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 **1 0 :30 a.m.** on **Tuesday, January 12, 2021.**

**AGENDA**

1. Approve Minutes of December 8, 2020 Meeting.
2. Director's Report on Utility Operations
   - Lead and Copper Rule Revisions
   - 2020 Sanitary Survey
   - DWTF Update
   - Wastewater Plant on Track to Meet Permit Limits for December
   - Interceptor Main Cleaning and Televising
   - New Hire for Sewer Maintainer – Levi Williams
   - COVID Samples for Wisconsin State Lab of Hygiene Study
   - Effluent PFAS Samples
3. Discussion and Possible Action on the Private Lead Service Line Funding for 2021.
4. Discussion and Possible Action on WAUter Savvy Decals for Utility Vehicles.
5. Discussion and Possible Action on Amendment of WMC Ch13 Related to Sewer Rates.
6. Discussion and Possible Action on Implementation of a Policy Manual Outline and Policy 301 – Review and Establishment of Sewer Rates.
7. Discussion and Possible Action Regarding Proposed Vergent Power Solutions Contract to Maintain Micro-turbines at Wastewater Plant.

Adjourn.

**Next meeting scheduled for February 2, 2021.*

THIS NOTICE POSTED AT CITY HALL AND EMAILED TO CITY PAGES AND DAILY HERALD: January 8, 2021 at 1:30 pm.

Due to the COVID-19 pandemic, this meeting is being held in person and via teleconference. Members of the media and the public may attend in person, subject to the social distancing rules of maintaining at least 6 feet apart from other individuals, or by calling 1-408-418-9388. The Access Code is 146 221 0403 and the password is mhKPyJcR662. Individuals appearing in person will either be seated in the Council Chambers or an overfill room, subject to the social distancing rules. Space available will be on a first come, first served basis. All public participants' phones will be muted during the meeting. Members of the public who do not wish to appear in person may view the meeting live over the internet at https://tinyurl.com/wausaucitycouncil on the City of Wausau's YouTube Channel https://www.youtube.com/channel/UC-Nigpdco_i8sq5FbbJD_aw and live by cable TV, Channel 981. Any person wishing to offer public comment who does not appear in person to do so, may e-mail michelle.weasler@ci.wausau.wi.us with "Water Commission public comment" in the subject line prior to the meeting start. All public comment, either by email or in person, will be limited to items on the agenda at this time. The messages related to agenda items received prior to the start of the meeting will be provided to the Chair.

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

**Minutes of December 8, 2020**

A meeting of the Wausau Water Works Commission was called to order at 1:00 p.m. in City Hall on December 8, 2020. In compliance with Wisconsin Statutes, this meeting was posted and receipted for by the Wausau Daily Herald on December 3, 2020.

Members present: President Rosenberg, Commissioners Robinson, Herbst, Gehin/WebEx.
Others present: Eric Lindman, Dave Erickson, Tonia Westphal/Clark Dietz, Steve Opatik/Becher Hoppe.

1) **Approve Minutes of November 10, 2020 Meeting.**
   Robinson moved to approve the minutes of the November 10, 2020 meeting. Seconded by Herbst. Motion to approve the minutes carried 4-0.

2) **Director's Report on Utility Operations.**
   Gehin asked if there were any other details on the I & I study. Erickson advised they met with Strand. They are getting some additional information such as pumping times and estimated gallons at the lift stations so they can finalize their report.
   Robinson had questions on the service line insurance program through the National League of Cities, he would assume there is another Underwriter for that. Lindman responded yes and he believed it was Home Serve. Robinson asked if there were a lot of other communities that have done this and his concern is a rebate to the utility. Lindman advised this is a choice for homeowners. It's a service that the customers would have the option to elect into but there would be an agreement between the utility and the National League of Cities for offering the program. He doesn't have all of the details ironed out yet. There aren't a lot of municipalities that are doing this yet in Wisconsin. They will reach out to the ones that are and see how it's going. It's essentially an insurance program where the customer will pay so much a month and if there is a leak, repair or replacement that is required then they make the claim and it would be covered.
   Robinson asked about the update of the sewer rate schedule. Is the attempt here to reference a process that will provide an attachment or note to the ordinance. How will we do that and also ensure due process and public participation. Lindman responded a couple of months ago we discussed implementing a policy manual. We're looking at a few different things right now for the policy manual and one of them is how sewer rates get implemented, looked at and raised. The issue right now is by statute, the commission has full authority to make adjustments to the sewer rates. How they're written is that the actual rates are in the ordinance but the council has full authority to amend the ordinance creating a conflict. So we'd like to take the rates out of the ordinance and have them on a fee schedule and the ordinance itself will just reference the fee schedule. This will eliminate the ordinance from having to be amended every time sewer rates change. Robinson asked if the council will have a role in that approval. The water rates are set through the PSC but the sewer rates are set through the local process. Lindman advised that's correct and final determination can be done by the Water Commission by statute. The council has delegated that authority to the commission through ordinance.
   Gehin wanted to go back to the service line insurance program. Who collects payment for this and

does everyone need to take part in it. Lindman advised this is an elective program and the city will not handle the fees.

3) **Request Approval of Chemical Quotes for Year 2021.**

Lindman advised we typically go out every year and this is final approval to enter into a contract with these vendors for 2021. Low bids as follows: Graymont Western Lime for Hydrated Lime @ 175.44/ton. Hydrite for Sodium Hypochlorite for 0.82/gal. Milport for Sodium Silicate for 0.1298/lb. and Air Products for Liquid Carbon Dioxide for 0.0675/lb. or 165/ton.

Motion by Robinson to approve the lowest qualified proposals. Seconded by Herbst.

Motion carried 4-0.

4) **Discussion and Possible Action on Acceptance of Proposal for Sewer Condition Assessment.**

Lindman advised we went out for bids for these services for cleaning and televising one of our large interceptors. We had a collapsed interceptor a couple months ago on Imm St. and it was a fairly extensive repair. It showed some hydrogen sulfide issues because it is concrete pipe. It has been on our schedule to try to get these lines cleaned. We had 4 bids that came in for that work. Hydro Kleen is currently doing our slip lining project. The 2 lowest bids were Hydro Kleen and Northern Pipe. We are proposing to move ahead with Northern Pipe which is about $500.00 more. This is based off performance with Hydro Kleen and the work they have with us right now.

Erickson advised that they're still finishing up that project and there's been some issues. They are more comfortable going with Northern Pipe at this time.

Motion by Robinson to approve Northern Pipe's proposal for $69,858.50. Seconded by Herbst.

Gehin questioned whether this was a bid or a proposal. Lindman advised he could have misspoken, but this is for services, not construction.

Motion carried 4-0.

5) **Discussion and Possible Action on Vergent Proposal for Micro-Turbine Factory Protection Plan Extension.**

Erickson explained that they have 2 micro-turbines that generate electricity from the methane that is generated from the digesters. They've been running consistently since purchasing them 9-10 years ago but the service contract is running out. We have the option of extending that and he recommends we do extend it. This doesn't run out until January 2021 so we do have the option of reconsidering this at that time. He has requested some additional information. They're going to be onsite next week to take a look at what we have and go over those proposals. This was just to make them aware that this is being looked at and we are evaluating the options. He would recommend bringing this back again in January.

Robinson asked if we have any type of maintenance or replacement schedules for the wastewater plant and water treatment plant. Erickson responded yes and no. The old system was based on an XP computer and that has essentially collapsed. For the time being, they are tracking key maintenance issues on an excel spreadsheet. As part of the new plant expansion, we will be looking at a system that would track that and be more extensive.

**Adjourn.**

There being no further business to discuss, motion was made by Robinson to adjourn the meeting. Seconded by Herbst.

Michelle Weasler, Recording Secretary
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WAUSAU WATER WORKS
FOR YOU!

**MEMORANDUM**

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

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

SUBJECT: Director's Report – December 2020

**WATER DIVISION**

1. EPA announces final Lead and Copper Rule revisions, please see attachment.

2. 2020 Sanitary Survey.

**WASTEWATER DIVISION**

1. The wastewater plant is on track to meet permit limits for December.

2. Northern Pipe started on the interceptor main cleaning and televising project on December 28th. A portion of that sewer main collapsed last summer and we are conducting this work to assess additional repairs that may need to be completed.

3. Levi Williams started as a Sewer Maintainer on December 14th and is a welcome addition to our staff. We are proceeding with filling another Sewer Maintainer and a Plant Mechanic position to be fully staffed.

4. We have continued to collect COVID samples for the Wisconsin State Lab of Hygiene study. Results and other information is available at https://www.dhs.wisconsin.gov/covid-19/wastewater.htm. They have requested that we increase the sampling frequency from 2 samples per week to 6 samples per week.

5. The WDNR collected a PFAS sample of our effluent on January 5th. This is a part of a study they are conducting following a general lack of participation when they asked utilities to voluntary collect samples.

| | |
|---|---|
| **From:** | Michelle Weasler |
| **To:** | Michelle Weasler |
| **Subject:** | FW: [EXTERNAL] [MARKETING] AWWA Regulatory Advisory - Announcement of final Lead and Copper Rule |
| **Date:** | Friday, January 8, 2021 9:40:07 AM |

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**From:** AWWA Public Affairs [mailto:publicaffairs@awwa.org]
**Sent:** Tuesday, December 22, 2020 5:14 PM
**To:** Scott Boers <Scott.Boers@ci.wausau.wi.us>
**Subject:** [EXTERNAL] [MARKETING] AWWA Regulatory Advisory - Announcement of final Lead and Copper Rule

Having trouble viewing the email below? Please click here.
Note: To ensure delivery to your inbox please add publicaffairs@awwa.org to your address book.

# Regulatory Advisory

**Who: U.S. Environmental Protection Agency (EPA)**
**What: Announcement of final Lead and Copper Rule**
**When: Today**

The U.S. Environmental Protection Agency (EPA) today announced its Lead and Copper Rule revisions. Once the final rule is published in the Federal Register, the rulemaking is officially complete.

AWWA is analyzing the materials released today by EPA but on first review, the final rule reflects many of the core elements of the November 2019 proposal including:

1. A requirement that utilities develop lead service line (LSL) inventories regardless of service line ownership, a necessary first step to eventually create a LSL removal program. Utilities must always pursue full lead service line replacement when disturbing a lead service line and are required to replace the utility-owned portion of a lead service when a customer elects to replace the customer-owned portion of the line.
2. Utilities will be required to test elementary schools and childcare facilities.
3. The 15 µg/L lead action level (90th percentile lead level) remains unchanged, but there is a requirement for public notification within 24 hours if a system exceeds the lead action level.
4. Corrosion control treatment requirements include a new “trigger level” (a 90th percentile lead level of 10 µg/L), that when exceeded a system that currently employs corrosion control would be required to re-optimize existing treatment. Systems that do not currently treat for corrosion control would be required to conduct a corrosion control study.

Important differences in the final rule from the proposal include:

1. Requirement that a fifth liter sample rather than a first liter sample in the LCR monitoring samples at a home with a lead service line be a fifth liter sample rather than a first liter sample.
2. Revision of the proposed “find and fix” requirements triggered based on individual lead values above 15 µg/L.
3. Clarification of how galvanized iron pipe should be treated in developing

inventories and sample plans.

AWWA President Melissa Elliott issued a public statement regarding the revisions.

As AWWA evaluates the final rule, systems are advised to:

1. **Begin now to take steps to meet compliance deadlines.** In order to meet rule requirements that take effect in 3 – 4 years (e.g., compliance sample pool and protocol, lead service line replacement and lead education) water systems need to organize available information and develop a plan to assure compliance when the rule provisions take effect.
2. **Talk about lead with your customers.** Every water system has a story to tell. Customers want to know about the likely sources of lead present in your community, what the system is doing to control corrosivity, and options for customers concerned about lead to take additional actions. Suggestions on how to communicate effectively are available in AWWA's Lead Communications Toolkit.
3. **Review and refine current corrosion control practice.** All systems serving more than 50,000 persons have a formal corrosion control treatment program. All other systems are managing their supplies, perhaps with active treatment measures, to reliably comply with the current LCR action levels. Understanding and modifying corrosion control take careful study and evaluation.
4. **Develop a lead service line inventory and strategy to remove lead service lines.** Lead service lines are a large potential source of lead in drinking water. The Lead Service Line Replacement Collaborative provides an introduction to building a community-based approach to lead service replacement. Replacing lead service lines completely will require a shared effort with customers, local government leaders, and numerous other local agencies.

AWWA has resources available to help utilities communicate about lead in drinking water, including:

- AWWA Lead Resource page, which includes a printable brochure on lead
- Lead whiteboard animation available on YouTube
- Lead Communications Toolkit
- DrinkTap's Lead in Water page

Questions about EPA's latest LCR action can be directed to Steve Via, director of federal relations, or Greg Kail, director of communications.

**AWWA Delivers Valuable Member Benefits**
Members receive news and information, periodicals and Section membership, as well as discounts on technical resources, conferences and other online learning opportunities. Learn more.

Comments or questions? Email service@awwa.org.
We welcome your thoughts and suggestions.

This email was sent by the American Water Works Association
6666 W. Quincy Ave., Denver CO 80235

This was sent to 02981620 scott.boers@ci.wausau.wi.us. You were added to the system February 26, 2016. Learn More.

AWWA may send emails regarding member benefits or announcements for products or training events. To manage what you receive update your Preferences.

If you are an existing AWWA Member or customer, you can manage your contact information and additional preferences through your AWWA Account.

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**State of Wisconsin**
**DEPARTMENT OF NATURAL RESOURCES**
**Wausau Service Center**
**225051 Rib Mountain Drive**
**Wausau WI 54401**

**Tony Evers, Governor**
**Preston D. Cole, Secretary**
Telephone 608-266-2621
Toll Free 1-888-936-7463
TTY Access via relay - 711

December 21, 2020

PWS ID#: 73701023
Wausau Waterworks-MC
Wausau, WI
Marathon County

Wausau City Clerk
ATTN: LESLIE KREMER, CLERK
407 GRANT ST
Wausau, WI 54403

Subject: 2020 Sanitary Survey Report and Notice of Noncompliance

Dear Ms. Kremer:

The purpose of a sanitary survey is to evaluate the water system's source, facilities, equipment, operation, maintenance, and management as they relate to providing safe drinking water. The sanitary survey is also an opportunity to update the Department's records, provide technical assistance, and identify potential risks that may adversely affect drinking water quality. This Sanitary Survey Report also serves as a Notice of Noncompliance for those deficiencies outlined below.

On 12/16/2020, Glenn Falkowski conducted a sanitary survey of your water system, Wausau Waterworks. During the sanitary survey Scott Boers was interviewed. At the completion of the survey, Scott was briefed on the preliminary findings. This report outlines the final findings, discusses problems that need to be addressed, and timelines for corrective action where appropriate.

A plan for corrective action, including a work schedule must be completed by 02/04/2021. Please provide a letter by 02/04/2021 indicating that you agree to the timelines listed below or with justification for adjusting these timelines. Depending on the type of corrective action you employ, you may need to obtain prior approval and submit additional plans to the Department.

Please make this report available to the City Council or Water Commission members so that the deficiencies and recommendations can be fully discussed.

