UTILITY COMMITTEE
Meeting Notice

Governing Body: Utility Committee of Boone, Iowa
Date of Meeting: October 20, 2025
Time of Meeting: 5:00 P.M.
Place of Meeting: City Hall Council Chambers

The City will have this meeting available via Zoom. To join the meeting via internet and/or phone please use the link and/or phone number below. If your computer does not have a mic and you wish to speak, you will have to call in.

https://us06web.zoom.us/j/85655797097?pwd=C3bDBI14bFyUDtTHOUBJZ0ahBVBSq6.1
Meeting ID: 856 5579 7097
Passcode: 243693
Phone: 1-301-715-8592 or 1-253-215-8782

1. Call Meeting to Order.
2. Approve Minutes from the August 18, 2025, Meeting.
3. Discuss Water System Modeling and Water Projects. – SEH.
4. Review the August and September 2025 US Water Monthly Report.
5. Meter Upgrade Report.
    a. August
    b. September
6. Stop Box Repair/Shut Off Report.
    a. August
    b. September
7. Other Business.
8. Adjourn.

UTILITY COMMITTEE
Meeting Notice

Governing Body: Utility Committee of Boone, Iowa
Date of Meeting: August 18, 2025
Time of Meeting: 4:00 P.M.
Place of Meeting: City Hall Council Chambers

The City will have this meeting available via Zoom. To join the meeting via internet and/or phone please use the link and/or phone number below. If your computer does not have a mic and you wish to speak, you will have to call in.

https://us06web.zoom.us/j/85218247136?pwd=zeFY61ZVGRMbXJze8NP36al2WpS9qS.1
Meeting ID: 852 1824 7136
Passcode: 014044
Phone: 1-301-715-8592 or 1-253-215-8782

1. Call Meeting to Order.

Present: Angstrom, Moorman
Absent: Byrd
Others present: Andrews, Gjersvik, Elmquist, Montag, Majors, JD Roberts, Katie Kinsey, McKenzie Hunt, Rolling Meadows Representatives

2. Approve Minutes from the July 21, 2025 Meeting.

Moorman moved; Angstrom seconded to approve the minutes from July 21, 2025 meeting. Ayes: all those in attendance. Nays: none.

3. Discuss High Water Bill. – Rolling Meadows Association.

The Rolling Meadows Association met with the Utility Committee to discuss a water leak that occurred at the end of May 2025. Andrews advised that the total water consumption due to the leak and subsequent flushing was 239,550 cubic feet, totaling $17,684.92. Andrews provided a timeline of his communications with Rolling Meadows regarding the SCADA system and acknowledged the technical issues with the communication system between the City of Boone water meter and the Rolling Meadows SCADA system, which resulted in a failure to notify or trigger an alarm for the water leak. Andrews also presented the Committee with several payment options for Rolling Meadows Association:

1. *Continue with billing Rolling Meadows Water District for the total amount of $17,684.92.*
2. *Bill Rolling Meadows Water District for the cost of production of the lost water, totaling $5,879.18.*
3. *Bill Rolling Meadows Water District for the approximate 250,000 gallons of water flushed after the repairs, and for staff time to flush and test, at their agreed rate, for a total of $1,810.90.*

4. *Forgive the total bill to Rolling Meadows Water District in the amount of $17,684.92.*

Moorman moved; Angstrom seconded, to approve Option 2: to bill Rolling Meadows Water District for the cost of production of the lost water in the amount of $5,879.18. Ayes: all those in attendance. Nays: none.

4. Discuss Allowing the City of Ogden to Temporarily Deliver Digester Sludge to the Boone Wastewater Plant.

Roberts explained that the City of Ogden reached out to him regarding the possibility of the Wastewater Plant accepting some of their digester sludge during the months of January 2026 and July 2026, not to exceed 60,000 gallons per month. The City of Ogden agrees to pay the City of Boone $0.175 for each gallon delivered. Elmquist advised that staff would have the City of Ogden review and approve the one (1) year agreement before bringing it to the full Council for review. Moorman moved; Angstrom seconded, to recommend approval of the agreement to the full Council, allowing the City of Ogden to deliver digester sludge to the Wastewater Plant. Ayes: all those in attendance. Nays: none.

