **Van Ert Electric**
3. **OMNI Glass and Paint**
4. **Quality Roofing**
5. **Complete Control Inc.**
6. **MAVO Systems**
- 7.
- 8.
- 9.
- 10.
- 11.
- 12.
- 13.

BID BOND

Any singular reference to Bidder, Surety, Owner or other party shall be considered plural where applicable.

BIDDER (Name and Address): J.F. Ahern Co.
855 Morris Street
Fond du Lac, WI 54935

SURETY (Name, and Address of Principal Place of Business): Continental Casualty Company
151 N. Franklin St.
Chicago, IL 60606

OWNER (Name and Address): City of Wausau
407 Grant Street
Wausau, WI 54403

BID

Bid Due Date: September 17, 2024

Description (Project Name— Include Location): Wastewater Treatment Facility Screening Improvements
Wausau, WI
Project No. 14279

BOND

Bond Number: N/A

Date: September 17, 2024

Penal sum Five Percent of Bid Amount \$ 5% of Bid Amount
(Words) (Figures)

Surety and Bidder, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Bid Bond to be duly executed by an authorized officer, agent, or representative.

BIDDER

J.F. Ahern Co. (Seal)

Bidder's Name and Corporate Seal

By:

Signature

James R. Jarvis

Print Name

Executive Vice President

Title

Attest:

Signature

Title Estimating Coordinator - Witness

SURETY

Continental Casualty Company (Seal)

Surety's Name and Corporate Seal

By:

Signature (Attach Power of Attorney)

Tracy M. Krause

Print Name

Attorney-in-Fact

Title

Attest:

Signature

Title Witness

Note: Addresses are to be used for giving any required notice.

Provide execution by any additional parties, such as joint venturers, if necessary.

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Bidder's and Surety's liability. Recovery of such penal sum under the terms of this Bond shall be Owner's sole and exclusive remedy upon default of Bidder.
2. Default of Bidder shall occur upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.
3. This obligation shall be null and void if:
 - 3.1 Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or
 - 3.2 All Bids are rejected by Owner, or
 - 3.3 Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).
4. Payment under this Bond will be due and payable upon default of Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.
5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions shall not in the aggregate exceed 120 days from the Bid due date without Surety's written consent.
6. No suit or action shall be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety and in no case later than one year after the Bid due date.
7. Any suit or action under this Bond shall be commenced only in a court of competent jurisdiction located in the state in which the Project is located.
8. Notices required hereunder shall be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Registered or Certified Mail, return receipt requested, postage pre-paid, and shall be deemed to be effective upon receipt by the party concerned.
9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.
10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond shall be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute shall govern and the remainder of this Bond that is not in conflict therewith shall continue in full force and effect.
11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

Know All Men By These Presents, That Continental Casualty Company, an Illinois insurance company, National Fire Insurance Company of Hartford, an Illinois insurance company, and American Casualty Company of Reading, Pennsylvania, a Pennsylvania insurance company (herein called "the CNA Companies"), are duly organized and existing insurance companies having their principal offices in the City of Chicago, and State of Illinois, and that they do by virtue of the signatures and seals herein affixed hereby make, constitute and appoint

Travis J Schreiber, Tracy M Krause, Becky Jo Sawall, Individually

of Madison, WI, their true and lawful Attorney(s)-in-Fact with full power and authority hereby conferred to sign, seal and execute for and on their behalf bonds, undertakings and other obligatory instruments of similar nature

- In Unlimited Amounts -

and to bind them thereby as fully and to the same extent as if such instruments were signed by a duly authorized officer of their insurance companies and all the acts of said Attorney, pursuant to the authority hereby given is hereby ratified and confirmed.

This Power of Attorney is made and executed pursuant to and by authority of the By-Laws and Resolutions, printed below, duly adopted, as indicated, by the Boards of Directors of the insurance companies.

In Witness Whereof, the CNA Companies have caused these presents to be signed by their Vice President and their corporate seals to be hereto affixed on this 1st day of November, 2023.