**Significant Deficiencies**
During the course of the sanitary survey, 0 significant deficiencies were identified. Significant deficiencies represent an immediate health risk to consumers and indicate noncompliance with one or more Wisconsin Administrative Codes. As such, the deficiencies listed below should be corrected as soon as possible.

| Significant Deficiency | Compliance Due Date | Code Citation |
|---|---|---|
| None | | |

**Deficiencies**
During the course of the sanitary survey, 5 deficiencies were identified. It should be noted that all 5 of these deficiencies were noted in the previous sanitary survey and will be eliminated with the new plant construction. No new deficiencies were noted during this survey. Deficiencies indicate noncompliance with one or more Wisconsin Administrative Codes and/or are problems in the drinking water system that have the potential to cause

serious health risks or represent long-term health risks to consumers. Corrective action should be completed for these deficiencies as soon as possible. If there were any significant deficiencies identified above, those should be given highest priority.

| **Deficiency** | **Compliance Due Date** | **Code Citation** |
|---|---|---|
| 1. The floor of the clear well is not at least two feet above the water table. | 12/31/2022 | NR 811.63(4) |
| 2. The clear wells do not have adequate venting or overflows. | 12/31/2022 | NR 811.64 |
| 3. The clearwell hatches are not watertight. | 12/31/2022 | 811.64(7) |
| 4. The clearwell is not equipped with a means for bypass. | 12/31/2022 | 811.64(6) |
| 5. There are direct overflow cross-connections to sewers. | 12/31/2022 | NR 811.64(3) |

**Discussion and Schedule for Correction of Deficiencies:**

- The clearwell has a floor elevation below the normal water table elevation. The department recommends that the lowest elevations of floors and sumps of ground level reservoirs be placed at or above the normal ground surface. If the department allows the floor or sump to be below the normal ground surface, it shall be placed a minimum of 2 feet above the groundwater table. A clearwell exposed to groundwater may allow groundwater seepage directly into the finished water. This untreated groundwater could carry viruses or other contaminants into the finished water. **The clearwell will either need to be modified or replaced so that the floor elevation is a minimum of 2 feet above the water table in accordance with s. NR 811.63(4) or the utility will need to provide 4-log virus inactivation after the clearwell in accordance with s NR 810.31 Wis. Adm. Code by December 31, 2022.**
- The clearwell is not equipped with overflow piping or venting. All reservoirs are required to have properly designed overflows and vents. If the existing clearwell is filled beyond capacity due to a mechanical or control problem, the water will blow out the manhole hatches and flow onto the floor of the treatment plant pipe gallery. Hydrostatic pressure could also damage the concrete ceiling of the reservoir and disrupt the seal between the wall and ceiling joint. The flooded area will then flow back into the reservoir when the water level drops back to normal levels. Without proper venting, the air exchange required when the reservoir is filling, or emptying is uncontrolled and may induce contamination when drawing air from unprotected pathways. **The clearwell shall be provided with properly designed overflow(s) and vent(s) in accordance with s. NR 811.64(4) and (8) Wis. Adm. Code by December 31, 2022.**
- The clearwell hatches are currently metal plates on fitted concrete frames. One of the hatches has been modified to allow a cable to penetrate through the metal plate. For ground storage reservoirs, access manholes are required to be fitted with solid watertight covers which overlap the framed opening and extend around the frame a minimum of 2 inches. A compressible gasket shall be attached to the bottom side of the cover so that when the cover is closed it will provide a watertight seal around the manhole opening. Any flooding in the pipe gallery where the hatches are located would allow this water to flow through or around the hatch covers and into the finished water of the reservoir. **The clearwell shall be provided with properly designed access hatches in accordance with s. NR 811.64(7) Wis. Adm. Code by December 31, 2022.**
- The clearwell cannot currently be bypassed to route treated water to the pump chamber. In order to take the clearwell out of service, the entire treatment plant would need to be taken offline. For groundwater facilities, if the water system design is such that all water passes though one ground reservoir, there shall be bypass piping from the well pumps to the high lift pumps to allow the reservoir to be taken out of service for cleaning and maintenance. An alternative would be to pump the wells directly to the distribution system if they are capable of pumping against system pressure, however, the water would not be treated and would likely result in numerous water quality

complaints. **A method to bypass the clearwell shall be provided in accordance with s. NR 811.64(6) Wis. Adm. Code by December 31, 2022.**

- The recycle chamber is equipped with an overflow pipe, but that pipe is connected to the storm sewer without a proper air gap. Reservoir overflows are not allowed to discharge to a storm sewer manhole unless there is a free air break above grade. All overflow pipes shall be located so that any discharge is visible. This is essentially a direct cross connection between the storm sewer and the potable water system. The department may approve discharge with a free air break over a storm sewer manhole on a case by case basis. **The recycle chamber overflow shall be modified to provide a free air break before discharge to the storm sewer manhole in accordance with s. NR 811.64(3) Wis. Adm. Code by December 31, 2022.**

**Recommendations**

During the course of the sanitary survey, 3 recommendations were identified. Recommendations are suggestions the utility should consider to improve the services provided or indicate actions necessary to avoid future deficiencies.

| **Recommendation** |
|---|
| 1. Well pumps are required to be pulled and inspected on a regular basis; every 10 years is recommended. |
| 2. Isolated service areas should be looped whenever practicable. |
| 3. An inventory of service line and internal plumbing materials should be compiled for each service. |

**Discussion of Recommendations:**

- Well pumps are required to be pulled on a regular basis; every 10 years is recommended. The pump at Well 10 was last pulled and inspected in 2006 and should be considered for service soon.
- There are several isolated service areas in the Wausau distribution system. Isolated service areas are areas with significant populations that are served by one water main. A water main break or other disruption of this water main will cause the area of service downstream to be without a means of supply until the water main can be repaired. Isolated service areas can be prevented by looping the area back into the distribution system. The most significant isolated service area is the west industrial park area. Providing an alternate route or loop to this area should be considered a priority project for the future.
- The operators should increase efforts to maintain an inventory of service laterals and home plumbing construction materials as discussed during the survey. Per ss. NR 809.119(4) and NR 809.547(1)(b) Wis. Adm. Code, the city is required to collect information where possible during normal operations, including checking service line materials when reading meters or performing maintenance activities including meter replacements, complaints, cross connection inspections and all construction activities. Note the materials coming into the meter and the plumbing materials used in the home. Any time work is done on water mains, note the materials and construction from the water main to the curb stop and correlate with the last known date that the water main was worked on. Data should be compiled in a readily searchable format and available for review when requested.

**Non-conforming Features**

During the course of the sanitary survey, 8 features that met code requirements at the time of your public water system's construction but would not be allowed in the current code were discovered. These are referred to as "non-conforming features." Though you are not required to correct these non-conforming features at this time, they will need to be corrected when any major work is done in the future.

| **Non-conforming Features** |
|---|
| 1. The pump base or the termination of the well casing is not adequate. |
| 2. Well house floor drains are no longer allowed to discharge to a gravel pocket or French drain. |

| Non-conforming Features |
| --- |
| 3. Wells shall not be located within 200 feet of a sanitary sewer main. |
| 4. Filters shall be designed for the prevention of floor drainage to the filter with a minimum 4-inch curb around the filters. |
| 5. Well houses must have a least one outward opening doorway to the outside |
| 6. Well vents for well casings 10" in diameter or larger are now required to be at least 2" in diameter. |
| 7. Well house floor drains shall not be located closer than 2 feet to the outer well casing. |
| 8. Chemical feed systems are required to have secondary containment. |

**Discussion of Non-conforming Features:**

- Pump bases are now required to be a minimum of 12 inches above the floor. The pump base at Well 6 does not meet this requirement. This is scheduled to be completed with the current treatment plant project.
- The floor drains at Wells 3 and 9 are reported as discharging to a gravel pocket; current code now requires pump house floor drains to be connected to a sanitary sewer, a holding tank or discharge to the surface of the ground at least 25 feet from the well building. The floor drain at Well 9 will be modified to comply with current code under the current treatment plant project.
- A sanitary sewer main is regarded as a potential source of contamination and wells are now required to have a minimum separation of 200 feet to a sanitary sewer main. Alternative criteria can be granted to have the well located within 50 feet, provided the sewer main is constructed to C900 DR18 pressure pipe standards. Wells 3, 6, 7 and 9 are listed as having a sanitary sewer main located within 200 feet of the well. If these roads are scheduled for reconstruction, the sewer main should either be relocated at least 200 feet from the well, replaced with C900 DR18 pressure pipe or slip lined to water main specifications in those portions that are located within 200 feet of a well.
- The filters are located on a slightly elevated platform from the main walkway, but the walkways along the filters are flush with the filter basins. Dirt or debris could wash directly into the filter basins from these walkways. Filter basins are now required to have a minimum 4-inch curb around the filters. This non-conforming feature will be eliminated with the demolition of the old plant.
- Well houses are required to have at least 1 outward opening doorway to the outside. This is to prevent interior flooding from pining the door to the frame and impeding access. Wells 6 and 7 have doorways that open inward although there are openings to the building that are boarded shut that could provide access in an emergency. Outward opening doorways are included in the new treatment plant project.
- Wells with vertical turbine pumps in casings over 10 inches in diameter are now required to be equipped with a well vent that is 2 inches in diameter or greater to insure adequate venting. The next time the pumps are pulled for maintenance, the well vents should be upgraded to the larger diameter. Wells 9 and 10 are scheduled to have their well vents upgraded to 2-inch diameter during the new water plant project.
- Floor drains are not allowed to be located within 2 feet of the outermost casing of a well. The floor drain at Well 9 is located closer than 2 feet to the outer well casing. This will be modified with the treatment plant project.
- All chemical feed equipment is now required to be housed in an area that provides containment for any chemical leaks or spills. The containment area must be capable of handling the entire volume of the chemical solution tank(s). The containment area may not include a floor drain. Only the sodium hypochlorite feed equipment is currently equipped with secondary containment. The new plant will be equipped with proper chemical feed containment.

**System Summary**

Wausau is located in Marathon County, at the intersections of Interstate 39, State Hwy. 51 and State Hwy. 29. The water supply is owned by the city and includes the following: 6 active wells, chemical addition equipment for the addition of chlorine, fluoride, and silicates, a lime softening plant, clearwell, 6 elevated reservoirs, and a distribution system. The original waterworks began operation in 1885. A filtration plant for iron removal was constructed in 1927 and was replaced with a lime softening plant in 1963. A solids separation/water recycle facility was added in 1975-76. Air stripping facilities for volatile organics removal were constructed in 1984 to treat water from Wells 3, 4 and 6. A second river crossing and Well 10 were added in 1988 to provide additional transmission capacity and routing options from the West Side Wellfield to the plant. Well 11 was added in 2001 and seldom used Well's 4 and 8 were properly filled and sealed shortly thereafter. Auxiliary power is available at Well's 3, 7 and 11, the entire water treatment plant operation is supported by auxiliary power and all booster stations also have auxiliary power available. Well 6 has an auxiliary engine with right angle drive on site, but Scott stated that due to mechanical issues, this unit would not likely be used during a power outage. A new generator set will be installed at Well 6 as part of the new treatment plant project.

All 6 wells are routed through the lime softening plant to remove elevated levels of iron and manganese. Clarion 415 is injected below the aerators prior to the clarifier. Hydrated lime and a mixture of Clarion 700, water and silicate are added at the clarifier mixing zone. Fluoride is added after the clarifier, just prior to the filters. Disinfection is accomplished with chloramines by combining sodium hypochlorite and ammonia in the clearwell. Chloramines help to reduce trihalomethane formation, which are a byproduct of chlorine and naturally occurring organic compounds. Silicates are added at the high lift discharge to reduce the natural corrosive tendencies of the groundwater found in this area. The utility determined that corrosion control was also improved by maintaining a stable disinfection level throughout the distribution system; this is aided by more frequent flushing of low flow areas and an established annual unidirectional flushing program.

A second clarifier unit was added in 2000 along with bulk chemical storage. The utility made the switch from gas chlorine to chloramine disinfection at the same time. The second clarifier allows the utility to take a clarifier unit out of service for maintenance and repair without interruption of the treatment process. The second clarifier unit did not add to the overall production capacity of the treatment plant.

In 2009 and 2010 the City added a booster station to serve the Village of Brokaw and two additional booster stations to improve system pressure as the system continues to expand east and west. The City now has 8 separate pressure zones, not including the Village of Brokaw. The area served by the West Hill booster, has not yet been developed and this booster station remains offline. The newest booster station serves the West Development Court and feeds a 200,000-gallon spheroidal reservoir.

Groundwater contamination discovered in the early 80's resulted in Wells 3 and 6 being routed through packed tower aerators located at the water treatment plant. The ongoing groundwater cleanup still controls how the City of Wausau operates their well system. Well 6 is required to operate 24/7 during the week to essentially serve as an extraction well. Based on demand, the utility operates Well 6 with Well 10 one week, and alternates with Well 11 the next week. The other wells: 3, 7 and 9 are run on the weekends. Entry Point 200 consists of Wells 6, 10 and 11 and Entry Point 300 includes Wells 3, 7 and 9.

The operational well capacity is about 16.5 million gallons per day, but the maximum water treatment plant capacity is about 12 million gallons per day and is the limiting factor. With all wells in the daily rotation, the average day demand could be satisfied with the wells running about 6 hours in a 24-hour period. Maximum day demands can be met with all wells running approximately 10 hours in a 24-hour period. Average day demands are around 4 million gallons per day and can be met with the available auxiliary power should an electrical failure occur. Water loss rates dropped significantly after a large leak was discovered in 2014 and have been about 5% in the past three years. Total gravity storage is 4.75 million gallons or roughly an average day volume.

A number of deficiencies were identified in the previous Sanitary Survey related to design short comings with the aging plant. The clearwell elevation was below the groundwater table elevation, there was no overflow or venting built in, no means for by-pass and the manhole covers were not watertight. In addition, the recycling chamber overflowed to a manhole structure linked directly to the storm drainage system. Due to the flood elevation in this area, retrofitting of the existing treatment plant to meet current code conditions would have been difficult. The city made the decision to construct a new treatment facility on the west side of the Wisconsin River, at a much higher elevation and in close proximity to the majority of the wells. The new plant will eliminate all of the deficiencies identified at the existing plant as well as improve the treatment provided to include TOC and color reduction, improved manganese removal and provide enhanced disinfection.

Enhanced disinfection was required based on the history of re-occurring total coliform positive samples with occasional e-coli positive occurrences at Well 11. Source water characterization requirements will likely be required and will either be covered with the start-up letter for the new plant or under separate cover. The expected start up of the new treatment facility is scheduled to occur in 2022. In accordance with the approval letter, the following items must still be addressed prior to placing the new water treatment plant into service:

- The appropriate rapid mix detention time and G value shall be determined through jar testing and the results submitted to the department for review and comment prior to installation of the rapid mix system. (s. NR 811.47 (7)(b)1., Wis. Adm. Code)

- Shop drawings for the finished water reservoir/CT tank vents shall be submitted to the department for review and the subsequent written comments of the department obtained prior to installation. (s. NR 811.08 (1), Wis. Adm. Code)

- The chlorine contact tanks shall be tracer tested and the results shall be submitted and reviewed by the department. In addition, the tracer testing protocol should be submitted for review and comments. (s. NR 811.65(2)(b), Wis. Adm. Code)

- A Wisconsin Pollutant Discharge Elimination System (WPDES) permit is required under ch. 283, Wis. Stats. for the process waste tank overflow discharge. Prior to placing the treatment plant into service, all requirements of s. NR 810.19, Wis. Adm. Code shall be met. Information to apply for a WPDES permit can be found on the department's web page for wastewater general permits (https://dnr.wi.gov/topic/wastewater/GeneralPermits.html).

- The City shall demonstrate the successful automated operation of the water plant for a minimum of 6 months and prepare an operation manual prior to requesting approval for unattended operation. (s. NR 810.21, Wis. Adm. Code)

A water system summary, based on the information available in our data system, is attached. Please review this information for accuracy. If there are changes that need to be made, contact me at (715) 359-5284.