5. Update on Status of Water Projects.

McKenzie Hunt, and Katie Kinsey, Short Elliott Hendrickson (SEH), presented a power point presentation on the status of the Water System Improvements:

Water Supply Improvements – Well Additions: Due to permitting and pumping restrictions on the Jordan Aquifer, the City will no longer pursue two Jordan wells and will instead develop two (2) alluvial wells. The cost for one (1) alluvial well is estimated at $650,000.00, with an additional $300,000.00 needed to extend electrical service. This alternative is projected to save approximately $1.88 million compared to the original plan. Design for the first well will be completed by October 2025, with site evaluation for the second ongoing.

Water Treatment Plant Improvements – The pilot study has been revised in response to reliance on high-nitrate wells. Phase 1 will assess potential operational adjustments to the existing WTP, and Phase 2 will test ion exchange technology for nitrate removal. The study begins in September. Iowa regulations require action if nitrate levels exceed 7 mg/L; thus, the treatment goal is 6 mg/L. Approximately 60% of system flow will need treatment by 2044. Space constraints at the Water Treatment Plant are being reviewed to accommodate the ion exchange system.

High Service Pump Station (HSPS) Improvements – Four (4) new 250 HP pumps with VFDs will be installed to enhance system capacity. Minimal electrical work is expected, but the aging generator will be replaced due to insufficient capacity. Valve and sodium hypochlorite system upgrades are included to ensure reliability and compliance. A new flow meter and actuated valve will be added to enable bypass automation around the lime softening units—essential for operations when Daisy Brands comes online in 2028.

Ground Storage Reservoir Rehabilitation – Design is complete, and the team is awaiting the Iowa Department of Natural Resources (IDNR) Construction Permit. Funding of $500,000.00

has been approved through CDBG, with release expected in September. The project will be bid once funds are available.

Distribution System Improvements – Hydraulic modeling is underway to evaluate system impacts once the Daisy Brands facility becomes operational, with water demand expected to reach 2.0 MGD at 60 psi between 2028 and 2032. Without improvements, the system will face reduced capacity at the Industrial and Clinton Towers, high pressure on the west side of town, and insufficient pressure at the Daisy site.

Three (3) solutions were evaluated and presented:

> ***Solution 1.*** *Involves upsizing existing water mains ($4.5M) but does not resolve tower capacity or meet pressure targets.*
> ***Solution 2.*** *Proposes installing altitude valves (cost not estimated), but results in unacceptably high west-side pressures.*
> ***Solution 3.*** *The preferred option, create a new pressure zone by building a booster station, installing a check valve, upsizing a water main along Scenic Valley Railway, and redirecting flow via valve closure. This option costs $2.5M and has no identified limitations.*

Daisy Water Tower – The tower project is on hold pending completion of hydraulic modeling and selection of a preferred distribution solution. Final design will consider FAA airspace clearance, ground elevation, the required 60 psi pressure at the Daisy site, and modeling results to ensure efficiency and performance.

Kinsey also discussed CIP planning regarding a water tower on the west side of town.

6. Update on Status of Wastewater Improvement Projects.

Gjersvik presented the status of the Wastewater Improvements Projects:

Headworks Improvements Project – The project was rebid and received five (5) bids, all under the engineer's estimate. The City Council awarded the project to Shank Contractors at the second Council meeting in July. A preconstruction meeting will be scheduled soon to initiate project coordination.

Digester Replacement Project – Design is underway to replace two (2) aging digesters with a new single bolted-steel tank digester. This project may be eligible for CDBG funding, pending completion of the Water Ground Storage Reservoir (GSR) Tank Project.

Wastewater System Expansion Project – Design of all improvements is currently underway. A 30% design review meeting was held with the SEH team in July to discuss routing and final sizing of the pump station and force main. A site visit was also conducted in July with SEH and the US Water operations team in Story City to evaluate the proposed sludge fan press equipment. All teams were impressed with the equipment's suitability for use in Boone. The City is currently working with Daisy Brands and their wastewater engineers to determine discharge permit limits,

which will guide final sizing of the improvements. A meeting with the IDNR Pretreatment Coordinator is scheduled this week to further discuss permit limits for Daisy.