Continental Casualty Company
National Fire Insurance Company of Hartford
American Casualty Company of Reading, Pennsylvania

Larry Kasten

Vice President

State of South Dakota, County of Minnehaha, ss:

On this 1st day of November, 2023, before me personally came Larry Kasten to me known, who, being by me duly sworn, did depose and say: that he resides in the City of Sioux Falls, State of South Dakota; that he is a Vice President of Continental Casualty Company, an Illinois insurance company, National Fire Insurance Company of Hartford, an Illinois insurance company, and American Casualty Company of Reading, Pennsylvania, a Pennsylvania insurance company described in and which executed the above instrument; that he knows the seals of said insurance companies; that the seals affixed to the said instrument are such corporate seals; that they were so affixed pursuant to authority given by the Boards of Directors of said insurance companies and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said insurance companies.

My commission expires

March 2, 2026



M. Bent

Notary Public

CERTIFICATE

I, D. Johnson, Assistant Secretary of Continental Casualty Company, an Illinois insurance company, National Fire Insurance Company of Hartford, an Illinois insurance company, and American Casualty Company of Reading, Pennsylvania, a Pennsylvania insurance company do hereby certify that the Power of Attorney herein above set forth is still in force, and further certify that the By-Laws and Resolutions of the Board of Directors of the insurance companies printed below are still in force. In testimony whereof I have hereunto subscribed my name and affixed the seal of the said insurance companies this 17th day of September, 2024.

Continental Casualty Company
National Fire Insurance Company of Hartford
American Casualty Company of Reading, Pennsylvania

D. Johnson

Assistant Secretary

Authorizing By-Laws and Resolutions

ADOPTED BY THE BOARD OF DIRECTORS OF EACH OF CONTINENTAL CASUALTY COMPANY, NATIONAL FIRE INSURANCE COMPANY OF HARTFORD, and AMERICAN CASUALTY COMPANY OF READING, PENNSYLVANIA (as defined above, the "CNA Companies"):

This Power of Attorney is made and executed pursuant to and by authority of the following resolution duly adopted by the Board of Directors of each of the above CNA Companies at a meeting held on May 12, 1995:

"RESOLVED: That any Senior or Group Vice President may authorize an officer to sign specific documents, agreements and instruments on behalf of the Company provided that the name of such authorized officer and a description of the documents, agreements or instruments that such officer may sign will be provided in writing by the Senior or Group Vice President to the Secretary of the Company prior to such execution becoming effective."

This Power of Attorney is signed by Larry Kasten, Vice President, who has been authorized pursuant to the above resolution to execute power of attorneys on behalf of each of the CNA Companies.

This Power of Attorney is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of each of the above Companies by unanimous written consent dated the 25th day of April, 2012:

"Whereas, the bylaws of the Company or specific resolution of the Board of Directors has authorized various officers (the "Authorized Officers") to execute various policies, bonds, undertakings and other obligatory instruments of like nature; and

Whereas, from time to time, the signature of the Authorized Officers, in addition to being provided in original, hard copy format, may be provided via facsimile or otherwise in an electronic format (collectively, "Electronic Signatures"); Now therefore be it resolved: that the Electronic Signature of any Authorized Officer shall be valid and binding on the Company."

This Power of Attorney may be signed by digital signature and sealed by a digital or otherwise electronic-formatted corporate seal under and by the authority of the following Resolution adopted by the Board of Directors of each of the above CNA Companies by unanimous written consent dated the 27th day of April, 2022:

"RESOLVED: That it is in the best interest of the Company to periodically ratify and confirm any corporate documents signed by digital signatures and to ratify and confirm the use of a digital or otherwise electronic-formatted corporate seal, each to be considered the act and deed of the Company."

Go to www.cnasurety.com > Owner / Obligatee Services > Validate Bond Coverage, if you want to verify bond authenticity.

Disclosure of Ownership

The statutory authority for the use of this form is prescribed in Sections 66.0903(12)(d), 66.0904(10)(d) and 103.49(7)(d), Wisconsin Statutes.

The use of this form is mandatory. The penalty for failing to complete this form is prescribed in Section 103.005(12), Wisconsin Statutes.

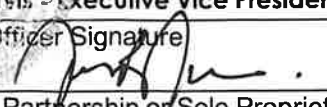
Personal information you provide may be used for secondary purposes [Privacy Law, s. 15.04(1) (m), Wisconsin Statutes].