**Water Quality Monitoring and Reporting**

The utility has a very good overall monitoring and reporting record. Bacteriological samples have been submitted on a timely basis and all Safe Drinking Water Act samples have been submitted as required. The monthly reports are completed and submitted on a timely basis. Updated sampling site plans for Bacteriological sampling, Disinfection Byproducts sampling and Lead and Copper sampling are on file with the department as required.

All monitoring samples were well within acceptable parameters. The operator stated that the utility receives very few water quality complaints from residents although the water supplied has a slight yellow tint due to tannins. The lime softening plant does a very good job of removing the high manganese concentrations in the raw water,

but manganese concentrations are occasionally over the secondary standard of 0.05 ppm when leaving the plant. The new plant design will be equipped to reduce both the color and the manganese concentrations to lower levels.

All municipal water systems are now required to maintain an inventory of all water main and plumbing materials found in the water system. The operators should maintain an inventory of distribution system mains, laterals and home plumbing construction materials as discussed during the survey. Per ss. NR 809.119(4) and NR 809.547(1)(b) Wis. Adm. Code, the city is required to collect information where possible during normal operations, including checking service line materials when reading meters or performing maintenance activities including meter replacements, complaints, cross connection inspections and all construction activities. Note the materials coming into the meter and the plumbing materials used in the home. Any time work is done on water mains, note the materials and construction from the water main to the curb stop and correlate with the last known date that the water main was worked on. Data should be compiled in a readily searchable format and available for review when requested. Much of this information must also be reported to the Public Service Commission (PSC) for their annual report.

Scott said that this data has been captured for the past several years, but there are still a lot of private services where this information needs to be verified. The identification of the private side lead service lines should be given the highest priority. The state has over 60 million dollars in principle forgiveness money available to be used for private lead service line replacements, but this funding source will not be available for very long. The utility is strongly encouraged to take advantage of this funding source to eliminate as many lead services as possible from the system.

**Required Reports, Records, and Utility Programs**

The cross-connection program implementation has improved. The operators perform cross-connection inspections at the residential services during meter replacements or repair and a survey form is used to document each inspection. The utility is in the process of switching over to a 20-year replacement schedule. Residential surveys are done as partial home inspections, including all areas of the premise other than normal kitchen and bathroom fixtures. A brochure is provided at the time the survey is conducted and is provided system wide every three years as required; the brochure was last provided system wide in 2019.

The non-residential surveys have been contracted out to Hydro Corp Inc., since 2015 and the entire city has had at least an initial survey completed. Surveys are now scheduled for 2, 6- or 10-year surveys based on sanitary hazards present and the ordinance language is up to date.

The local well regulation program now has 121 private wells on record, 106 of the 121 known wells are under permit and the remaining 15 wells are currently in the process for a permit or filling and sealing. The ordinance was last updated in 2011 and contains the latest required language.

As additional wells are discovered during routine cross connection inspections, those well owners need to apply for well permits or have their wells filled and sealed. It should be noted that wells can no longer be filled and sealed by the homeowner and must be filled and sealed by a licensed well driller, pump installer, or a certified waterworks operator within their community. In addition, a licensed well driller or pump installer must inspect any private well system before a new permit can be issued and re-inspect the well every 10 years thereafter.

The city has a comprehensive well head protection plan for all of the wells, which includes an ordinance. Land adjacent to Wells 9, 10 and 11 is now the site for the new water treatment facility which will enhance the protection for these wells.

Valves are exercised on a 10-year rotation with a variance granted for the 10-year interval. Valves that are found not functioning properly are placed on a work order status for repair. Inventory and locational records are

becoming established for the valves and hydrants, as required; the valve exercising machine geo-locates each valve position.

The utility adopted a unidirectional flushing program to help clean the water main system rather than exercising the hydrants once each year. The added benefit is to remove iron and manganese scales from the distribution piping, which may contain adsorbed lead. This was one of the recommendations to reduce Wausau's lead concentrations outlined in the corrosion study performed by Process Research. The annual uni-directional flushing program was listed as one of the methods to be used to optimize the utilities overall corrosion control program. This program also compliments the valve exercising program, as valves need to be operated to control the flow route.

The distribution reservoirs, clearwell and backwash reservoirs were all dive inspected in 2019 and will be due for complete drain down inspections in 2024. The clearwell and backwash reservoirs were allowed to be dive inspected again since they cannot be taken offline without taking the entire treatment plant offline as well. This is a deficiency that will be eliminated with the new plant design. The dive inspections were performed by Liquid Engineering. The Industrial Park reservoir is now equipped with a valve arrangement to allow the reservoir to be drained through an isolation hydrant without disrupting service. This reservoir has been equipped with a frost resistant vent system and equipped with a mixer to ensure stratification is minimized. A new spheroidal reservoir, added to serve the West Development Court in 2018, will need to be inspected in 2023.

**Certified Operator**

Scott Boers is listed as your designated "Operator in Charge" for the water system at Wausau. Scott is certified in the Groundwater (G), Distribution (D), Lime Soda Ash Treatment (L) and Specialized Treatment (V) subclasses that are required to operate this system. Kevin Behnke, and Floyd Smith are also certified in the G, D, L and V subclasses. There are a number of other operators with various certifications either working in the plant or on the distribution crew. Operators are required to accumulate a minimum of 18 continuing education credits every three years to maintain their certifications. A number of the operators have an Operator-In-Training (Grade T) designation and should complete and submit an experience form once they have completed at least 12 months of experience working in the various aspects of their certifications.

**Water System Security**

It is recommended that a daily security check be performed on the entire drinking water system to ensure doors are locked, windows are secured, and nothing has been tampered with. All water supply facilities are equipped with intrusion alarms linked to the SCADA system. Many of the reservoirs are also equipped with chain link fenced enclosures to provide additional security. The utility should continue to enhance the security of all of their water supply facilities whenever possible with special attention to cyber security aspects.

The Emergency Operations Plan (EOP) was recently updated in July of 2019, and a tabletop exercise was conducted in October of 2015. It is important to keep the EOP updated and staff trained in all aspects of the plan. As a reminder, the American Water Infrastructure Act of 2018 (AWIA) will require the utility to submit confirmation of completion for a risk and resilience assessment by June 30, 2021 and confirmation of an Emergency Response Plan by December 31, 2021. These are reported online directly to the EPA and will need to be updated every 5 years.

**Capacity Development Evaluation**

This sanitary survey serves as an evaluation of the capabilities of your water system. This system has been determined to have adequate technical, managerial and financial capacity to provide safe drinking water. The ability to plan for, achieve, and maintain compliance with applicable drinking water standards has been demonstrated.

The utility is commended for moving forward with construction of the new water treatment plant. This plant will eliminate the many deficiencies related to the old treatment plant design and the new location will eliminate the potential flooding hazards that the old location was subject to. Many of the non-complying features throughout the water system facilities will also be upgraded with the new treatment plant project.

The next sanitary survey of your system is scheduled to take place in 2023. The designated operator in charge will be contacted prior to the survey to schedule a date that is convenient.

**Please respond within 45 days of receipt of this letter (by 02/04/2021) with notification that all deficiencies have been corrected, or with a plan for correcting the deficiencies identified above by their respective deadlines.**

I would like to thank Scott Boers for his time and cooperation during the sanitary survey. If there are any questions concerning this report, please feel free to contact me at glenn.falkowski@wisconsin.gov or by phone (715) 359-5284.

Sincerely,

Glenn Falkowski, P.E.
Environmental Engineer
Department of Natural Resources

cc: Bureau of Drinking Water/Groundwater – DG/5 (OnBase File)
Troy Stapelmann, Eau Claire (e-mail only)
Wausau File
Eric Lindman (e-mail only)
Scott Boers, Wausau (e-mail only)

**Water System Summary Information**
System ID: 73701023
System Name: WAUSAU WATERWORKS
County: Marathon
Type: Municipal Community
Basin: Wisconsin River (upper)
Population: 39106
Service Connections: 15643
Owner: WAUSAU CITY CLERK
ATTN: LESLIE KREMER, CLERK
407 GRANT ST
Wausau, WI 54403
(715) 261-6620 Fax: (715) 261-4133 leslie.kremer@cl.wausau.wi.us
Date Security VA Complete: 06/24/2004
Date ERP Complete: 12/22/2004
Date ERP Last Exercised/Updated: 10/15/2015
Emergency Phone: (715) 571-7752
Emergency Fax:
Emergency E-mail: scott.boers@ci.wausau.wi.us

**Certified Operators**

| Name | Lic. # | Expires | Phone/Fax/E-mail | Address 1 | Address 2 | City, State, Zip |
|---|---|---|---|---|---|---|
| KEVIN BEHNKE | 37119 | 11/01/2022 | (715) 261-7287 frstkg@netzero.net | 233591 POND CREST RD | | WAUSAU, WI 54403 |
| SCOTT BOERS | 35065 | 11/01/2022 | (715) 571-7752 Scott.Boers@ci.wausau.wi.us | 4014 HENRY ST | | WAUSAU, WI 54403 |
| RICKIE DORN | 36471 | 11/01/2020 | (715) 571-7747 rickdornjr@yahoo.com | W1279 ROBINSON DR | | MERRILL, WI 54452 |
| DAVID ERICKSON | 34268 | 05/01/2023 | (715) 261-6941 dave.erickson@ci.wausau.wi.us | 407 GRANT ST | | WAUSAU, WI 54403 |
| DARREN JENSEN | 37491 | 05/01/2023 | (715) 261-7288 truepurpose2008@hotmail.com | 809 S 48TH AVE APT 6 | | WAUSAU, WI 54401 |
| SHANNON LANE | 35075 | 11/01/2022 | (715) 573-4892 | N5404 COUNTY ROAD K | | IRMA, WI 54442 |
| TIMOTHY MESALK | 33015 | 11/01/2023 | (715) 261-7288 mesalks@charter.net | 231233 WELLBORN ROAD | | WAUSAU, WI 54403 |
| FLOYD SMITH | 36985 | 05/01/2022 | (715) 409-0780 jr_wildlife_09@yahoo.com | 1704 E 9TH ST | | MERRILL, WI 54452 |
| RAYMOND YOUNGER | 37109 | 11/01/2022 | (715) 571-7982 ryounger1979@yahoo.com | 238810 LITTLE ELM RD | | WAUSAU, WI 54403 |

**Affiliations**

| Name | Affiliation | Start Date | End Date | Primary? | Phone |
|---|---|---|---|---|---|
| SCOTT BOERS | SAMPLER | 04/01/2015 | | Y | 715-571-7752 |
| WAUSAU CITY CLERK | PLAN_CON | 05/11/2020 | | Y | 715-261-6620 |
| WAUSAU CITY CLERK | OWNER | 01/01/1960 | | Y | 715-261-6620 |
| ERIC LINDMAN | MANAGER | 05/07/2015 | | Y | |
| WAUSAU CITY CLERK | LEGAL_OWN | 09/23/2015 | | Y | 715-261-6620 |

| Name | Affiliation | Start Date | End Date | Primary? | Phone |
|---|---|---|---|---|---|
| SCOTT BOERS | EMERGENCY | 04/01/2015 | | Y | 715-571-7752 |
| GLENN FALKOWSKI | DNR_REP | 10/09/2006 | | Y | 715-359-5284 |
| ERIC LINDMAN | PLAN_CON | 11/06/2018 | | N | |

**Entry Points and Sources of Water (Basic Data)**

| Source ID | Name | WUWN | Status | Type | Source | Depth | Cased | Grouted |
|---|---|---|---|---|---|---|---|---|
| 3 | Well 3 | BG326 | Active | SOURCE OF WATER | Ground Water Source | 95 | 50 | 48 |
| 4 | Well 4 | BG327 | Perm Abandoned | ENTRY PT/SOURCE | Ground Water Source | 130 | 90 | 50 |
| 6 | Well 6 | BG328 | Active | SOURCE OF WATER | Ground Water Source | 100 | 61.5 | 100 |
| 7 | Well 7 | BG329 | Active | SOURCE OF WATER | Ground Water Source | 100 | 61 | 100 |
| 8 | Well 8 | BG330 | Perm Abandoned | ENTRY PT/SOURCE | Ground Water Source | 97 | 67 | 48 |
| 9 | Well 9 | BG331 | Active | SOURCE OF WATER | Ground Water Source | 100 | 60 | 58 |
| 10 | Well 10 | AR650 | Active | SOURCE OF WATER | Ground Water Source | 160 | 125 | 66 |
| 11 | Well 11 | MK460 | Active | SOURCE OF WATER | Ground Water Source | 155 | 115 | 155 |
| 200 | WELLS 6 10 and 11 | | Active | ENTRY POINT | Permanent Ground Water Entry Point | | | |
| 300 | WELLS 3, 7 AND 9 | | Active | ENTRY POINT | Permanent Ground Water Entry Point | | | |

**Entry Points and Sources of Water (Misc. Data)**

| Source ID | PLSS | Lat./Long. | Pump Cap. | Pump Type | Lube | Aux. Power? |
|---|---|---|---|---|---|---|
| 3 | T29, R7E, S24, Q-SW QQ-SW | 44.97473N x 89.62815W | 2000 | Vertical_Turbine | Water | Yes |
| 4 | T29, R7E, S24, Q-SW QQ-SW | 44.97559N x 89.62810W | | | | Unknown |
| 6 | T29, R7E, S24, Q-NW QQ-SW | 44.98401N x 89.62940W | 1900 | Vertical_Turbine | Water | Yes |
| 7 | T29, R7E, S24, Q-NW QQ-NW | 44.98540N x 89.62678W | 2000 | Vertical_Turbine | Water | Yes |
| 8 | T28, R7E, S12, Q-NW QQ-NW | 44.92888N x 89.62708W | | | | Unknown |
| 9 | T29, R7E, S24, Q-NW QQ-NW | 44.98656N x 89.63013W | 1500 | Vertical_Turbine | Water | No |
| 10 | T29, R7E, S24, Q-NW QQ-NE | 44.98659N x 89.62399W | 3200 | Vertical_Turbine | Water | No |
| 11 | T29, R7E, S24, Q-NW QQ-NE | 44.98814N x 89.62331W | 3200 | Vertical_Turbine | Water | Yes |
| 200 | T, RE, S, Q-U QQ-U | N x W | | | | Yes |
| 300 | T, R, S, Q- QQ- | N x W | | | | Yes |

**Storage**

| ID/Location | Type | Vol. (gal) | Firm Pumping Capacity (gpm) | Height to Overflow (ft.) | Overflow Elev. (sea-level, ft.) | Aux. Power? | Mfg. | Model |
|---|---|---|---|---|---|---|---|---|

| ID/Location | Type | Vol. (gal) | Firm Pumping Capacity (gpm) | Height to Overflow (ft.) | Overflow Elev. (sea-level, ft.) | Aux. Power? | Mfg. | Model |
|---|---|---|---|---|---|---|---|---|
| 1801 NORTH RIVER DRIVE | GROUND STORAGE | 1000000 | 2400 | | | Yes | Dive Inspection, Liquid Engineering | Concrete Clearwell |
| ELM AND 12TH AVENUE | STANDPIPE | 2500000 | 500 | 16 | 1373 | No | Dive Inspection, LIQ ENG | reinforced concrete |
| WEST WAUSAU AND 28TH AVE | STANDPIPE | 300000 | 110 | 21 | 1510 | Yes | Dive Inspection, LIQ ENG | reinforced concrete |
| WEST WAUSAU AVENUE | ELEVATED TANK | 250000 | | 118 | 1606 | No | Dive Inspection, LIQ ENG | Steel spheroid |
| 13TH AND BROWN | ELEVATED TANK | 500000 | | 152.5 | 1510 | No | Dive Inspection, LIQ ENG | Steel Ellipsoidal |
| INDUSTRIAL PARK WEST | STANDPIPE | 1000000 | | | 1373 | No | Dive Inspection, LIQ ENG | Reinforced Concrete |
| WEST DEVELOPMENT COURT | ELEVATED TANK | 200000 | | 108 | 1536 | No | MAQUIRE IRON | STEEL SPHEROID |