7. Update on Hancock Drive Extension.

Gjersvik advised that this project is currently out for bids, with the bid opening scheduled for September 9, 2025, at 2:00 p.m. Contract award is anticipated in the fall, with the potential to begin installation of underground utilities and grading later this year, weather permitting.

8. Review the July 2025 US Water Monthly Report.

The Committee reviewed the July 2025 US Water Monthly Report.

9. Meter Upgrade Report.
    a. July

Staff installed sixteen (16) meters in July, five (5) of those being new service meters.

10. Stop Box Repair/Shut Off Report.
    a. July

Staff reported that twenty-four (24) accounts qualified to be on the shut-off list. There are one hundred seventy (170) stop boxes that need repaired, with seventy-three (73) of those having lead service lines.

11. Other Business.

12. Adjourn.

With no further business coming before the Committee the meeting adjourned at 5:35 p.m.

Hydraulic Modeling Results

Water Treatment Plant Expansion

Boone, IA

BOONE 182275 | October 15, 2025

SEH

Building a Better World for All of Us®

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October 15, 2025

RE: Water Treatment Plant Expansion
Hydraulic Modeling Results
Boone, IA
SEH No. BOONE 182275

Perry Gjersvik, PE
City of Boone, IA
923 8th Street
Boone, IA 50036

Dear Mr. Gjersvik:

This report provides results from the hydraulic model developed for the water distribution system in the City of Boone, Iowa. It has been prepared in support of the City's planning efforts as it prepares to accommodate the development of the Daisy Brand Industry facility.

The modeling effort evaluates multiple alternatives to ensure the distribution system can reliably meet future demands associated with the new industrial development, while still maintaining the same level of service to the remainder of the community. The analysis includes assessments of system capacity, pressure zones, and potential infrastructure improvements to support long-term growth and operational resilience.

We appreciate the opportunity to support the City of Boone in this important phase of infrastructure planning and look forward to continued collaboration as the project progresses.

Katrina L. Kinsey, PE
Project Manager
(Lic. IA, KS, MN, MO, NE, SD, VA, WI)

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Hydraulic Modeling Results

Water Treatment Plant Expansion
Boone, IA

SEH No. BOONE 182275

October 15, 2025

LICENSED PROFESSIONAL ENGINEER KATRINA L. KINSEY P21084 IOWA	I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa. October 15, 2025
	Katrina L. Kinsey, P.E Iowa Reg. No. P21084 Date My license renewal date is December 31, 2025 Pages covered by this seal: All

Short Elliott Hendrickson Inc.
5414 NW 88th Street Suite 140
Johnston, IA 50131

SEH

Executive Summary

Daisy Brand Industry (Daisy) is planning to construct a new facility on the east side of Boone, Iowa. To ensure the City of Boone's municipal water distribution system can support Daisy's projected water demands without compromising service reliability, a comprehensive hydraulic modeling study was conducted. This study evaluated existing system performance, identified infrastructure limitations, and proposed phased improvements to accommodate Daisy's full buildout by 2032.

The modeling revealed that Daisy's location and high water usage introduce significant challenges to the distribution system, including reduced pressures near the Daisy site, elevated pressures on the west side, increased velocities along Hancock Drive, and imbalanced tower floating between the Clinton Street and Industrial Towers. These impacts are especially pronounced under maximum day demand conditions and necessitate targeted infrastructure upgrades.

Several alternatives were evaluated, including water main replacements, transmission main loops, and pressure zone modifications. The recommended solution is a phased approach that balances immediate operational needs with long-term system reliability and expansion.

Phase 1, targeted for completion by August 2028, includes construction of a 12-inch water main along the Boone & Scenic Valley Railroad, installation of a booster station at the proposed Daisy Tower, a check valve on Eastgate Drive, abandonment of the Greene Street Tower, and reconnection of the water main near Coal Road and W 12th Street. These improvements will establish a dedicated pressure zone for Daisy, achieving the required pressure and improving system performance at a cost of approximately $2.8 million.