- (1) On the date a contractor submits a bid to or completes negotiations with a state agency, local governmental unit, or developer, investor or owner on a project subject to Section 66.0903, 66.0904 or 103.49, Wisconsin Statutes, the contractor shall disclose to such state agency, local governmental unit, or developer, investor or owner, the name of any "other construction business," which the contractor, or a shareholder, officer or partner of the contractor, owns or has owned within the preceding three (3) years.
- (2) The term "other construction business" means any business engaged in the erection, construction, remodeling, repairing, demolition, altering or painting and decorating of buildings, structures or facilities. It also means any business engaged in supplying mineral aggregate, or hauling excavated material or spoil as provided by Sections 66.0903(3), 66.0904(2), 103.49(2) and 103.50(2), Wisconsin Statutes.
- (3) This form must ONLY be filed, with the state agency project owner, local governmental unit project owner, or developer, investor or owner of a publicly funded private construction project that will be awarding the contract, if **both (A) and (B) are met.**
 - (A) The contractor, or a shareholder, officer or partner of the contractor:
 - (1) Owns at least a 25% interest in the "other construction business," indicated below, on the date the contractor submits a bid or completes negotiations; or
 - (2) Has owned at least a 25% interest in the "other construction business" at any time within the preceding three (3) years.
 - (B) The Wisconsin Department of Workforce Development (DWD) has determined that the "other construction business" has failed to pay the prevailing wage rate or time and one-half the required hourly basic rate of pay, for hours worked in excess of the prevailing hours of labor, to any employee at any time within the preceding three (3) years.

Other Construction Business

Business Name NONE			
Street Address or P O Box	City	State	Zip Code
Business Name			
Street Address or P O Box	City	State	Zip Code
Business Name			
Street Address or P O Box	City	State	Zip Code
Business Name			
Street Address or P O Box	City	State	Zip Code

I hereby state under penalty of perjury that the information, contained in this document, is true and accurate according to my knowledge and belief.

Print the Name of Authorized Officer James R. Jarvis - Executive Vice President			
Authorized Officer Signature 		Date Signed 9.17.2024	
Corporation, Partnership or Sole Proprietorship Name J. F. Ahern Co.			
Street Address or P O Box 855 Morris Street	City Fond du Lac	State WI	Zip Code 54935

If you have any questions call (608) 266-6861

**Environmental Improvement Fund (EIF)
Disadvantaged Business Enterprise (DBE)
Good Faith Certification**

Form 8700-294 (R 8/10)

Notice: Under ss. NR 162.09(3) and NR 166.12(4)(b), Wis. Adm. Code, a municipality is required to provide complete information, as requested on this form, to verify that it has complied with requirements regarding solicitation of minority-and women-business enterprises (MBE/WBEs) and other Disadvantaged Business Enterprises (DBEs). The Department will not complete a financial assistance agreement unless the municipality submits documentation regarding DBE solicitation or utilization. Failure to provide information requested, or make a good faith effort, may result in sanctions described in s. NR 162.09(3)(b) or s. NR 166.12(4), Wis. Adm. Code.

Personally identifiable information provided on this form will be used to review participation in a project and may also be made available to requesters as required by Wisconsin Open Records law [ss. 19.31 - 19.39, Wis. Stats.].

Check applicable program: ☐ Safe Drinking Water Loan Program ☒ Clean Water Fund Program

I. Project Information

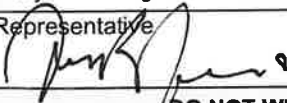
1. Name of Municipality J. F. Ahern Co.	2. EIF Project Number 14279
3. Name of Authorized Representative (Print or Type) James R. Jarvis	4. Title of Authorized Representative (Print or Type) Executive Vice President