**Booster Stations**

| ID/Location | Type | Firm Pumping Capacity (gpm) | Aux. Power? |
|---|---|---|---|
| BROWN STREET | ABOVE GROUND | 800 | Yes |
| WEST WAUSAU AVENUE | ABOVE GROUND | 110 | Yes |
| 28TH STREET | ABOVE GROUND | 500 | Yes |
| MONROE STREET (BACK UP ONLY) | ABOVE GROUND | | No |
| 18TH STREET BOOSTER | ABOVE GROUND | 300 | Yes |
| ELM AND 12TH (BACK UP ONLY) | ABOVE GROUND | 250 | No |
| N. 20th Avenue | ABOVE GROUND | 500 | Yes |
| 17th Street | ABOVE GROUND | 500 | No |
| West Hill | ABOVE GROUND | 500 | Yes |
| 84th Avenue Booster | ABOVE GROUND | 500 | Yes |

**System Interconnects**

| ID/Location | Type | Capacity (gpm) | Metered? | Chemical Injection Capable? |
|---|---|---|---|---|
| Schofield (emergency only) | BURIED | | No | No |
| Rib Mountain (emergency only) | BURIED | | Yes | No |
| BROKAW | BURIED | 500 | Yes | Yes |

**Treatment Summary Data**

| Source ID | Type | Description | Begin | End | Objective(s) | Pump Model | Cap. | Stroke % | Speed % | Sol. Tank Cap. | Dil. Ratio | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | 145 | Aeration, Packed Tower | 01/01/1984 | | Organics Removal | | | | | | | |
| 6 | 145 | Aeration, Packed Tower | 01/01/1984 | | Organics Removal | | | | | | | |
| 7 | 000 | 0 | 01/01/1960 | | No Treatment at Source | | | | | | | |
| 9 | 000 | 0 | 01/01/1960 | | No Treatment at Source | | | | | | | |
| 10 | 000 | 0 | 06/09/1988 | | No Treatment at Source | | | | | | | |
| 11 | 000 | 0 | 07/27/2006 | | No Treatment at Source | | | | | | | |
| 200 | 147 | Aeration, Slat Tray | 01/01/1963 | | Iron Removal | | | | | | | |
| 200 | 200 | Chloramines | 01/01/1963 | | Disinfection | PULSA FEEDER SODIUM HYPOCHLORITE FLOW PACED | 238 | 32 | 20 | 6000 | 0 | |
| 200 | 360 | Flocculation | 01/01/1963 | | Inorganics Removal | | | | | | | |
| 200 | 380 | Fluoridation | 01/01/1963 | | Other | Acrison dry feeder feeding pounds per day | 70 | | | | | |
| 200 | 500 | Lime - Soda Ash Addition | 01/01/1963 | | Inorganics Removal | LIME SLAKER | | | | | | |
| 200 | 600 | Rapid Mix | 01/01/1963 | | Inorganics Removal | | | | | | | |
| 300 | 147 | Aeration, Slat Tray | 01/01/1999 | | Iron Removal | | | | | | | |
| 300 | 200 | Chloramines | 01/01/1963 | | Disinfection | LMI B911 95 SB AMMONIA | 38 | 50 | 20 | 275 | 0 | |
| 300 | 240 | Coagulation | 01/01/1963 | | Inorganics Removal | | | | | | | |
| 300 | 345 | Filtration, Rapid Sand | 01/01/1963 | | Inorganics Removal | | | | | | | |
| 300 | 360 | Flocculation | 01/01/1963 | | Inorganics Removal | | | | | | | |
| 300 | 380 | Fluoridation | 01/01/1963 | | Other | | | | | | | |
| 300 | 449 | Inhibitor, Silicate | 01/01/1963 | | Corrosion Control | PULSAFEEDER FLOW PACED | 180 | 90 | | 250 | | |
| 300 | 500 | Lime - | 01/01/196 | | Inorganics | | | | | | | |

| Source ID | Type | Description | Begin | End | Objective(s) | Pump Model | Cap. | Stroke % | Speed % | Sol. Tank Cap. | Dil. Ratio | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Soda Ash Addition | 3 | | Removal | | | | | | | |
| 300 | 600 | Rapid Mix | 01/01/1963 | | Inorganics Removal | | | | | | | |

**System Evaluation Summary**

| Inspector/Reviewer | Date | Report Date | Type | Agency | Response Due | Response Recd |
|---|---|---|---|---|---|---|
| FALKOWSKI, GLENN | 12/16/2020 | 12/21/2020 | SURVEY | DNR | 02/04/2021 | |
| FALKOWSKI, GLENN | 11/02/2017 | 11/29/2017 | SURVEY | DNR | 01/12/2018 | 01/12/2018 |
| FALKOWSKI, GLENN | 11/13/2014 | 12/02/2014 | SURVEY | DNR | 01/16/2015 | 01/15/2015 |
| FALKOWSKI, GLENN | 12/19/2013 | 01/06/2014 | ANNUAL | DNR | | |
| FALKOWSKI, GLENN | 12/13/2012 | 12/18/2012 | ANNUAL | DNR | | |
| FALKOWSKI, GLENN | 11/30/2011 | 12/14/2011 | SURVEY | DNR | 01/30/2012 | 01/31/2012 |
| FALKOWSKI, GLENN | 11/16/2010 | 12/13/2010 | ANNUAL | DNR | | |
| FALKOWSKI, GLENN | 12/17/2009 | 01/05/2010 | ANNUAL | DNR | | |
| FALKOWSKI, GLENN | 10/20/2008 | 11/20/2008 | SURVEY | DNR | 01/12/2009 | 12/01/2008 |
| FALKOWSKI, GLENN | 11/14/2007 | 12/26/2007 | ANNUAL | DNR | | |
| FALKOWSKI, GLENN | 11/09/2006 | 12/13/2006 | ANNUAL | DNR | | |
| FALKOWSKI, GLENN | 11/15/2005 | 12/23/2005 | ANNUAL | DNR | | |
| FALKOWSKI, GLENN | 11/09/2004 | 12/21/2004 | ANNUAL | DNR | | |
| FALKOWSKI, GLENN | 11/06/2003 | 01/20/2004 | SURVEY | DNR | 03/10/2004 | 02/19/2004 |
| FALKOWSKI, GLENN | 12/09/2002 | 12/26/2002 | ANNUAL | DNR | | |
| FALKOWSKI, GLENN | 12/05/2001 | 12/26/2001 | ANNUAL | DNR | | |
| FALKOWSKI, GLENN | 11/01/2000 | 12/15/2000 | ANNUAL | DNR | | |

**Bacteriological Sampling History**

| Year | Distribution Safe | Distribution Unsafe | Confirmed Unsafe | Missed Samples | Raw Safe | Raw Unsafe | Fecal Positive? |
|---|---|---|---|---|---|---|---|
| 2020 | 470 | | | 0 | 23 | 1 | N |
| 2019 | 481 | | | 0 | 21 | 3 | N |
| 2018 | 485 | | | 0 | 25 | 2 | N |
| 2017 | 483 | | | 0 | 24 | | N |
| 2016 | 486 | | | 0 | 26 | | N |
| 2015 | 485 | | | 0 | 26 | 1 | N |
| 2014 | 485 | | | 0 | 27 | 3 | N |

**Chemical Sampling History**

| Year | Sample Group | Source ID | Samples Taken | Missed Samples | MCL Violations |
|---|---|---|---|---|---|
| 2020 | FLUORIDE | | 12 | 0 | 0 |
| 2020 | VOC | 300 | 1 | 0 | 0 |
| 2020 | SOC | 200 | 1 | 0 | 0 |
| 2020 | PBCU | | 30 | 0 | 0 |
| 2020 | VOC | 200 | 1 | 0 | 0 |
| 2020 | RAD | 300 | 1 | 0 | 0 |
| 2020 | IOC | 200 | 1 | 0 | 0 |

| Year | Sample Group | Source ID | Samples Taken | Missed Samples | MCL Violations |
|---|---|---|---|---|---|
| 2020 | IOC | 300 | 1 | 0 | 0 |
| 2020 | DBP | | 2 | 0 | 0 |
| 2020 | RAD | 200 | 1 | 0 | 0 |
| 2019 | FLUORIDE | | 12 | 0 | 0 |
| 2019 | NITRATE | 200 | 1 | 0 | 0 |
| 2019 | VOC | 300 | 1 | 0 | 0 |
| 2019 | SOC | 200 | 1 | 0 | 0 |
| 2019 | PBCU | | 30 | 0 | 0 |
| 2019 | VOC | 200 | 1 | 0 | 0 |
| 2019 | NITRATE | 300 | 1 | 0 | 0 |
| 2019 | DBP | | 2 | 0 | 0 |
| 2018 | FLUORIDE | | 12 | 0 | 0 |
| 2018 | VOC | 300 | 1 | 0 | 0 |
| 2018 | NITRATE | 200 | 1 | 0 | 0 |
| 2018 | SOC | 200 | 1 | 0 | 0 |
| 2018 | PBCU | | 30 | 0 | 0 |
| 2018 | VOC | 200 | 1 | 0 | 0 |
| 2018 | NITRATE | 300 | 1 | 0 | 0 |
| 2018 | DBP | | 2 | 0 | 0 |
| 2017 | FLUORIDE | | 12 | 0 | 0 |
| 2017 | VOC | 300 | 3 | 0 | 0 |
| 2017 | SOC | 200 | 1 | 0 | 0 |
| 2017 | PBCU | | 30 | 0 | 0 |
| 2017 | VOC | 200 | 3 | 0 | 0 |
| 2017 | IOC | 300 | 1 | 0 | 0 |
| 2017 | IOC | 200 | 1 | 0 | 0 |
| 2017 | DBP | | 2 | 0 | 0 |
| 2017 | SOC | 300 | 1 | 0 | 0 |
| 2016 | FLUORIDE | | 12 | 0 | 0 |
| 2016 | VOC | 300 | 4 | 0 | 0 |
| 2016 | NITRATE | 200 | 1 | 0 | 0 |
| 2016 | SOC | 200 | 1 | 0 | 0 |
| 2016 | PBCU | | 30 | 0 | 0 |
| 2016 | VOC | 200 | 4 | 0 | 0 |
| 2016 | NITRATE | 300 | 1 | 0 | 0 |
| 2016 | DBP | | 2 | 0 | 0 |
| 2015 | FLUORIDE | | 12 | 0 | 0 |
| 2015 | VOC | 300 | 4 | 0 | 0 |
| 2015 | NITRATE | 200 | 1 | 0 | 0 |
| 2015 | SOC | 200 | 1 | 0 | 0 |
| 2015 | PBCU | | 123 | 0 | 0 |
| 2015 | NITRATE | 300 | 1 | 0 | 0 |
| 2015 | VOC | 200 | 4 | 0 | 0 |
| 2015 | DBP | | 2 | 0 | 0 |
| 2014 | FLUORIDE | | 12 | 0 | 0 |
| 2014 | PBCU_RULE | 200 | 2 | 0 | 0 |
| 2014 | VOC | 300 | 4 | 0 | 0 |
| 2014 | PBCU_RULE | 300 | 2 | 0 | 0 |
| 2014 | SOC | 200 | 1 | 0 | 0 |
| 2014 | PBCU | | 35 | 0 | 0 |
| 2014 | PBCU_RULE | | 20 | 0 | 0 |

| Year | Sample Group | Source ID | Samples Taken | Missed Samples | MCL Violations |
|---|---|---|---|---|---|
| 2014 | VOC | 200 | 4 | 0 | 0 |
| 2014 | PBCU | 200 | 1 | 0 | 0 |
| 2014 | RAD | 300 | 1 | 0 | 0 |
| 2014 | IOC | 200 | 1 | 0 | 0 |
| 2014 | IOC | 300 | 1 | 0 | 0 |
| 2014 | PBCU | 300 | 1 | 0 | 0 |
| 2014 | DBP | | 2 | 0 | 0 |
| 2014 | RAD | 200 | 1 | 0 | 0 |

| Sample Group | Last Sampled |
|---|---|
| BACTI | 2020 |
| FLUORIDE | 2020 |
| IOC | 2020 |
| RAD | 2020 |
| HAA5 | 2009 |
| PBCU_RULE | 2014 |
| PBCU | 2020 |
| NITRATE | 2019 |
| VOC | 2020 |
| SOC | 2020 |
| TTHM | 2009 |
| DBP | 2020 |

**MCL Violations**

| Source ID | | Contaminant | Concentration | MCL | Units | Viol. Start | Viol. End | Continuing Operation? |
|---|---|---|---|---|---|---|---|---|

None

**Definitions**

MCL = Maximum Contaminant Limit (as set by the Environmental Protection Agency (EPA))
BACTI = Bacteriological Sample
IOC = Sample for Inorganic Compounds
NITRATE = Nitrate Sample
PBCU = Lead and Copper Sample
RAD = Sample for Radioactivity
SOC = Sample for Synthetic Organic Compounds
VOC = Sample for Volatile Organic Compounds
FLUORIDE = Fluoride from Fluoridation
TTHM = Total Trihalomethane Sample

Wausau Drinking Water Treatment Facility

Project Status

January 7, 2021

The mild start to winter has allowed concrete pouring and masonry work to continue into January. By the end of the month the contractor anticipates having most of the interior masonry walls in the south half of the main floor complete. Nearly all the process tank walls (east side of plant) have been poured. Weather permitting, the contractor hopes to complete the pours and begin water testing in the next two weeks.

The pre-cast roof planks over the electrical and chemical feed rooms were set into place mid-December. Interior masonry walls should be complete in January as well as some wall painting. This will allow installation of electrical equipment, HVAC components and some process piping to begin. Process piping installation on the grade level and basement level near the filters is ongoing.

After the January concrete and masonry work, the focus will shift from building construction to piping and equipment installation for the remainder of the winter.

BECHER HOPPE

## Dave Erickson

**From:** Hemming, Jocelyn C <jocelyn.hemming@slh.wisc.edu>
**Sent:** Wednesday, December 16, 2020 3:28 PM
**To:** Tyler Wagner; Dave Erickson
**Subject:** [EXTERNAL] DHS dashboard and other updates
**Attachments:** WausauReport12112020F.xlsx

**Follow Up Flag:** Follow up
**Flag Status:** Flagged

Wisconsin State Laboratory of Hygiene
UNIVERSITY OF WISCONSIN-MADISON

Dear Wausau Wastewater Treatment Plant,
We are happy to announce that the Wisconsin Department of Health Services (DHS) dashboard for Covid in Wastewater is live, and is found here:

https://www.dhs.wisconsin.gov/covid-19/wastewater.htm

If your facility isn't listed, it is because DHS needs the sewershed information from your facility to be able to relate case data to the wastewater results. If you have questions about the type of information they need or have the shapefiles of your service area, please contact Julia Olson and/or Nathan Kloczko at DHS.

julia.olson@dhs.wisconsin.gov
nathan.kloczko@dhs.wisconsin.gov

Three quick updates:

1. We have attached an updated preliminary interim report for samples collected through December 3.

2. You can expect to receive additional sampling kits the week of 12-28

3. Wisconsin has been selected by CDC to participate in the National Wastewater Surveillance System (NWSS). Therefore, we may be asking WWTFs for additional sampling events. More information will be forthcoming.