Phase 2, to be implemented when funding becomes available, involves construction of the North Transmission Main and installation of an altitude valve at the Industrial Tower. This phase will provide system redundancy, support future growth, and enhance operational control. The estimated cost for Phase 2 is approximately $8.6 million.

This phased strategy ensures that Daisy's integration into the Boone water distribution system is both technically feasible and financially manageable, while preserving service quality for existing customers and supporting future development.

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List of Appendices

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Hydraulic Modeling Results

Water Treatment Plant Expansion

Prepared for City of Boone, IA

1 Introduction

Daisy Brand Industry (Daisy) is planning to construct a new facility within the City of Boone, Iowa (Boone). To ensure that the integration of this industry does not adversely affect the existing municipal water distribution system, a series of hydraulic modeling scenarios have been conducted. These evaluations identify the infrastructure upgrades necessary to support Daisy's water demands while maintaining reliable service throughout the community.

1.1 Existing Distribution System Performance

The City of Boone's water distribution system currently relies on a single water supply source located on the far northwest side of the system. In contrast, its largest water customer, Xenia Rural Water District (Xenia), is situated on the far east side. Before assessing the potential impacts of the proposed Daisy facility, it is essential to understand the performance of the existing system.

Table 1 summarizes key performance factors under average day demand (ADD) and maximum day demand (MDD) conditions. These metrics serve as a baseline for evaluating future infrastructure improvements in response to Daisy's integration.

Table 1 – Existing Distribution System Performance

Scenario	Clinton Street Tower & Industrial Tower Peak Floating Difference (ft)	Peak System Pressure – W 3rd St & S Montana St (psi)	System Pressure - Daisy Brands Site (psi)	Hancock Dr Velocities (ft/s)
Existing ADD	3*	105	60.0 – 64.5	1.08
Existing MDD	5*	106	59.5 – 64.0	1.35

*If Xenia doesn't draw water, then both towers float together

1.2 Daisy Brands Industry

Daisy plans to construct a new facility on the far east side of Boone, south of the Xenia connection. The hydraulic modeling effort focused on identifying infrastructure solutions that will support full buildout of Daisy's operations by the year 2032.

Daisy has requested a pressure range of 55–60 psi at their site. To meet this requirement, projected water demands were scaled over time to determine the necessary infrastructure upgrades for each phase of development. The timing of these improvements is directly tied to Daisy's projected water demand schedule, as shown in Table 2.

Table 2 – Daisy Brands Industry Water Demand Projections

Year	Average Day Demand (MGD)	Maximum Day Demand (MGD)
2028	0.8	0.8
2029	1.1	1.1
2030	1.4	1.4
2031	1.7	1.7
2032	2.0	2.0

In addition to annual increases, Daisy's water usage fluctuates significantly throughout the day. These fluctuations are captured in Table 3 and will be modeled using a diurnal curve to reflect the instantaneous and normal demand periods.

Table 3 – Daisy Brands Industry Demand Fluctuations for ADD and MDD

Year	Instantaneous Demand (MGD)	Instantaneous Demand Timeframe	Normal Demand (MGD)	Normal Demand Timeframe
Aug 2028	4,000	midnight – 1:30 am	349	1:30 am – midnight
Aug 2029	4,000	midnight – 1:30 am	587	1:30 am – midnight
Aug 2030	4,000	midnight – 2:00 am	730	2:00 am – midnight
Aug 2031	4,000	midnight – 3:00 am	778	3:00 am – midnight
Aug 2032	4,000	midnight – 3:00 am	1,016	3:00 am – midnight

The addition of another high-demand user on the far east side of the distribution system introduces significant hydraulic challenges. These include:

- Imbalanced tower floating between the Clinton Street and Industrial Towers
- Elevated pressures in the western portion of the system
- Reduced pressures near the Daisy site
- Increased velocities along Hancock Drive

These impacts highlight the need for strategic infrastructure upgrades to maintain system reliability and performance as the Daisy facility comes online as shown in Table 4.