II. Good Faith Effort

1. Are any DBEs performing any type of work on this project? If yes, attach EPA Form 6100-4 for each DBE utilized. ☒ Yes ☐ No
2. Did your municipality either:
 - a. Contact DBEs included on the Unified Certification Program List (e.g., WisDOT UCP) when soliciting bids? ☒ Yes ☐ No
 - OR
 - b. Publish an advertisement in the official newspaper of record that included language encouraging DBEs to submit bids?
3. Did each primary contractor either:
 - a. Contact DBEs included on the Unified Certification Program List (e.g., WisDOT UCP) when soliciting bids? ☒ Yes ☐ No
 - OR
 - b. Publish an advertisement in an industry trade publication and/or the official newspaper of record that included language encouraging DBEs to submit proposals?
4. Did your municipality, your primary engineer, and/or primary contractor divide the total scope of work into smaller tasks and packages to permit maximum utilization of DBEs? ☒ Yes ☐ No
5. Did your municipality, your primary engineer, and/or primary contractor establish delivery schedules that enabled DBEs to compete for contracts or subcontracts? ☒ Yes ☐ No
6. Did your municipality, your primary engineer, and/or primary contractor use the disadvantaged business services (obtain lists of certified disadvantaged businesses or request other assistance) of agencies such as the Wisconsin Department of Transportation or the Small Business Administration? ☒ Yes ☐ No
7. Were solicited DBEs provided a reasonable amount of time to respond to requests for bids? ☒ Yes ☐ No
8. If you answered "No" to any of the questions in numbers II.1-II.7 above, provide justification or an explanation of why you could not answer "Yes" to that question. Attach an additional sheet of paper if extra space is required.

Municipal Certification

I certify that, to the best of my knowledge, the information provided on this form is true, accurate and complete.

Signature of Authorized Representative  James R. Jarvis, EVP	Date Signed 9.17.2024
--	---------------------------------

DO NOT WRITE BELOW THIS LINE - DNR USE ONLY

- | | |
|--|--|
| a. Is form filled out completely? | ☐ Yes ☐ No |
| b. Did authorized representative sign the form? | ☐ Yes ☐ No |
| b. Are submitted justifications and explanations acceptable? | ☐ Yes ☐ No ☐ NA |

Project Manager Signature	Date Review Completed
---------------------------	-----------------------

INVITATION TO BID

From: J. F. Ahern Co.
Sent: Friday, August 30, 2024 2:16 PM ET
Email: jloehr@jfahern.com
Phone: (920) 907-5148
Fax:



Let us know your bid intention here:

Will Bid

Under Review

Won't Bid

Attention:
Company:

You have been invited to bid:

Wausau WWTF Screening Improvements

Bid Due Date: Tuesday, September 17, 2024 3:00 PM CT
Project Location: Wausau, WI 54403
Project Start Date:
Contact: Jacob Loehr

Description:

Please note scopes are due to Ahern by 09.13.24, and quotes are due by 09.16.24 at 3:00 PM.

Please note that both American Iron & Steel and Davis Bacon wage rates apply.

SWMBE are encouraged to bid.

Questions Please Contact:

Jacob Loehr

jloehr@jfahern.com

920.907.5148

Message to Bidders:

By submitting a bid, Subcontractor agrees that it has reviewed J. F. Ahern's insurance requirements and subcontract terms and conditions and Subcontractor agrees that it can meet all insurance requirements, and agrees to be bound by the subcontract terms and conditions.

J. F. Ahern will not pay for additional insurance coverage to meet our requirements; if necessary, the cost must be included in your bid. Insurance and subcontract requirements can be found at: www.jfahern.com/subcontractrequirements.

J. F. Ahern's General Terms and Conditions can be found at:
www.jfahern.com/general-terms-and-conditions-sale

Click here to view the project

Access Number: AXXS-NMBR

Let us know your bid intention here:

Will Bid

Under Review

Won't Bid



855 Morris Street | P.O. Box 1316
Fond du Lac, WI 54936-1316
main 920.921.9020 | fax 920.907.5819
www.jfahern.com

8.30.2024

414.225.1801

publicnotices@dailyreporter.com

Public Notices
The Daily Reporter
225 East Michigan Street, Suite 540
Milwaukee, WI 53202

RE: S/W/MBE Ad

Dear Amanda:

Please place the following **S/W/MBE** ad to run **1 DAY 9.4.2024**

Bids Wanted **S/W/MBE**
Subcontractors & Suppliers for the following project:
WASTEWATER TREATMENT FACILITY
SCREENING IMPROVEMENTS
WAUSAU, WI
BID DATE: 9.17.2024
BIDS ACCEPTED UNTIL: 9.16.2024

J. F. Ahern Co.
855 Morris Street
Fond du Lac, WI 54935
(P) 920.921.9020 ~ (F) 920.907.5819

Minority bidding encouraged. We are an equal opportunity employer.

Please email to confirm receipt. Please email a copy of this ad along with invoice/proof to my attention. If you have questions, I can be reached at hschumacher@jfahern.com or 920.907.5800.