Thanks again for your participation!
Best Regards,
COVID Sewage Surveillance Team

Wisconsin State Laboratory of Hygiene
2601 Agriculture Drive
Madison, WI 53718
(608) 263-2444
CovidSewageTeam@slh.wisc.edu
COVID Sewage Surveillance website

**Dave Erickson**

**From:** Hemming, Jocelyn C <jocelyn.hemming@slh.wisc.edu>
**Sent:** Wednesday, January 6, 2021 5:21 PM
**To:** Tyler Wagner; Dave Erickson
**Subject:** [EXTERNAL] Requesting additional sample collection for COVID project

Wisconsin State Laboratory of Hygiene
UNIVERSITY OF WISCONSIN-MADISON

Hello Wausau WWTP,
We would like to do some higher frequency sampling of some facilities to explore issues associated with this project such as sources of variability and ways to normalize the COVID signal to populations. We are looking for facilities across a range of sizes that have had good consistency in COVID signal and relatively low industrial contribution. We have selected your facility and are reaching out to see if you would be willing to collect more samples for 6-8 weeks. The plan would increase sample collection to 6 days per week, but store the collected samples under refrigeration and ship to the lab twice per week.

For example, collect samples Monday, Tuesday, and Wednesday and ship Wednesday, Collect Thursday, Friday, Saturday, hold and ship Monday.

As with the current project, we would provide the supplies and there would be no additional cost to you other than your time. If you are willing to increase sample frequency or have any questions or concerns, please contact us. I will provide updated sampling schedules and supplies once I hear back.

Thanks again for your participation!
Best Regards,
COVID Sewage Surveillance Team

Wisconsin State Laboratory of Hygiene
2601 Agriculture Drive
Madison, WI 53718
(608) 263-2444
CovidSewageTeam@slh.wisc.edu
COVID Sewage Surveillance website

Jocelyn Hemming, PhD
EHD Env Tox, Water Micro Manager
Wisconsin State Lab of Hygiene
2601 Agriculture Drive
Madison WI 53718

# COVID-19 Wastewater Surveillance in Wisconsin

Date Updated: 01/06/2021

Click on the list or map to select a sewershed. Click again to deselect.

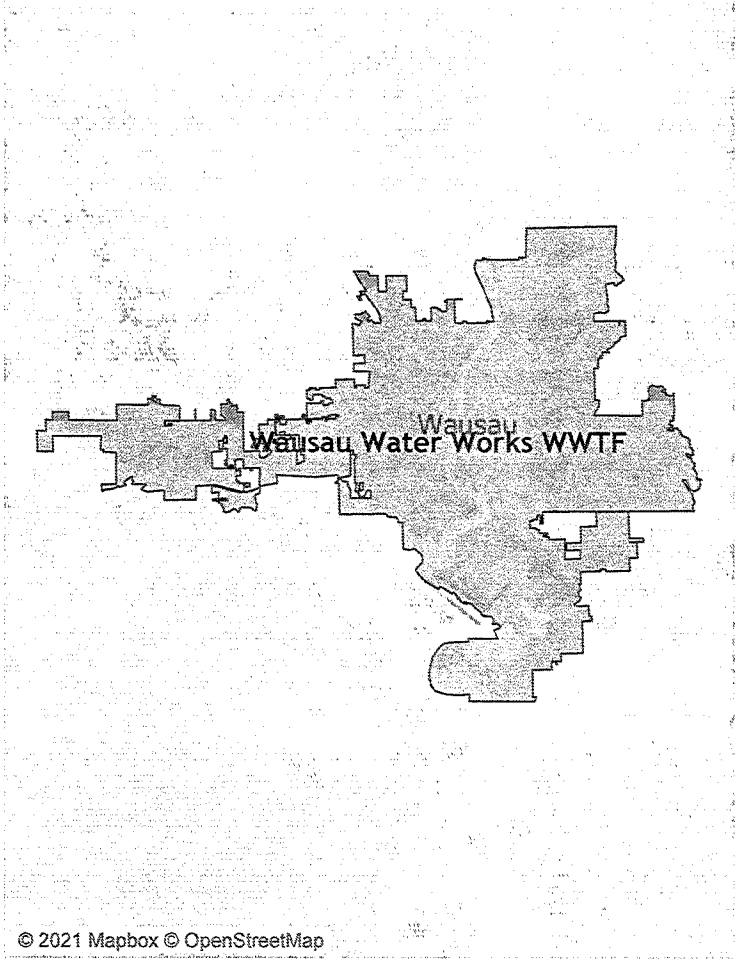
- Appleton WWTF
- Burlington WPCC
- Columbus WWTF
- De Pere WWTF
- Fox River WPCC
- Green Bay MSD
- Janesville WW Utility
- Kenosha WWTF
- La Crosse WWTP
- Madison MSD WWTF
- Manitowoc WWTF
- Marinette Wastewa..
- Marshfield WWTF
- Merrill WWTP
- Milwaukee MSD Jon..
- Milwaukee MSD Sou..
- New Richmond WW..
- Oshkosh WWTP
- Platteville WWTF
- Racine Wastewater..
- Rib Mountain MSD ..
- River Falls Municip..
- Sheboygan WWTP
- South Milwaukee W..
- Spooner WWTP
- Stevens Point WWTF
- Sun Prairie WWTF
- Viroqua WWTF
- Waukesha WWTP
- Wausau Water Wor..
- Whitewater WWTF
- Wisconsin Rapids W..

## Wausau Water Works WWTF

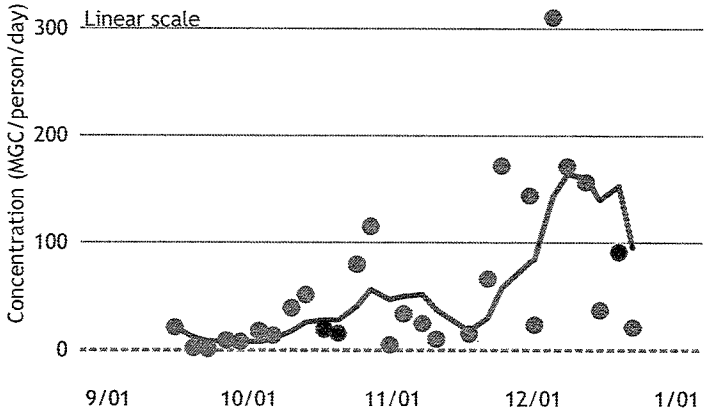
SARS-CoV-2 Concentration:
**No Significant Change**
from 12/8/20 to 12/23/20

COVID-19 Case Trajectory:
**No Significant Change**
from 12/22/20 to 1/6/21

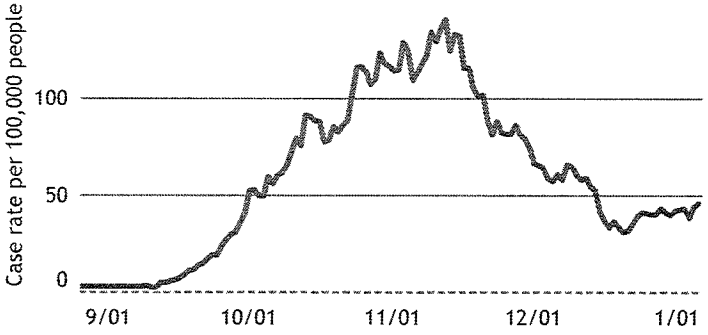
Estimated Population Served: **42,350**




Wastewater Concentration of SARS-CoV-2 in Wausau Water Works WWTF




7-day Average Case Rate of COVID-19 within Wausau Water Works WWTF Sewershed



Department of Public Works

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

**TO:** Wausau Waterworks Commission

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

**DATE:** January 12, 2021

**SUBJECT:** Wastewater (Sewer) Rates – Fee Schedule and CH 13.64 Amendment

---

The City established a Utility Commission under WMC CH 13.04 to manage and operate the water and sewerage utilities. Under this CH 13.04 the Utility Commission has been delegated, by the City Council, authority to "fix rates" subject to state statute and jurisdiction of the PSC. Throughout the state the majority of the municipalities have delegated rate authority to Utility Commissions in order to mitigate rates being politicized and creating financial hardships for a utility.

Under the WMC the Wausau Waterworks Commission has been delegated the authority to set sewer rates independently as needed to keep a financially healthy utility. Currently the sewer rates are written into the Wausau Municipal Code (WMC) CH 13.64. As written, any sewer rate changes approved by the Commission need to go to City Council to approve an amendment of the WMC, essentially having the City Council approve rate changes already approved by the Commission. This becomes a conflict of authority for approval of the sewer rates. In order to eliminate this conflict the sewer rates have been pulled out of the WMC and placed on a fee schedule and the fee schedule is referenced in WMC CH 3.40, similar to how other City related fees are referenced.

Staff recommends removing the fees from the WMC and establishing a fee schedule of the rates and referencing the schedule in the WMC. This will eliminate the need for amending the WMC each time a sewer rate adjustment is completed and also honors the authority delegated to the Wausau Waterworks Commission by the City Council. Establishing rates in a fee schedule is also beneficial as it is much more clear and easy to read the user rates than trying to discern the rates as currently written in the WMC.

Attached are the relevant chapters of the WMC as well as the proposed fee schedule for review and consideration. If approved the changes will be brought to the January 26 Common Council meeting for final approval of the changes to the WMC.

Attachments: WMC CH 3.40
WMC CH 13.04
Amended WMC CH 13.64
Sewer Rate Fee Schedule

# Chapter 3.40 - FEES AND LICENSES SCHEDULE

## 3.40.010 - Fees and licenses schedule.

(a) The City Council hereby adopts and incorporates into this Code by reference the City of Wausau Fees and Licenses Schedule. The schedule shall establish various fees and license as referenced throughout this Code. The schedule may be amended hereafter by resolution of the City Council.

(b) Said schedule shall be on file in the office of the City Clerk and shall be open to public inspection during business hours.

(Ord. 61-5633 §1, 2014, File No. 13-0309; Ord. 61-5553 §1(part), 2013, File No. 13-0309)

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## Chapter 13.04 - WAUSAU UTILITY COMMISSION

### 13.04.010 - Created.

There is created an independent and nonpartisan Utility Commission, which will be known as the Wausau Waterworks Commission ("commission"), which commission shall manage and operate the water and sewerage utilities of the City of Wausau, pursuant to Wis. Stats. § 66.0805. The commission shall operate the water utility and the sewerage utility, autonomously, as enterprise funds of the City.

These utilities shall collectively be referred to as ("utility").

(Ord. 61-5822 §4, (part) 2019; Ord. 61-4983 §1(part), 1997.)

### 13.04.020 - Membership, terms, appointments and meetings.

The Utility Commission shall consist of five members. The commission shall consist of the Mayor, one Alderperson elected from the membership of the Common Council, and three citizens of the City of Wausau.

The Mayor shall be deemed to be a member of the commission for the term for which he/she is elected, and the Mayor shall act as the president and presiding officer. The alderperson shall be elected (or re-elected) by the Common Council at the inaugural organizational meeting of the Council after its election, which alderperson shall serve a two-year term commencing immediately upon election, and which alderperson shall be the secretary of the commission.

The three citizen members of the commission shall be appointed (or reappointed) by the Mayor, subject to confirmation by the Common Council, and shall serve a five-year term of office which shall begin on the first day of May of the year in which the term commences.

Commission vacancies shall be filled for the unexpired term of office in accordance with appropriate state statutes and City ordinances, and shall be confirmed by the Common Council, as necessary.

These shall be regular monthly commission meetings, and special meetings may be held at any time upon the call of the president or upon the request of a majority of the commission. A majority of the commission shall constitute a quorum. The president shall have the authority to sign any contracts authorized by the commission.

(Ord. 61-5001 §1(part), 1998; Ord. 61-4983 §1(part), 1997.)

13.04.030 - Management and control.

The Utility Commission shall have the exclusive right to manage and supervise the utility subject only to the general control and supervision of the Common Council, with such general control and supervision being exercised pursuant to the enactment and amendment of this and other ordinances.

(a) *Management and staff.* The Director of Public Works and Utilities shall serve as the General Executive Officer of the utility to act on behalf of the commission. The commission delegates all other personnel matters to the Director of Public Works and Utilities and human resources department of the City to employ, compensate, set policy, and resolve all personnel matters as necessary in the best interest of the utility. The commission reserves the right to employ or contract for management and general operation of the utilities through agents or consultants as the commission deems necessary or convenient.

(b) *Director of Public Works and Utilities.* The Director of Public Works and Utilities shall serve at the discretion of the Utility Commission and will report directly to the president (Mayor). A detail of the job description of the Director of Public Works and Utilities' shall be maintained by the Human Resources Department. The Director of Public Works and Utilities will abide by and participate in all policies, benefits, compensation packages, etc., as established by the Human Resources Department and Committee which are ratified by the Common Council.

(c) *Rates, rules and regulations.* The commission shall have authority to fix rates, and establish rules and regulations for the governance, management, and operation of the utilities which make up utility, subject to state statutes and to the jurisdiction of the Public Service Commission of Wisconsin, Wisconsin Department of Natural Resources, and any other approving authority. The utility shall comply with and enforce any required regulations, tariffs, codes, permits, plan approvals, etc. The Common Council may enact and amend ordinances to confirm and/or modify policies, rates and regulations of the utility.

(d) *Contracts and other powers.* The commission shall have full authority to let bids and enter into contracts in the name of the City; provided, that such contracts are necessary or convenient to the management and operation of the utility and that funding is available. The commission shall have such other powers as are necessary or convenient to the management and operation of the utility, and the City intends that the commission shall have full authority respecting the utility unless that authority is specifically withheld by statute or ordinance.

(e) *Funding and financial control.* The commission shall oversee financial control through budget review, audits and directing the Director of Public Works and Utilities to prepare and summarize financial reports appropriate to ensure sound fiscal control of the utility. Each utility shall maintain segregated accounts to correctly reflect financial status under enterprise fund practices and will work with the Finance Department for the overall administration of utility finances. Payment shall be made for labor, salaries, and other regular expenses deemed appropriate to manage and operate the utility financial and other fiscal decisions necessary for day-to-day operations of the utility, shall be made either by the Director of Public Works and Utilities or under the direction of the Mayor.

(Ord. 61-5822 §5 (part), 2019; Ord. 61-5735 §8(part), 2017; Ord. 61-4983 §1(part), 1997.)

**CITY OF WAUSAU, 407 Grant Street, Wausau, WI 54403**

| **ORDINANCE OF THE WAUSAU WATER WORKS COMMISSION** | |
|---|---|
| Amending Section 13.64.010 Purpose; repealing and recreate Section 13.64.020 Basis for charges.<br><br>Committee Action: Pending **Ordinance Number:**<br><br>Fiscal Impact: | |
| **File Number:** | **Date Introduced:** |

The Common Council of the City of Wausau do ordain as follows:

Add ( )
Delete (———)

Section 1. That Section 13.64.010 Purpose is hereby amended to read as follows:

13.64.010 Purpose.

…

The utility will ensure that sewer rate structure is equitable amongst all users to recover actual costs associated with operation, maintenance, and replacement costs. ~~A rate review shall be performed once every two years~~ A rate review shall be performed as is needed and approved by the Wausau Waterworks Commission and the rate structure will provide sufficient funds to cover all ~~operating costs~~ operation, maintenance, and replacement costs. Excess revenue collected from a user class will be redistributed to the appropriate cost category for the following year as reasonably feasible. The utility will render a sewer bill that reflects costs associated with ~~the~~ user~~s~~ demand on the system.