Table 4 – Existing Distribution System Performance with Daisy

Scenario	Clinton Street Tower & Industrial Tower Peak Floating Difference (ft)	Peak System Pressure – W 3rd St & S Montana St (psi)	System Pressure – Daisy Brands Site (psi)	Hancock Dr Velocities (ft/s)
Existing ADD	18	132	Cannot Sustain (+) Pressure	13.24
Existing MDD	20	132	Cannot Sustain (+) Pressure	14.62

2 Infrastructure Improvements Alternatives

As various infrastructure improvement options are evaluated, certain components will be constructed regardless of the selected alternative. These shared improvements include the installation of a 1-million-gallon elevated storage tank, referred to as the Daisy Tower, located north of the Daisy site, and a 12-inch water main loop. This loop will extend from the existing dead-end water main on Eastgate Drive, pass through the Daisy site to the Daisy Tower, and continue along the newly constructed Hancock Drive to Corporal Roger Snedden Drive.

2.1 Water Main Upgrades

The initial modeling strategy aimed to optimize the distribution system through passive infrastructure upgrades, minimizing the need for ongoing maintenance or operational oversight by the City. This phase focused on enhancing water mains within the system.

2.1.1 Water Main Improvements (3 Projects)

Three key water main replacement projects were evaluated to address tower, pressure, and velocity issues as shown in Figure A-1, with results summarized in Table 5 below, and a total estimated cost of $4,600,000.

- **Project 1: Hancock Drive Water Main**
  Upgrade the existing 8-inch water main to a 12-inch main to improve pressure at the Daisy site and reduce peak demand velocities along Hancock Drive. The estimated cost for this project is $1,100,000.

- **Project 2: 8th and 9th Streets Water Main**
  Replace small-diameter mains with a 16-inch water main to mitigate peak pressure concerns near W 3rd Street and S Montana Street. The estimated cost for this project is $1,500,000.

- **Project 3: Industrial Park Road Water Main**
  Replace the existing 8-inch diameter water main with a 16-inch water main to enable the Clinton Street Tower and Industrial Tower to float together, improving system balance. The estimated cost for this project is $2,000,000.

Table 5 – Distribution System Performance after Construction of the 2.1.1 Projects

Scenario	Clinton Street Tower & Industrial Tower Peak Floating Difference (ft)	Peak System Pressure – W 3rd St & S Montana St (psi)	System Pressure – Daisy Brands Site (psi)	Hancock Dr Velocities (ft/s)
2044 ADD	2.5	115	Cannot Sustain (+) Pressure	7.61
2044 MDD	4.0	114	Cannot Sustain (+) Pressure	7.60

Limitation:
Although these upgrades were implemented, the system was not permitted to return to its previous performance level, and the pressure at the Daisy site remained insufficient to maintain

positive pressure. Additionally, the proposed Daisy Tower is unable to recover, rendering it ineffective for improving system performance. As a result of these limitations, further alternatives were evaluated.

2.1.2 Expanded Water Main Improvements – Including a Significant Transmission Main Project

Including all three projects from Alternative 2.1.1, an additional alternative was considered involving a substantial 16-inch transmission main loop to address the issue throughout the distribution system. The route of this additional alternative is shown in Figure A-1, with results summarized in Table 6 below, and an estimated cost of $4,600,000 for Alternative 2.1.1 improvements and an estimated cost of $7,800,000 for Alternative 2.1.2 improvements for a total estimated project cost of $12,400,000.

Table 6 – Distribution System Performance after Construction of the 2.1.2 Project

Scenario	Clinton Street Tower & Industrial Tower Peak Floating Difference (ft)	Peak System Pressure – W 3rd St & S Montana St (psi)	System Pressure – Daisy Brands Site (psi)	Hancock Dr Velocities (ft/s)
2044 ADD	negligible	107	45 – 56	3.34
2044 MDD	negligible	108	45 – 56	3.34

Limitation:
This alternative enabled the distribution system to nearly regain its previous performance levels. However, the associated costs of projects from Alternatives 2.1.1 and 2.1.2 appear disproportionately high. As a result, the modeling outcomes led to further investigation of alternative solutions.