Please provide your invoice and proof of publication by **9.5.2024**.

Sincerely,

J. F. AHERN CO.

Heather Schumacher
Estimating Coordinator
Major Construction
hschumacher@jfahern.com

The Daily Reporter
225 East Michigan Street
Milwaukee, WI, 53202
Phone: 4142251801 Fax: 0

THE DAILY REPORTER

Affidavit of Publication

See Page 2 for ad proof

To: J.F. Ahern -
855 Morris Street,, PO Box 1316
Fond du Lac,, WI, 54935

Re: Legal Notice 2645940, WASTEWATER TREATMENT FACILITY
SCREENING IMPROVEMENTS

State of WI

}

} SS:

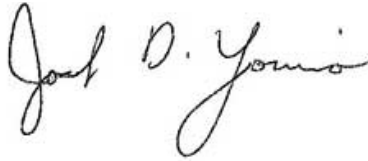
County of Milwaukee

}

I, Joe Yovino, being duly sworn, depose and say: that I am the Authorized Designee of The Daily Reporter, a daily newspaper of general circulation in Milwaukee, County of Milwaukee, State of WI; that a notice, of which the annexed is a printed copy, has been duly and regularly published in the The Daily Reporter once each day for 1 consecutive days; and that the date of the publication were as follows: 09/04/2024.

Publishers fee: \$100.00

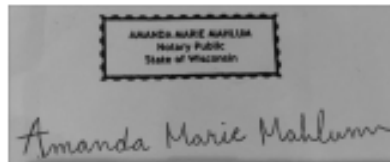
By:



Joe Yovino

Sworn to me on this 9th day of
September 2024

By:



Amanda Marie Mahlum
Notary Public, State of WI
No. -
Qualified in Milwaukee County
My commission expires on December
31, 2026

**ATTENTION:
SBE/WBE/MBE
Bids Wanted S/W/MBE**

**Subcontractors & Suppliers for
the following project:**

WASTEWATER TREATMENT FACILITY
SCREENING IMPROVEMENTS
WAUSAU, WI
BID DATE: 9.17.2024
BIDS ACCEPTED UNTIL: 9.16.2024

J. F. Ahern Co.
855 Morris Street
Fond du Lac, WI 54935
(P) 920.921.9020
(F) 920.907.5819

Minority Bidding Encouraged.
We are an Equal Opportunity Employer.

NOTE: This form is authorized by chs. NR 162 and NR 166, Wis. Adm. Code. The information requested on this form is necessary for the review of solicitation of Disadvantaged Business Enterprises (DBEs). This form is intended to be a tool to assist those seeking funding from the EIF (Clean Water Fund Program or Safe Drinking Water Loan Program) to meet the DBE requirements of EIF programs. Submitting this form to the Department is optional. Applicants may submit the form as the required documentation of solicitation efforts or provide the information in some other format. Personally identifiable information provided on this form will only be used in determining whether or not DBE requirements are met. Failure to complete or submit this form has no impact on the applicant. For complete information regarding DBE requirements, see the Contract Packet for DBE Compliance on DNR's website at <http://dnr.wi.gov/Aid/documents/EIF/Guide/DBE.html>.

Contact DBEs on a Unified Certification Program (UCP) List to solicit bids from DBE firms (e.g., firms registered in the WisDOT UCP, <http://wisconsindot.gov/pages/doing-bus/civil-rights/dbe/certified-firms.aspx>). The individual that makes the contacts should document all contacts. Contact at least 2 minority business enterprises (MBEs) and 2 women's business enterprises (WBEs); additional contacts may be to any type of DBE. Only contacts made to DBEs on DOT's UCP list can be considered in determining whether a good faith effort was made to solicit DBEs.