Section 2. That Section 13.64.020 Basis for charges is hereby repealed and recreated to read as follows:

Section 13.64.020 Basis for charges.

(a) To pay for such a system there is imposed a service charge upon each user of the sewerage system as provided in Chapter 13.04.

(b) All customers who are connected to municipal sewer will be charged the imposed rates determined by the current City fee schedule found in Section 3.40.010(a) of the City of Wausau Municipal Code.

(c) *Residential and non-residential customer*. Customers with water meters provided by the utility shall be charged based on actual volume as recorded by the water meter. All such water metering devices shall be approved by the utility's director prior to installation.

Adjustments may be made to the billed sewer volume on a case-by-case basis provided it can be verified that a significant portion of the usage was not discharged to the sanitary sewer and will only be considered based upon a written request.

In the case where a customer is served only with sewer service and a water meter has not been installed to record water usage, the user will pay a flat fee as provided in the fee schedule, located in Section 3.40.010(a).

(d) A volume credit may be granted for water not discharged to the sanitary sewer provided the volume is metered and approved by the utility.

(e) Monitored Customers

a. *Volume and concentration determination*. Monitoring and sampling control facilities shall be constructed on each lateral discharging industrial wastes to the sanitary sewer system. Concentration billing for $BOD_5$ and TSS may be based on samples or on the latest reported concentration numbers of NR 101 reporting forms submitted to the DNR, where no samples are available.
b. *Flow monitoring*. Flow shall be recorded for each day a flow occurs.
c. *Sampling and analysis frequency*. Three consecutive 24-hour composite samples shall be taken and analyzed on three consecutive production days each 30-day period.
d. *Analysis of wastes*. Laboratory analysis of monitored waste samples shall consist of biochemical oxygen demand and total suspended solids to be performed in accordance with the current edition of "Standard Methods."
e. *Who shall collect data*. All significant industrial users shall conduct or cause to be conducted all required tasks to provide the utility with the required data. The utility may verify the data.
f. *Reporting of volume and concentration data*. Daily volume recordings and concentration data reports shall be submitted in writing to the utility by the tenth of the month following the data collection.

g. *Billing determination*. The utility shall summarize all data for bimonthly billings. The normal procedure for determining the strength data shall be to take the arithmetic average of the concentrations and proportionate to the total bimonthly volume to arrive at total pounds. (Average concentration as milligrams per liter multiplied by flow in millions of gallons multiplied by the factor for weight 8.345/gal pounds.) However, irregularities noted with the concentration as compared with the flow may constitute other means of determining the concentration billing data at the discretion of the utility.

h. *Reclassification review.* A monitored customer may request the utility to reclassify the customer to nonmonitored on the grounds that during 12 consecutive months of monitoring, the cost of required monitoring exceeded the utility's concentration charge. Documentation of costs for monitoring must accompany the request for review. The discharge is still liable for compliance monitoring and associated fees for a three-year period following reclassification. If, during the three years, the concentration of the discharge changes to the point that monitoring should be resumed and the discharge fails to inform the utility, the utility may back bill the entire period during which the customer was classified nonmonitored at the current rate of billing for monitored customers less the charges paid as a nonmonitored customer. The customer may also be subject to a forfeiture. A condition for reclassification is that the discharger has fully complied with all provisions of section 13.62.050 for a 12-month period.

i. *Reduction in monitoring frequency.* Written requests for permission to reduce monitoring frequency as stipulated in subdivision (c) of this subsection may be granted by the Director of Public Works and Utilities. The requests by the monitored customer must clearly demonstrate the following:

   i. The cost of monthly monitoring is unreasonable in relation to the utility’s concentration charge;
   ii. Previously submitted concentration values must be constant; and
   iii. Compliance monitoring by the utility checks with reported concentrations.

   However, the minimum frequency is three consecutive production days each four-month period. The most recent strength data on file with the utility at the time of billing will be used to determine concentration billing.

(f) Nonmonitored Customers outside of City limits.

a. Nonmonitored customers located outside of the corporate limits of the City served with sanitary sewer service directly by the utility are subject to codes, policies, regulations and charges as established and set forth below. (This chapter applies to the remaining area of Town of Stettin Sanitary District 1 not annexed to Wausau.)

(g) Charges for hauled wastes dumped at Wausau’s Wastewater Treatment Facility.

a. Charges for hauled waste shall be determined by the current City fee schedule found in Section 3.40.010(a) of the City of Wausau Municipal Code.

b. Hauled wastes dumped at Wausau's Wastewater Treatment Facility (WWTF) are subject to all codes, policies, regulations, and charges adopted by the Wausau Waterworks Commission. Specifically, all hauled wastes shall comply with all provisions of chapter 13.62. Hauled waste generated outside of Wausau's sewer service area and nondomestic in nature (such as industrial process wastes) is restricted from dumping at Wausau's WWTF without written approval. (Wastes potentially toxic in nature or waste generally not acceptable for treatment at the municipal WWTF regardless of origin shall be considered on a case-by-case basis. Contract haulers should not convey such wastes without prior written approval if it is the intent to dispose at Wausau's WWTF.) All hauled wastes are subject to the conditions and charges established and delineated below. All septic haulers shall receive written authorization to dump at Wausau's WWTF. Existing septic haulers at time of adoption of this Code will have complied with this requirement. Dumping will only occur at Wausau's WWTF at a designated manhole or station. All septic haulers are required to report all waste loads delivered to Wausau's WWTF. Procedures regarding entering plant grounds, dumping, and reporting requirements are subject to change and will be addressed by policy by the Director of Public Works and Utilities or commission. Upon demand, the utility will have the right to inspect state-required hauling records to confirm origin and disposal of hauled wastes.

c. Septic haulers must report to Wausau Waterworks the volume of septic waste and the volume of holding tank waste for each load delivered by the tenth day of the following month. The concentration charges for residential septic and holding tank wastes can be estimated, where test results are not available and at the discretion of the Director of Public Works and Utilities. If the septic hauler fails to submit a report detailing the volumes of wastes dumped, they will be charged for 95 percent of the actual truck volume and an assumed 16 percent septic tank sludge and 84 percent holding tank waste.

   Charges for commercial, industrial, environmental cleanup, and other unique wastes that, in the opinion of the Director of Public Works and Utilities, are not adequately characterized by the stated Administrative, Volume, and Concentration charges can be established by contract or agreement approved by the commission.

d. Septic haulers not in compliance with polices, codes and current with dumping charges are subject to revocation of dumping privileges at Wausau’s WWTF.

(h) *Delinquent sewer bills*. All customers shall be subject to late payment charges and penalties and/or disconnection of sewer service and the policies and procedures for such charges/penalties and disconnections shall be similar to those approved by the Public Service Commission for the utility.

Section 3. All ordinances or parts of ordinances in conflict herewith are hereby repealed.

Section 4. This ordinance shall be in full force and effect from and after its date of publication.

Adopted:

Approved:

Published:

Attest:

Approved:

_____

Katie Rosenberg, Mayor

Attest:

_____

Leslie M. Kremer, Clerk

# Wausau Wastewater User Rates - Fee Schedule

Updated Juanuary 5, 2021

**1. Charges for customers with a single water meter monitoring all water usage. Quarterly fixed charge based on water meter size plus the volume rate.**

| [1]Water Meter Size (inches) | Fixed Charge 10/01/20 | Fixed Charge 07/01/21 | Fixed Charge 10/01/22 |
|---|---|---|---|
| 5/8 or 3/4 | $ 23.06 | $ 29.06 | $ 34.58 |
| 1 | 31.13 | 39.23 | 46.68 |
| 1 1/4 | 43.36 | 54.63 | 65.01 |
| 1 1/2 | 50.28 | 63.35 | 75.38 |
| 2 | 84.18 | 106.06 | 126.21 |
| 3 | 151.98 | 191.49 | 227.88 |
| 4 | 248.15 | 312.67 | 372.07 |
| 6 | 489.84 | 617.20 | 734.46 |
| 8 | 770.50 | 970.83 | 1,155.29 |

[1]Charges listed above are meter charges per quarter

| Volume | [1,2]Volume Charge 10/01/20 | [1,2]Volume Charge 07/01/21 | [1,2]Volume Charge 10/01/22 |
|---|---|---|---|
| per CCF | 3.75 | 4.73 | 5.63 |

[1]Volume is charged per 100cf (748gal)

[2]Charges to residential customers shall be based on actual volume as recorded by the water meter each quarter.

**1a. Irrigation Meter (optional): Customers may elect to install a second water meter to monitor water usage not discharged to sanitary sewer eliminating the sewer fixed & volume charge for this portion of metered water. The meter shall be provided by the utility and the installation approved by the utility.**

**2. Sewer Only & No Water Meter (Water Treatment Facility): The fixed charge is the 3/4 meter fixed charge plus two thousand cubic feet (average quarterly household water usage) times the current volume charge.**

| Sewer Service Only (Quaterly Billing) | Charge 10/01/20 | Charge 07/01/21 | Charge 10/01/22 |
|---|---|---|---|
| 3/4 Meter Fixed Charge | $ 23.06 | $ 29.06 | $ 34.58 |
| Per CCF | $3.75 | $4.73 | $5.63 |
| 2000 cf (Ave usage) | $75.00 | $94.60 | $112.60 |
| **Total Fixed Charge** | **$ 98.06** | **$ 123.66** | **$ 147.18** |

**3. Sewer Treatment Only. City of Schofield**

| Wastewater Receiving (Monthly Billing) | Charge 10/01/20 | Charge 07/01/21 | Charge 10/01/22 |
|---|---|---|---|
| Fixed Charge | $357.60 | | |
| Per Million Gallons | $2,631.01 | | |

**4. Sewer Treatment Only. Village of Weston**

| Wastewater Receiving (Monthly Billing) | Charge 10/01/20 | Charge 07/01/21 | Charge 10/01/22 |
|---|---|---|---|
| Permit Fee | $150.00 | | |
| Per CCF | $3.23 | | |

**5. Hauled Wastewater - Village of Maine WWTF**

| Hauled Wastewater (Monthly Billing) | Charge 10/01/20 | Charge 07/01/21 | Charge 10/01/22 |
|---|---|---|---|
| 50% volume (per 1000 gal) | $86.93 | | |
| 50% volume (per 1000 gal) | $9.46 | | |

**5a. Hauled Wastewater - Environmental Professional Services (REI)**

| Hauled Wastewater (Monthly Billing) | Charge 10/01/20 | Charge 07/01/21 | Charge 10/01/22 |
|---|---|---|---|
| 50% volume (per 1000 gal) | $86.93 | | |

**5b. Hauled Leechate (Marathon County Landfill)**

| Hauled Leechate | Charge 10/01/20 | Charge 07/01/21 | Charge 10/01/22 |
|---|---|---|---|
| Permit Fee | $27.36 | | |
| Each Load | $25.91 | | |

**6. Treated Watewater Discharged (Wauleco)**

| Hauled Wastewater | Charge 10/01/20 | Charge 07/01/21 | Charge 10/01/22 |
|---|---|---|---|
| Permit Fee | $150.00 | | |

| | | | |
|---|---|---|---|
| per CCF | $3.23 | | |

**7. [1,2]Permitted customer fees. Permit fees;**

| Outfalls (Sample Point) | Charge 10/01/20 | Charge 07/01/21 | Charge 10/01/22 |
|---|---|---|---|
| 1st outfall Permit Fee | $177.00 | $223.00 | $265.39 |
| Addt'l outfalls (Each) | 17.70 | 22.30 | 26.54 |

[1]Permit fees are billed annually; January each year. The charges listed above are monthly charges

[2]Monitored Cuustomers. Utility pays for lab testing fees and bills customers for reimbursement

**7a. Monitored Customers (High strength wastewater). Volume charges;**

| [1]Volume | Charge 10/01/20 | Charge 07/01/21 | Charge 10/01/22 |
|---|---|---|---|
| Charge per CCF | $2.03 | $2.55 | $3.04 |

Meter charge is based on Item 1 Fee schedule and billed quarterly

[1]Volume charges above are billed quarterly

**7b. Monitored Customers (Constituents Charge). Charge for each pound of constituent;**

| [1]Constituents | Charge 10/01/20 | Charge 07/01/21 | Charge 10/01/22 | Units |
|---|---|---|---|---|
| BOD | 0.34 | 0.43 | 0.51 | $/lb |
| TSS = | 0.49 | 0.62 | 0.74 | $/lb |
| Phosphorus = | 4.63 | 5.83 | 6.94 | $/lb |
| Aluminum | 0.53 | 0.67 | 0.85 | $/lb |

[1]Charges per pund of constituents are billed bi-monthly

| [1]Based Water Meter discharge | Charge 10/01/20 | Charge 07/01/21 | Charge 10/01/22 |
|---|---|---|---|
| Not less than | $44.25 | $55.76 | $66.35 |

If the water meter is the basis for determining volume of waste discharge, the minimum monthly charge will be one-third of the minimum quarterly charge per the water meter size as shown in Item 1 of this section, but not less than above;

[1]Charges above are monthly charges, customers are billed bi-monthly

**8. Customers (Outside city limits) served with sanitary sewer service. Town of Stettin Sanitary District 1 not annexed to Wausau.**

8a. Charges for customers with a single water meter monitoring all water usage. Quarterly fixed charge based on water meter size plus the volume rate.

| Water Meter Size in inches | Min Qrtly Chrg 10/01/20 | Min Qrtly Chrg 07/01/21 | Min Qrtly Chrg 10/01/22 |
|---|---|---|---|
| 5/8 or 5/3 | $ 25.50 | $ 30.70 | $ 36.54 |
| 3/4 | 25.50 | 30.70 | 36.54 |
| 1 | 34.50 | 41.45 | 49.33 |
| 1 1/4 | 48.00 | 57.72 | 68.69 |
| 1 1/2 | 55.50 | 66.93 | 79.65 |
| 2 | 93.00 | 112.07 | 133.36 |
| 3 | 168.00 | 202.34 | 240.78 |
| 4 | 274.50 | 330.37 | 393.14 |
| 6 | 541.50 | 652.15 | 776.06 |
| 8 | 852.00 | 1,025.82 | 1,220.72 |

8b. Volume Rate. All volume as recorded by the water meter;

| Volume | [1,2]Volume Charge 10/01/20 | [1,2]Volume Charge 07/01/21 | [1,2]Volume Charge 10/01/22 |
|---|---|---|---|
| per CCF | 3.97 | 4.98 | 5.93 |

[1]Volume is charged per 100cf (748gal)

[2]Charges to customers shall be based on actual volume as recorded by the water

8c. Non-metered Sewer Service (Residential Flat Fee Sewer Charge).

| Sewer only service | Fixed Charge 10/01/20 | Fixed Charge 07/01/21 | Fixed Charge 10/01/22 |
|---|---|---|---|
| Qtrly Sw Service | $103.47 | $130.38 | $155.15 |

**9. Charges for Hauled Waste Dumped at Wausau's Wastewater Treatment Facility:**

9a. Dumping charges for hauled domestic wastewater

| Description | | Hauled Load Chrg 02/01/19 | unit |
|---|---|---|---|
| Monthly Admin Fee | | $ 32.83 | per month |
| Volume Charge | | $ 1.45 | per ccf |
| BOD Concentration | | $ 0.25 | per lb. |

| | | | | |
|---|---|---|---|---|
| TSS Concentration | | $ | 0.46 | per lb. |
| Phosphorus concentration | | $ | 4.38 | per lb. |
| Aluminum Concentration | | $ | 0.40 | per lb. |