2.1.3 North Transmission Main

Another alternative was evaluated to address the tower capacity, pressure, and velocity concerns resulting from the addition of Daisy. This option, illustrated in Figure A-2 and summarized in Table 7 below, has an estimated cost of $8,500,000. It includes the construction 6.2 mile transmission main consisting of a 16-inch transmission main from the water treatment plant to Marion Street, continuing south to connect with the existing 16-inch water main at the intersection of Marion Street and W 10th Street. From the point where the 16-inch main bends south, a 12-inch transmission main will extend north to W 22nd Street, then east to Quartz Avenue, and finally south to tie into the dead-end 12-inch water main located north of the intersection of Quartz Avenue and Industrial Park Road.

Table 7 – Distribution System Performance after Construction of the 2.1.3 Project

Scenario	Clinton Street Tower & Industrial Tower Peak Floating Difference (ft)	Peak System Pressure – W 3rd St & S Montana St (psi)	System Pressure – Daisy Brands Site (psi)	Hancock Dr Velocities (ft/s)
2044 ADD	negligible	110	Cannot Sustain (+) Pressure*	12.89
2044 MDD	negligible	105	Cannot Sustain (+) Pressure*	12.85

* System pressure at Daisy Brands site remains insufficient to maintain positive pressure for 2044 ADD and 2044 MDD when the water main between the Daisy Tower and the Daisy site is changed to a 16-inch water main.

Limitation:
Despite the upgrades, the system was unable to maintain positive pressure at the Daisy site, and velocities within the Hancock Drive water main remain excessively high. Additionally, the proposed Daisy Tower was unable to recover, making it ineffective in improving overall system performance. Due to these limitations, additional alternatives were evaluated.

2.2 Altitude Valves

Preliminary hydraulic modeling was performed to assess the feasibility of installing altitude valves at both the Industrial Tower and Clinton Street Tower, as illustrated in Figure B, with the intent of redirecting flow toward the proposed Daisy Tower. However, this approach was quickly ruled out due to significant pressure spikes observed throughout the distribution system, particularly on the west side, where pressures exceeded 200 psi. These extreme conditions raised serious operational concerns.

Limitation:
This alternative was deemed impractical due to the excessive pressures generated across the system, which pose unacceptable risks to infrastructure and operations.

2.3 Water Main Improvements and Boosted Daisy Zone

To achieve the water demands required and the target pressure of 55–60 psi at the Daisy site, the recommended approach is to establish a dedicated pressure zone that includes both Daisy and the proposed Daisy Tower. This strategy also involves identifying and implementing necessary water main upgrades to enhance the overall efficiency of the distribution system.

A booster station will be installed at the proposed Daisy Tower to elevate the pressure to the desired 55-60 psi requested by Daisy. This installation will effectively create a separate pressure zone around the Daisy site, operating independently from the rest of the distribution network. To fully isolate this new zone, a check valve must be installed on the existing water main along Eastgate Drive.

To enhance the overall efficiency of the distribution system, alternative water main routes were evaluated.

2.3.1 Boone & Scenic Valley Railroad Water Main with Boosted Daisy Zone

One alternative that was considered to improve the distribution system was to install a 12-inch water main along the Boone & Scenic Valley Railroad. Modeling results indicate that this alternative is feasible with the addition of a boosted zone for Daisy. However, for optimal results, the connection point on Industrial Park Road should be located as close to the Industrial Tower as possible.

This setup causes the Industrial and Clinton Street Towers to float together, but it also significantly reduces the need of the Greene Street Tower due to the height of the tower and the existing altitude valve, causing the tower to never empty and remain full. As a result, there is potential for water age and stagnant water issues in the Greene Street Tower causing it to be obsolete. Ideally, in this scenario, the Greene Street Tower should be removed from service.

The last improvement needed to enhance the overall efficiency of the distribution system is to close a valve on a 12" water main located near Coal Road and W 12th Street and reconnect the water main in this area. Closing this valve will reduce the pressures on the west side of the distribution system by creating more headloss within the water mains.

The improvements described in this alternative are illustrated in Figure C, with modeling results summarized in Table 8. The estimated cost for these improvements, which include a booster station, check valve, abandonment of the Greene Street Tower, Boone & Scenic Valley Railroad water main, and the water main reconnection near Coal Road and W 12th Street, is approximately $2,800,000.