Project Information	
Name of Municipality City of Wausau	EIF Project Number 14279
Name of Prime Contractor J. F. Ahern Co.	Information Prepared By (Name and Phone or E-Mail Address) Jacob Loehr & Heather Schumacher jloehr@jfahern.com & hschumacher@jfahern.com

Contacts			
Information Needed For Review	Contact 1	Contact 2	Contact 3
a. Name of Firm Contacted	Double D Landscape, LLC	Express Insulation, Inc.	Hartford Landscape Supply
b. Contact's Phone Number or E-Mail	Melissa Tillmann controller@doubledlandscape.com	Joseph Peterson joe@expressinsulation.net	Matthew Lauersdorf m.lauersdorf@grasschopperllc.com
c. Firm Type	☐ MBE ☒ WBE ☒ Other DBE	☐ MBE ☒ WBE ☒ Other DBE	☐ MBE ☒ WBE ☐ Other DBE
d. On DOT UCP list?	☒ Yes ☐ No	☒ Yes ☐ No	☐ Yes ☒ No
e. Date Contacted	8.30.24, 9.6.24, 9.11.24	8.30.24, 9.6.24, 9.11.24	8.30.24, 9.6.24, 9.11.24
f. Result of contact	Will Not Bid	Will Not Bid	Will Bid
g. Bid received?	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
h. If bid received and rejected, why rejected?			Bid Not Received
i. Utilizing this firm? (If yes, more on p. 4)*	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No

Environmental Improvement Fund (EIF) DBE Contacts Worksheet

Form 8700-294A (R 03/17)

Page 2 of 4

Information Needed For Review	Contact 4	Contact 5	Contact 6
a. Name of Firm Contacted	HVA Products	Mavo Systems	Northern Electric, Inc
b. Contact's Phone Number or E-Mail	Estimating Department bids@hvaproducts.com	Dan Kufahl dkufahl@mavo.com	Jim Conrad Jim@nei-gb.com
c. Firm Type	☒ MBE ☐ WBE ☒ Other DBE	☒ MBE ☐ WBE ☒ Other DBE	☐ MBE ☒ WBE ☐ Other DBE
d. On DOT UCP list?	☒ Yes ☐ No	☒ Yes ☐ No	☐ Yes ☒ No
e. Date Contacted	8.30.24, 9.6.24, 9.11.24	8.30.24, 9.6.24, 9.11.24	8.30.24, 9.6.24, 9.11.24
f. Result of contact	Will Bid	Will Bid	No Response
g. Bid received?	☒ Yes ☐ No	☒ Yes ☐ No	☐ Yes ☒ No
h. If bid received and rejected, why rejected?	High Price		
i. Utilizing this firm? (If yes, more on p. 4)*	☐ Yes ☒ No	☒ Yes ☐ No	☐ Yes ☒ No

Information Needed For Review	Contact 7	Contact 8	Contact 9
a. Name of Firm Contacted	Ostrenga Excavating, Inc	Sanchez Coating & Environmental LLC	Vyron
b. Contact's Phone Number or E-Mail	Rebecca Ostrenga-Ruffell ostrengaex@gmail.com	Javier Sanchez Javier@sanchezce.com	Logan Smith lsmith@vyron.com
c. Firm Type	☐ MBE ☒ WBE ☐ Other DBE	☐ MBE ☒ WBE ☐ Other DBE	☐ MBE ☒ WBE ☐ Other DBE
d. On DOT UCP list?	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
e. Date Contacted	8.30.24, 9.6.24, 9.11.24	8.30.24, 9.6.24, 9.11.24	8.30.24, 9.6.24, 9.11.24
f. Result of contact	Will Not Bid	Will Bid	Will Bid
g. Bid received?	☐ Yes ☒ No	☒ Yes ☐ No	☒ Yes ☐ No
h. If bid received and rejected, why rejected?		High Price	
i. Utilizing this firm? (If yes, more on p. 4)*	☐ Yes ☒ No	☐ Yes ☒ No	☒ Yes ☐ No

Environmental Improvement Fund (EIF) DBE Contacts Worksheet

Form 8700-294A (R 03/17)

Page 3 of 4

Information Needed For Review	Contact 10	Contact 11	Contact 12
a. Name of Firm Contacted			
b. Contact's Phone Number or E-Mail			
c. Firm Type	☐ MBE ☐ WBE ☐ Other DBE	☐ MBE ☐ WBE ☐ Other DBE	☐ MBE ☐ WBE ☐ Other DBE
d. On DOT UCP list?	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
e. Date Contacted			
f. Result of contact			
g. Bid received?	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
h. If bid received and rejected, why rejected?			
i. Utilizing this firm? (If yes, more on p. 4)*	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Information Needed For Review	Contact 13	Contact 14	Contact 15
a. Name of Firm Contacted			
b. Contact's Phone Number or E-Mail			
c. Firm Type	☐ MBE ☐ WBE ☐ Other DBE	☐ MBE ☐ WBE ☐ Other DBE	☐ MBE ☐ WBE ☐ Other DBE
d. On DOT UCP list?	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
e. Date Contacted			
f. Result of contact			
g. Bid received?	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
h. If bid received and rejected, why rejected?			
i. Utilizing this firm? (If yes, more on p. 4)*	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No