**Holding Tank Wastewater**

| | Concentration | | Amount | | Rate | | Cost | |
|---|---|---|---|---|---|---|---|---|
| BOD = | 600 | mg/l | 5.00 | lbs | 0.25 | $/lb | $1.25 | $/1000 gal |
| TSS = | 1800 | mg/l | 15.01 | lbs | 0.46 | $/lb | $6.91 | $/1000 gal |
| Phosphorus = | 20 | mg/l | 0.17 | lbs | 4.38 | $/lb | $0.73 | $/1000 gal |
| Aluminum | 0 | mg/l | 0.00 | lbs | 0.40 | $/lb | $0.00 | $/1000 gal |
| Volume = | 1000 | gals | 1.34 | units | 1.45 | $/unit | $1.94 | $/1000 gal |
| | | | | | | Total | $10.83 | |

**Septic Tank Wastewater**

| | Concentration | | Amount | | Rate | | Cost | |
|---|---|---|---|---|---|---|---|---|
| BOD = | 8000 | mg/l | 66.72 | lbs | 0.25 | $/lb | $16.68 | $/1000 gal |
| TSS = | 15000 | mg/l | 125.10 | lbs | 0.46 | $/lb | $57.55 | $/1000 gal |
| Phosphorus = | 250 | mg/l | 2.09 | lbs | 4.38 | $/lb | $9.13 | $/1000 gal |
| Aluminum | 0 | mg/l | 0.00 | lbs | 0.40 | $/lb | $0.00 | $/1000 gal |
| Volume = | 1000 | gals | 1.34 | units | 1.45 | $/unit | $1.94 | $/1000 gal |
| | | | | | | Total | $85.30 | |

**Blended Rate**

16% Septic and 84% Holding Tank, Applied to 95% of truck volume $22.74 /1000 gal

**Monthly Charge** $32.83 /month

Septic haulers must report to Wausau Water Works the volume of septic waste and the volume of holding tank waste for each load delivered by the tenth

Charges for commercial, industrial, environmental cleanup, and other unique wastes that, in the opinion of the Director of Public Works and Utilities, are not adequately characterized by the stated Administrative, Volume, and Concentration charges can be established by contract or agreement approved by the commission.

Department of Public Works

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

**TO:** Wausau Waterworks Commission

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

**DATE:** January 12, 2021

**SUBJECT:** Policy 301 – Review and Establishment of Sewer Rates

---

The Utility Commission previously approved staff to proceed with establishing a policy manual for Wausau Waterworks. Attached is the first policy, Policy 301, for your review, comment and approval. Also included are the DRAFT Table of contents for the policy manual.

Staff is currently in the process of drafting a few other policies for consideration; procurement policy, wage adjustment policy, operational policies, etc. Policies and procedures to be included in this manual will be brought forward to the Commission as they are written for your consideration and approval.

# TABLE OF CONTENTS

Section 100: Organization

Section 200: Administration

Section 300: User Rates

301.00 Review and Establishment of Sewer Rates

Section 400: Water Operations

Section 500: Sewer Operations

Section 600: Emergency Response

Section 700: Training

Section 800:  Procurement

# Review and Establishment of Sewer Rates

## 301.1 PURPOSE AND SCOPE

This policy establishes the process for review and approval of sewer rates for Wausau Waterworks.

### 301.1.1 DEFINITIONS

Definitions related to this policy include:

**Sanitary Sewer System** – A wastewater treatment facility and collection/conveyance system.

**Utility** – Wausau Waterworks.

**Director** – Director of Public Works & Utilities

**Commission** – Wausau Waterworks Commission

## 301.2 POLICY

The City of Wausau has determined that a sanitary sewer system is necessary for the protection of the health, safety and welfare of the general public and more specifically, the citizens and residents of the City. The utility policy is to ensure the sewer rate structure is equitable amongst all users to recover actual costs associated with operation, maintenance, and replacement costs. Utility policy is to evaluate sewer rates as needed to ensure revenue is adequate to cover any and all costs for operation/maintenance of the sanitary sewer system.

## 301.3 RESPONSIBILITIES

The Director shall evaluate the capital and operation budgets annually along with any related utility debt and determine if rates are adequate to sustain the utility. Recommendations for sewer rate adjustments shall be brought forward to the Commission for determination and final approval.

## 301.4 PROCEDURES

The following procedures shall be followed when reviewing and establishing sewer rates for users of the sanitary sewer system.

### 301.4.1 SIMPLIFIED RATE ADJUSTMENT

A simplified rate adjustment may be considered by the Commission without a full rate case being conducted. The simplified rate adjustment may be up to a 3% increase per calendar year.

1. Director shall provide a recommendation to the Commission for approval along with justification for an adjustment in rates.
2. Upon approval by the Commission the rate shall take effect no sooner than 30 days from the date of approval

301.4.2FULL RATE CASE STUDY & ADJUSTMENT

As needed, the utility will evaluate the sewer rate structure and sewer user fees to ensure rates are equitable for all users on the sanitary sewer system. The Commission will review for approval the need for a rate study as recommended by the Director.

1. Commission shall provide approval of a sewer rate review prior to commencing a sewer rate study.
2. Upon Commission approval the Director shall determine if the sewer rate study shall be conducted by City staff or conducted by a 3rd party.
3. The sewer rate study will be conducted with input from utility staff and finance department staff.
4. The completed rate case study will be presented to the Commission for review and comment.
5. The Director will arrange a public hearing to present the results of completed rate case to users. Sanitary Sewer System users shall be notified of the Public Hearing through a Class I Publication.
6. Additional notifications to users will be used as determined appropriate by the Director.
7. Results of the Public Hearing shall be presented to the Commission at the next regularly scheduled meeting and staff shall make a rate adjustment recommendation to the Commission for their consideration.
8. Rate adjustments shall take effect no earlier than 30 days from the date of approval by the Commission and in accordance with state statutes.

**301.5 DOCUMENTATION**

The approved rate adjustments shall be formally documented on the established fee schedule as referenced in the Wausau Municipal Code Chapter 13.

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7244 Washington Ave South • Eden Prairie • MN 55344 • USA
Phone: (888) 282-2071 • Email: service@vergentpower.com
Web: www.vergentpower.com

# FACTORY PROTECTION PLAN – END USER AGREEMENT

| | | |
|---|---|---|
| **AGREEMENT NUMBER**<br>VPFS-21-01-WAU | **AGREEMENT EXECUTION DATE**<br>X | |
| **PURCHASER COMPANY NAME (BILL-TO)**<br>WAUSAU WATER WORKS | **PURCHASER CONTACT NAME (BILL-TO)**<br>X | **PHONE NUMBER**<br>X |
| **ADDRESS (BILL-TO)**<br>X | | |
| **NAME (SITE CONTACT)**<br>X | **COMPANY (SITE CONTACT)**<br>X | **PHONE NUMBER**<br>X |
| **ADDRESS (TURBINE LOCATION)**<br>X | | |
| **TOTAL NUMBER OF:**<br>Turbines: 2 Gas Packs/Air Packs: 0 | | |

## A. Factory Protection Plan Types and Optional Services

| **FACTORY PROTECTION PLAN TYPE**[1] | | **PRICE** |
|---|---|---|
| ☐ **Plan A** – 5 year, Parts ONLY, with Overhaul | ☐ <4000 hrs/yr<br>☐ 4000-6000 hrs/yr<br>☐ >6000 hrs/yr | $ |
| ☐ **Plan B** – 5 year, Parts & Labor, with Overhaul | ☐ <4000 hrs/yr<br>☐ 4000-6000 hrs/yr<br>☐ >6000 hrs/yr | $ |
| ☐ **Plan C** – 10 year, Parts ONLY, with Overhaul | ☐ <4000 hrs/yr<br>☐ 4000-6000 hrs/yr<br>☐ >6000 hrs/yr | $ |
| ☒ **Plan D** – 10 year, Parts & Labor, with one (1) Overhaul | ☐ <4000 hrs/yr<br>☐ 4000-6000 hrs/yr<br>☒ >6000 hrs/yr | $197,900 |
| ☐ **Other** – Description: X<br>(See also checked items in column "OTHER" in Section B below.) | ☐ X hrs/yr | $ |
| **OPTIONAL SERVICES** | | **PRICE** |
| ☐ **VPSN** – VergentPower Service Network Remote Monitoring Service, Subscription ONLY[2] | | $ |
| ☒ **Upgrades** – Description: Any and all as made available by Capstone | | $Incl |
| ☐ **Commissioning** or ☐ **Re-commissioning** | | $ |
| **TOTAL PRICE** | | $197,900 |

[1] See Section B below for description of included services for each type of Factory Protection Plan.
[2] VPSN Remote Monitoring equipment must be purchased separately.

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# FACTORY PROTECTION PLAN – END USER AGREEMENT

## B. Description of Factory Protection Plan Services

| FACTORY PROTECTION PLAN INCLUDED SERVICES | PLAN A | PLAN B | PLAN C | PLAN D | Wausau WWTP |
|---|---|---|---|---|---|
| Maintenance Parts: | | | | | |
| ➢ Scheduled maintenance parts as needed pursuant to the then current Capstone Standard Maintenance Schedule (Capstone document number 440000 for Model C30 or Model C60, or Capstone User Manual for Model C65 or C200). | ✓ | ✓ | ✓ | ✓ | ☒ |
| ➢ Unscheduled maintenance parts as needed, including: | | | | | |
| • Engine assembly (Engine/Generator) | ✓ | ✓ | ✓ | ✓ | ☒ |
| • All power electronics components | ✓ | ✓ | ✓ | ✓ | ☒ |
| • All fuel system components | ✓ | ✓ | ✓ | ✓ | ☒ |
| • Optional/Accessory equipment (if installed) | | | | | |
| - Main battery pack | ✓ | ✓ | ✓ | ✓ | ☐ |
| - Heat Recovery Module (HRM) coil | ✓ | ✓ | ✓ | ✓ | ☒ |
| - Capstone Logic Controller (CLC) | ✓ | ✓ | ✓ | ✓ | ☐ |
| - Dual Mode System Controller (DMSC) | ✓ | ✓ | ✓ | ✓ | ☐ |
| - External Fuel Filter | ✓ | ✓ | ✓ | ✓ | ☐ |
| - External Regulator | ✓ | ✓ | ✓ | ✓ | ☐ |
| Maintenance Labor:[3] | | | | | |
| ➢ Scheduled maintenance labor. | No | ✓ | No | ✓ | ☒ |
| ➢ Unscheduled maintenance labor. | No | ✓ | No | ✓ | ☒ |
| Engine Overhaul, scheduled at 48k hours since previous | No | No | ✓ | ✓ | ☒ |
| Additional Services: | | | | | |
| ➢ Access to Vergent Power's Technical Support. | ✓ | ✓ | ✓ | ✓ | ☒ |
| ➢ Priority response to unscheduled maintenance service requests. | No | ✓ | No | ✓ | ☒ |
| ➢ System software upgrades as released by Capstone. | ✓ | ✓ | ✓ | ✓ | ☒ |
| ➢ Installation of system software upgrades. | No | ✓ | No | ✓ | ☒ |
| ➢ Other – Description: | | | | | ☐ |
| ➢ Other – Description: | | | | | ☐ |

[3] Normal Vergent Power's service hours are 8:00 am to 5:00 pm local time weekdays, excluding holidays.

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# FACTORY PROTECTION PLAN – END USER AGREEMENT

## C. Service Conditions

1. Sites must be clean, free of debris and any other obstructions, well lit, and operating in an environment that will not cause excessive usage, or need for replacement, of consumables and filters outside the parameters of Capstone's standard service intervals.
2. Sites must be installed in accordance with all Capstone/Vergent Power installation requirements.
3. Sites must be commissioned in accordance with Capstone/Vergent Power specifications and Capstone/Vergent Power must have an approved Commissioning Checklist on file.
4. If VPSN is checked in Section A above, then Purchaser is responsible for providing Vergent Power with a dedicated internet connection for VPSN starting on the Start of Services Date and terminating on the End of Services Date (see Section D below).

## D. Term of Agreement

1. ***Start of Services:*** The Agreement and Services shall commence ☐ Upon the Date of Commissioning, which shall occur no later than _____; or ☒ Agreement Execution Date.
2. ***End of Services:*** The Agreement and Services shall expire ☐ 5 years from Start of Services; or ☒ 10 years from Start of Services; or ☐ Other (specify: X).
3. ***Renewal:*** Owner shall be able to renew this agreement at a price no more than X percent higher than the price herein.

## E. Payment Terms

1. Payment for the Service Agreement will be made in ☐ Upfront; equal ☒ Annual; or ☐ Other (specify: X) installment(s) of $19,790.
2. For recurring payments such as annual payments, Purchaser agrees to pay thirty (30) days prior to the anniversary of Start of Services to maintain Service Agreement in good standing.
3. ~~Vergent Power reserves the right to add a fuel surcharge fee in the event that gasoline prices exceed $4.00 per gallon on any service visit.~~
4. Unless otherwise provided for in the payment descriptions above, payments for Services are due 30 calendar days from date of invoicing, are stated in U.S. dollars and include any fees, licenses and permits required for the performance of the Services, and exclude sales and other taxes.
5. Overdue payments shall be subject to a late charge, calculated from the date of invoice to the date of payment, equal to the lesser of 1.5% per month or the highest applicable rate allowed by law. The foregoing shall in no way limit any other remedy that may be available to Vergent Power.
6. Purchaser's obligations to Vergent Power to pay in full all amounts owed to Vergent Power as of the termination or expiration of this Agreement shall survive the termination for any reason or expiration of this Agreement.
7. ~~Vergent Power may adjust pricing for the services provided hereunder upon written notice to Purchaser should the total Consumer Price Index (CPI) exceed 3% in any given year.~~

# FACTORY PROTECTION PLAN – END USER AGREEMENT

## F. Excluded Services

The following are specifically excluded from the Agreement:

1. Changes to the original design and configuration (alterations from "as commissioned").
2. Application engineering and installation; correction of latent or discovered defects or equipment failure due to application engineering, installation, settings and/or connections.
3. Operation of Covered Equipment on a day-to-day basis.
4. Usage/consumption of consumables outside the parameters of Capstone's/Vergent Power's standard service intervals, unless otherwise specified in Exhibit 1.
5. Emissions testing or testing of exhaust gas.
6. Fuel analysis or laboratory analysis to confirm fuel composition.
7. Operator classroom training.
8. City, state, and/or federal permits, rebates, or incentive applications or filings.
9. Balance of plant equipment: Vergent Power will provide Services for the Covered Equipment listed in Exhibit 1 only, as may be amended by the parties from time to time in writing.
10. Using the VPSN, Vergent Power may provide remote monitoring service diagnostics as a courtesy to the customer. The VPSN equipment is capable of monitoring additional Balance of Plant equipment (i.e., anything outside of the housing and not included in the definition of "Covered Equipment" set forth below), which may impact the successful operation of the Covered Equipment under this Agreement. Under no circumstances is Vergent Power obligated to provide any Services for Balance of Plant equipment or any other equipment that is not listed as Covered Equipment.
11. Internet connection, service, maintenance, or hardware related fees.
12. Certain tooling required to support performing Services on the Covered Equipment, e.g. assistive lifting devices, trucks, crane or forklift rentals, etc.
13. Any expenses resulting from failure to meet, or incurred as a result of correcting deficiencies in order to meet, Service Conditions specified in Section C above.
14. Any expenses resulting from improper operation of Covered Equipment.
15. Any expenses resulting from Force Majeure events.
16. Any expenses resulting from power quality disturbances (e.g. sags, surges, and harmonics) in grid-connected operation.
17. Any services requested by Purchaser which are determined, in Vergent Power's sole discretion, to be outside the scope of this Agreement.