Table 8 – Distribution System Performance after Construction of the 2.3.1 Project

Scenario	Clinton Street Tower & Industrial Tower Peak Floating Difference (ft)	Peak System Pressure – W 3rd St & S Montana St (psi)	System Pressure – Daisy Brands Site (psi)	Hancock Dr Velocities (ft/s)
2044 ADD	negligible	115	47 – 65*	5.24
2044 MDD	negligible	121	47 – 65*	5.23

* System pressure at Daisy Brands site is 55–65 psi for 2044 ADD and 2044 MDD when the water main between the Daisy Tower and the Daisy site is changed to a 16-inch water main.

Limitation:
Although the Industrial and Clinton Street Towers float together and system pressure at the Daisy site, as well as velocities in the Hancock Drive water main, appear to be within acceptable operating ranges, pressure levels on the west side of the distribution system remain higher than desired.

2.3.2 North Transmission Main with Boosted Daisy Zone

Another alternative considered to improve the distribution system is the installation of a transmission main, as outlined in Section 2.1.3. Modeling results show that the North Transmission Main, combined with a boosted zone for the Daisy area, is a viable option compared to the Boone & Scenic Valley Railroad alignment. This transmission main offers a more direct connection to the Industrial Tower, which helps reduce headloss throughout the system.

This setup causes the Industrial and Clinton Street Towers to float together, but it also significantly reduces the need of the Greene Street Tower due to the height of the tower and the existing altitude valve, causing the tower to only cycle 2 feet every day. As a result, there is potential for water age and stagnant water issues in the Greene Street Tower causing it to be obsolete. Ideally, in this scenario, the Greene Street Tower should be removed from service.

To further enhance the overall efficiency of the distribution system, an additional improvement involves closing a valve on a 12-inch water main near Coal Road and W 12th Street and reconnecting the water main in that area. This improvement increases headloss within the system, which helps lower pressures on the west side of the distribution system.

The improvements described in this alternative are illustrated in Figure D, with modeling results summarized in Table 9. The estimated cost for these improvements, which include a booster station, check valve, abandonment of the Greene Street Tower, North Transmission Main, and the reconnection near Coal Road and W 12th Street, is approximately $9,300,000.

Although the North Transmission Main is a costly addition to the distribution system, it offers several benefits, as it provides operators with a redundant water main from the water treatment plant to the east side of town, increasing system reliability. This redundancy also supports future expansion by enabling the addition of new water users on the north and east sides of town.

Table 9 – Distribution System Performance after Construction of the 2.3.2 Project

Scenario	Clinton Street Tower & Industrial Tower Peak Floating Difference (ft)	Peak System Pressure – W 3rd St & S Montana St (psi)	System Pressure – Daisy Brands Site (psi)	Hancock Dr Velocities (ft/s)
2044 ADD	negligible	105	51 – 65*	4.94
2044 MDD	negligible	108	51 – 65*	4.80

* System pressure at Daisy Brands site is 57–65 psi for 2044 ADD and 2044 MDD when the water main between the Daisy Tower and the Daisy site is changed to a 16-inch water main.

Limitation:
While this alternative appears to be the ideal long-term solution, its high cost may require several years to secure funding.

2.3.3 Combined Water Main with Boosted Daisy Zone

A practical solution would be to proceed with Alternative 2.3.1, pursue funding, and subsequently implement the North Transmission Main (Alternative 2.1.3) at a later date. This long-term solution includes a booster station, check valve, abandonment of the Greene Street Tower, Boone & Scenic Valley Railroad water main, and the water main reconnection near Coal Road and W 12th Street to be completed in the near future and the North Transmission Main to be completed at a later date when funding can be secured.

With two transmission mains supplying the Industrial Tower, it becomes the lead tower and tends to float at a higher elevation than the Clinton Street Tower, which can result the Industrial Tower overflowing. To prevent this, installing a control valve at the Industrial Tower is recommended.

In this configuration, elevated pressures on the west side of the distribution system during maximum day demand are primarily caused by the control valve, which is designed to prevent overflow of the Industrial Tower. Pressure spikes occur immediately after the valve closes and just before the third high service pump shuts down. To reduce these spikes, a failsafe mechanism should be considered that shuts down the third pump before the valve closes. Without this spike, pressures on the west side of the system remain close to current operating conditions. On typical days, the Industrial Tower does not overflow as frequently, which results in lower system pressures. The control valve at the Industrial Tower is only activated when two high service pumps are operating at the same time.