Form 8700-294A (R 03/17)

Information Needed For Review	Contact 16	Contact 17	Contact 18
a. Name of Firm Contacted			
b. Contact's Phone Number or E-Mail			
c. Firm Type	☐ MBE ☐ WBE ☐ Other DBE	☐ MBE ☐ WBE ☐ Other DBE	☐ MBE ☐ WBE ☐ Other DBE
d. On DOT UCP list?	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
e. Date Contacted			
f. Result of contact			
g. Bid received?	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
h. If bid received and rejected, why rejected?			
i. Utilizing this firm? (If yes, more on p. 4)*	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No

[illegible]

**Disadvantaged Business Enterprise (DBE) Program
DBE Subcontractor Utilization Form**

This form is intended to capture the prime contractor's actual and/or anticipated use of identified certified DBE¹ subcontractors² and the estimated dollar amount of each subcontract. An EPA Financial Assistance Agreement Recipient must require its prime contractors to complete this form and include it in the bid or proposal package. Prime contractors should also maintain a copy of this form on file.

Prime Contractor Name J. F. Ahern Co.		Project Name Wausau WWTF Screening Improvements	
Bid/ Proposal No. 14279	Assistance Agreement ID No. (if known)	Point of Contact Jacob Loehr	
Address 855 Morris St., Fond du Lac, WI 54935			
Telephone No. 920.907.5148		Email Address jloehr@jfahern.com	
Issuing/Funding Entity: City of Wausau			

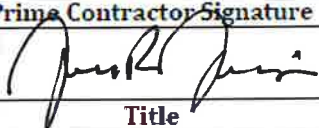
I have identified potential DBE certified subcontractors		<u> X </u> YES	<u> </u> NO
If yes, please complete the table below. If no, please explain:			
Subcontractor Name/ Company Name	Company Address/ Phone/ Email	Est. Dollar Amt	Currently DBE Certified?
Mavo Systems	4455 Stewart Ave Wausau, WI 54401 715.225.0197 dkufahl@mavo.com	\$8,810	Yes
Vyron	401 Pilot Court Ste B Waukesha, WI 53188 608.729.5690 lsmith@vyron.com	\$45,020	Yes
Continue on back if needed			

¹ A DBE is a Disadvantaged, Minority, or Woman Business Enterprise that has been certified by an entity from which EPA accepts certifications as described in 40 CFR 33.204-33.205 or certified by EPA. EPA accepts certifications from entities that meet or exceed EPA certification standards as described in 40 CFR 33.202.

² Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an EPA award of financial assistance.

**Disadvantaged Business Enterprise (DBE) Program
DBE Subcontractor Utilization Form**

I certify under penalty of perjury that the forgoing statements are true and correct. Signing this form does not signify a commitment to utilize the subcontractors above. I am aware of that in the event of a replacement of a subcontractor, I will adhere to the replacement requirements set forth in 40 CFR Part 33 Section 33.302 (c).

Prime Contractor Signature	Print Name
	James R. Jarvis
Title	Date
Executive Vice President	9.17.2024

The public reporting and recordkeeping burden for this collection of information is estimated to average three (3) hours per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed form to this address.

From: James Force jim.force@aol.com
Subject: Task force
Date: Oct 1, 2024 at 10:02:52
To: James Force jim.force@aol.com

Consumer confidence report task force

Our task force (Watson, Force, Boers) met Sept. 17 to discuss the water utility's consumer confidence report and what changes might be considered to improve public understanding of the data.

We understand the numerical tables are required by regulators and must be in the reports. But there is an opportunity to communicate more effectively about our water utility in these documents.

We recommend the reports include a brief narrative explaining the numerical tables in understandable language; a series of "little known facts" about water; latest news from the water utility; and graphics to help illustrate our messages, possibly depicting the water treatment and distribution systems.

We also feel our website needs a lot of work to communicate more effectively and interactively with our customers.

Force
Watson
Boers

Sent from my iPhone