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# FACTORY PROTECTION PLAN – END USER AGREEMENT

**Pursuant to this Services Agreement (the "Agreement"), Purchaser hereby authorizes Vergent Power Solutions, Inc. ("Vergent Power") to provide the services described above (the "Services"), including the provision of any necessary parts (the "Parts"), on the Capstone Turbine generator systems, controls and/or accessories identified above (the "Covered Equipment") in accordance with and subject to the terms and conditions described above and on the pages attached hereto.**

**1. Price of the Services, Payment Terms and Scope of Services**. The price, payment terms and scope of services for each of the Services (the "**Scope of Services**") are set forth on the cover pages of this Agreement. If repairs or additional labor outside of the applicable Scope of Services are determined to be necessary and the required repairs are authorized by Purchaser, then (i) additional labor and other costs and expenses will be billed by Vergent Power to Purchaser at the then effective Factory Protection Plan Service Flat Rate Schedule and the then effective Vergent Power Service Rates, as such terms and provisions are revised by Vergent Power from time to time, and (ii) Parts will be billed at the then prevailing Vergent Power List Price, and (iii) mobilization costs and expenses will be without charge so long as the labor is performed at the same time scheduled maintenance is performed. If labor is not performed at the same time of scheduled maintenance, mobilization charges will be as described in Vergent Power's Service Rates.

**2. Term**. This Agreement shall continue in effect for the term indicated in Section D of this Agreement unless Vergent Power or Purchaser terminates this Agreement by delivering to the other party written notice in the event of: (i) Purchaser's breach of any material term or condition of this Agreement; or (ii) Purchaser's failure to pay when due any amount owed by Purchaser to Vergent Power under this Agreement, within fifteen (15) days of when such payment is due under the Agreement, and Purchaser fails to cure such default within seven (7) days after receiving written notification of default. If Purchaser fails to pay when due any amount owed by Purchaser to Vergent Power and this Agreement is not terminated immediately by Vergent Power, Vergent Power may delay or cease performance of Services under this Agreement until payment in full is received or other payment arrangements are agreed to, at Vergent Power's sole discretion. The foregoing does not limit or restrict in any way Vergent Power's right to terminate this Agreement at any time following an event described in this Section. In the event of a termination by Vergent Power, Purchaser will forfeit all amounts paid at the time of termination. Purchaser reserves the right to terminate this Agreement without cause, and in such event shall pay Vergent Power for all services performed through the date of termination or forfeit all amounts paid at the time of termination, whichever is greater. If this agreement is terminated by Purchaser between years Five (5) through Ten (10), there will be a charge to Purchaser for the engine replacement that was performed during the 40,000 hour service at current market value.

**3. Vergent Power's Services; Warranty.** Vergent Power agrees that it will comply with applicable laws and regulations relating to its provision of the Services and such Services will be provided in a professional and workmanlike manner consistent with the applicable Scope of Services and with generally accepted industry standards and practices with regard to the type of services provided hereunder. Vergent Power and Capstone provide the warranties with respect to Parts and labor provided by Vergent Power and Capstone for the applicable Covered Product (the "**Service-Related Warranties**"). Notwithstanding any term contained in a Service-Related Warranty or this Agreement to the contrary, any and all Service-Related Warranties expire upon the completion of the Services.

**4. Purchaser's Representations.** Purchaser represents, warrants, and covenants that: (i) it has the right, power, and authority to enter into this Agreement and to perform fully its obligations hereunder; (ii) the making of this Agreement does not violate any agreement existing between it and any other person or entity; (iii) it has obtained or will obtain all licenses and permits necessary for Vergent Power to perform the Services; (iv) all information provided by Purchaser to Vergent Power related to the Services and its ability to pay for the Services is

complete and accurate; (v) it will arrange for Vergent Power's access to the facilities where the Covered Equipment is located as needed to perform the Services; and (vi) it will perform all of its obligations under this Agreement to the reasonable satisfaction of Vergent Power.

**5. Purchaser's Obligations.** In addition to all other obligations stated in this Agreement, when requested, Purchaser shall provide Vergent Power with: (i) records and information concerning the Covered Equipment; and (ii) any special tools or instruments needed for the Covered Equipment which Purchaser already possesses. Purchaser shall designate an authorized representative who shall be available to Vergent Power at all times while Vergent Power is performing the Services on Purchaser's premises. Purchaser agrees that the Scope of Services excludes all trade labor work and any supervision, management or regulation of Purchaser's employees, agents or contractors and work related thereto, and it does not include responsibility for planning, scheduling, monitoring or management of the work to be performed by Purchaser. Purchaser agrees that any written or oral reports and advice provided by Vergent Power to Purchaser in connection with the provision of Services shall be utilized solely by Purchaser and shall not be used or conveyed by Purchaser to any third party.

**6. Disclaimer.** EXCEPT AS SET FORTH IN SECTION 3, THE SERVICES ARE PROVIDED ON AN "AS IS" BASIS AND NO OTHER WARRANTIES, EXPRESS, IMPLIED OR STATUTORY ARE GIVEN FOR THE SERVICES, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY, NON-INFRINGMENT OR FITNESS FOR A PARTICULAR PURPOSE, AND ALL SUCH WARRANTIES ARE EXPRESSLY DISCLAIMED.

**7. Limitation of Liability in General.**

7.1 THE EXCLUSIVE REMEDY OF PURCHASER UNDER THIS AGREEMENT SHALL BE THE: CORRECTION OF NON-CONFORMITIES OF SERVICES; THE CORRECTION OF NON-CONFORMITIES OF PARTS; OR AS OTHERWISE PROVIDED IN THE SERVICE-RELATED WARRANTY.

7.2 Independent of, severable from, and to be enforced independently of any other enforceable provision of this Agreement, VERGENT POWER and/or CAPSTONE SHALL NOT BE LIABLE FOR INCIDENTAL, CONSEQUENTIAL, INDIRECT, SPECIAL, PUNITIVE, OR EXEMPLARY DAMAGES OF ANY KIND, OR FOR LOST GOODWILL, LOST PROFITS, LOST BUSINESS, COST OF COVER OR OTHER INDIRECT ECONOMIC DAMAGES, AND FURTHER INCLUDING INJURY TO PROPERTY, WHETHER SUCH CLAIM IS BASED ON THEORIES OF CONTRACT, VERGENT POWER'S and/or CAPSTONE'S NEGLIGENCE, TORT (INCLUDING STRICT LIABILITY), AS A RESULT OF BREACH OF ANY WARRANTY OR OTHER TERM OF THIS AGREEMENT, OR OTHERWISE WITH RESPECT TO ANY NON-CONFORMANCE OF OR NON-CONFORMITY OR DEFICIENCY IN THE SERVICES OR PARTS, REGARDLESS OF WHETHER VERGENT POWER and/or CAPSTONE HAD REASON TO KNOW OR IN FACT KNEW OF THE POSSIBILITY OF SUCH DAMAGES. Purchaser shall indemnify, defend and hold Vergent Power and Capstone harmless from and against all costs, fees (including attorneys' fees), losses, liabilities and expenses related to any personal injury, damage, or death related to Purchaser's improper use or operation of the Covered Equipment, including, without limitation, those costs, losses, liabilities and expenses resulting from any product liability claim, to the extent such claim involves improper use or operation of the Covered Equipment.

7.3 The limitations of Vergent Power and/or Capstone's obligations and Purchaser's remedies, as provided for in this Section, shall prevail over any conflicting or inconsistent provisions contained in any of the documents comprising this Agreement or any other document issued by Purchaser hereto or in any conflicting or inconsistent statement made by any representative of Vergent Power and/or Capstone, except to the extent that such provision or statement further limits Vergent Power and/or Capstone's liability.

7.4 The rights, remedies and obligations of the Parties set forth in this Agreement, together with the attached exhibits, are the exclusive rights, remedies and obligations of the Parties hereunder and are in lieu of any other right, remedy, or obligation available at law or in equity.

# FACTORY PROTECTION PLAN – END USER AGREEMENT

**8. Dispute Resolution.** All disputes and claims arising out of this Agreement or any document referenced herein shall be settled by arbitration in Minneapolis, Minnesota by a panel of three arbitrators under the commercial arbitration rules of the American Arbitration Association or the Judicial Arbitration and Mediation Service. Such arbitration shall be conducted by three (3) arbitrators, one (1) chosen promptly by Vergent Power, one (1) chosen promptly by Purchaser and one (1) neutral arbitrator, selected by the first two arbitrators. The award of the arbitrators shall be final and binding and the parties consent to the exclusive jurisdiction of any federal or state court in Hennepin County, Minnesota for purposes of enforcing any decision of the arbitration panel. The Parties agree that the prevailing Party in an arbitration proceeding shall be entitled to recover its reasonable attorneys' fees and expenses such prevailing Party incurred.

**9. Confidential Information, Intellectual Property Rights.** Purchaser shall not, directly or indirectly, modify or disassemble for the purpose of reverse engineering any Covered Equipment or components thereof. All intellectual property rights and confidential information relating to the Covered Equipment, and any information provided by Capstone/Vergent Power to Purchaser under this Agreement, shall remain the property of Capstone/Vergent Power. To the extent that the Parties have entered into a nondisclosure agreement ("**NDA**"), the terms of such NDA are incorporated into this Agreement. Purchaser's obligations related to confidentiality shall remain in effect and continue to bind Purchaser for five (5) years after the expiration or termination of this Agreement and Purchaser's obligation to maintain the secrecy of Capstone/Vergent Power's trade secret information shall continue for so long as such information is entitled to trade secret protection under California law. Purchaser acknowledges that a breach of its confidentiality obligations will cause irreparable damage and monetary damages are an inadequate remedy. In the event of a breach or threatened breach of the confidentiality obligations or any violation of Capstone's/Vergent Power's intellectual property rights, Capstone/Vergent Power shall be entitled to temporary and permanent injunctive relief for the protection of its confidential information and intellectual property rights without posting a bond and without having to prove any actual damages.

**10. Miscellaneous.**

10.1 **Governing Law.** This Agreement is governed by the laws of the State of Minnesota (as such laws are applied to contracts made and performed entirely within Minnesota, without regard to Minnesota's conflicts of laws provisions) and federal laws applicable to patents and trademarks.

10.2 **Survival.** All provisions of this Agreement will survive its termination to the fullest extent necessary to give the Parties the full benefit of the bargain expressed in this Agreement. Notwithstanding the foregoing, Purchaser agrees that upon completion of the Services, any and all Service-Related Warranties shall expire as of such date.

10.3 **Assignment.** This Agreement may not be assigned by Purchaser without the prior written consent of Capstone/Vergent Power. Vergent Power may assign this Agreement to an entity wholly-owned by Vergent Power without the consent of Purchaser.

10.4 **Severability.** If any provision of this Agreement or the terms and conditions set forth herein is declared or found to be illegal, unenforceable, or void, the remaining provisions of this Agreement shall remain in full force and effect, subject to the immediately following provisions. In the event any provision of this Agreement is declared or found to be illegal, unenforceable or void, the Parties agree to negotiate in good faith a substitute provision that is legal and enforceable and is as nearly as possible consistent with the intentions underlying the original provision. If the remainder of the Agreement is not materially affected by such declaration or finding and is capable of substantial performance, then such remainder will be enforced to the extent permitted by law.

10.5 **Independent Review and Advice.** Each Party has full knowledge of the contents of this Agreement, its legal consequences and any and all rights which each may have with respect to one another. Each Party has had the opportunity to receive independent legal advice with respect to this Agreement and each Party enters into this Agreement of its own free will. The Parties expressly agree that there are no expectations contrary to the Agreement and no usage of trade or regular practice in the industry shall

be used to modify any of the terms and provisions of the Agreement.

10.6 **Entire and Sole Agreement.** This Agreement constitutes the complete agreement with respect to the Services and supersedes all prior or contemporaneous proposals, agreements, representations, discussions and literature, written or oral, concerning the Services. This Agreement is not intended to change or alter any of the rights, duties, obligations, liabilities or limitations set forth in any other agreements between the Parties. The Parties' obligations with respect to confidential information, reverse engineering and/or trade secrets shall be governed by, if applicable, the Direct Sales Agreement, the End User License, or any confidentiality agreements the Parties have entered into.

10.7 **Amendments.** This Agreement may not be modified or amended except in writing signed by a duly authorized representative of each Party.

10.8 **Force Majeure.** Each Party's performance shall be suspended (other than the obligation to pay monies due) for so long as such performance is hindered by events beyond its reasonable control ("**Force Majeure**"), such as, but not limited to, riots, labor disputes of a general nature, national or civil wars, insurrections, rebellions, terrorist acts, embargoes, civil disturbances, earthquakes, dispositions or orders of governmental authority, acts of civil or military authority, fires, strikes, delays in transportation, inability to obtain necessary labor, manufacturing facilities or materials from usual sources and acts of God. Any delays resulting from a Force Majeure shall extend the time for performance correspondingly. If a failure to perform results from a governmental law, rule, regulation, disposition or order and the affected Party is unable to perform, after making reasonable efforts to comply, the matter shall be deemed a Force Majeure.

10.9 **No Third Party Beneficiaries.** None of the terms of this Agreement are intended to confer to or benefit any person or entity other than the Parties to this Agreement any rights, remedies or other benefits under or by reason of this Agreement.

10.10 **Waiver.** No waiver by either Party of any term contained herein (or any breach thereof) shall be effective unless it is in writing executed by the party waiving such term (or any breach thereof). No waiver shall be deemed or construed as a further or continuing waiver of any such term (or any breach thereof) on any other occasion or as a waiver of any other term (or any breach thereof) on the same or any other occasion. The delay or failure of any Party in providing written notice hereunder shall not constitute a waiver by such Party of any default or any further default under the Agreement.

Vergent Power Solutions, Inc.
7244 Washington Ave South • Eden Prairie • MN 55344 • USA
Phone: (888) 282-2071 • Email: service@vergentpower.com
Web: www.vergentpower.com

# FACTORY PROTECTION PLAN – END USER AGREEMENT

| **VERGENT POWER SOLUTIONS** | | **PURCHASER:** | |
|---|---|---|---|
| BY: | _____ | BY: | _____ |
| NAME: | _____ | NAME: | _____ |
| TITLE: | _____ | TITLE: | _____ |
| DATE: | _____ | DATE: | _____ |





Customer Initials: _____

Vergent Power Solutions, Inc.
7244 Washington Ave South • Eden Prairie • MN 55344 • USA
Phone: (888) 282-2071 • Email: service@vergentpower.com
Web: www.vergentpower.com

# FACTORY PROTECTION PLAN – END USER AGREEMENT

## Exhibit 1

| SITE NAME/ LOCATION | DESCRIPTION | MANUFACTURER | MODEL/CONFIGURATION OR PART NUMBER | SERIAL NO. | STARTING TRH |
|---|---|---|---|---|---|
| WAUSAU WWTP | C65 BIOGAS ICHP | CAPSTONE | CR65-DG-GC-INDPKG-SSHRM-UL | 6172, 7003 | |
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VERGENT POWER CONFIDENTIAL
FPP Contract – rev. _____

Customer Initials: _____