Modeling results for this alternative are summarized in Table 10. The estimated cost for implementing Alternative 2.3.1 is approximately $2,800,000. The future cost for Alternative 2.1.3, along with the installation of an altitude valve at the Industrial Tower, is approximately $8,600,000.

Table 10 – Distribution System Performance after Construction of the 2.3.3 Project

Scenario	Clinton Street Tower & Industrial Tower Peak Floating Difference (ft)	Peak System Pressure – W 3rd St & S Montana St (psi)	System Pressure – Daisy Brands Site (psi)	Hancock Dr Velocities (ft/s)
2044 ADD	2.5	104	51 – 65**	4.88
2044 MDD	5.0	115*	51 – 65**	4.86

* High pressure is caused by overflow at the Industrial Tower, occurring just as the control valve closes and before the third high service pump shuts down.

** System pressure at Daisy Brands site is 57–65 psi for 2044 ADD and 2044 MDD when the water main between the Daisy Tower and the Daisy site is changed to a 16-inch water main.

3 Recommendation

To address the immediate hydraulic challenges of the distribution system when Daisy becomes operational in August 2028 while balancing long-term system reliability and cost-effectiveness, it is recommended to proceed with Alternative 2.3.3 as a phased infrastructure improvement strategy:

Phase 1: Immediate Construction
Construct the Boone & Scenic Valley Railroad water main with a dedicated booster station at the proposed Daisy Tower. This phase includes:

- Establishing a boosted pressure zone for the Daisy site.
- Installing a check valve on Eastgate Drive to isolate the boosted zone.
- Abandoning the Greene Street Tower, which becomes obsolete due to minimal cycling and potential water age issues.
- Reconnecting the water main near Coal Road and W 12th Street to reduce west-side pressures.
- Estimated cost: $2,800,000.

Benefits:

- Achieves acceptable pressure and velocity levels at the Daisy site.
- Keeps Clinton Street and Industrial Towers floating together.
- Provides a cost-effective solution with manageable short-term investment.
- Eliminates the Greene Street Tower from the distribution system, thereby removing the problematic altitude valve. This also reduces dependence on the tower, helping to improve overall water quality.

Phase 2: Future Expansion
Construct the North Transmission Main when funding becomes available. This phase includes:

- A 6.2-mile transmission main from the water treatment plant to the north and east sides of town.
- Installation of an control valve at the Industrial Tower to prevent overflow and manage pressure spikes.
- Estimated cost: $8,600,000.

Benefits:

- Adds redundancy and reliability to the distribution system.
- Supports future expansion and new water users.
- Reduces headloss and improves system efficiency.
- Enhances operational control and balances tower performance.

Operational Considerations:

- Implement a failsafe mechanism to shut down the third high service pump before the altitude valve closes to mitigate pressure spikes.
- Monitor and adjust control settings at Clinton Street and Industrial Towers to optimize usable volume and system pressures.

4 Phasing of Recommendations

To address current system performance limitations while planning for future expansion and reliability, a phased implementation strategy is proposed. This plan outlines two distinct phases, an immediate improvement phase to be completed by August 2028 before Daisy becomes operational, and a future expansion phase to be implemented when funding becomes available.

Phase 1: Immediate Implementation (Target Completion – 2028)
Phase 1 focuses on constructing the Boone & Scenic Valley Railroad water main and establishing a dedicated pressure zone for the Daisy site. This includes the installation of a booster station at the proposed Daisy Tower to achieve the target pressure. A check valve will be installed on Eastgate Drive to isolate the boosted zone from the rest of the distribution system.

As part of this phase, the Greene Street Tower will be removed from service due to its limited cycling and potential for water age issues. Additionally, the water main near Coal Road and W 12th Street will be reconnected to reduce pressures on the west side of the system. These improvements will enhance pressure and velocity performance along Hancock Drive and reduce reliance on aging infrastructure.

The estimated cost for Phase 1 is approximately $2,800,000. Completion of this phase is targeted for August of 2028.

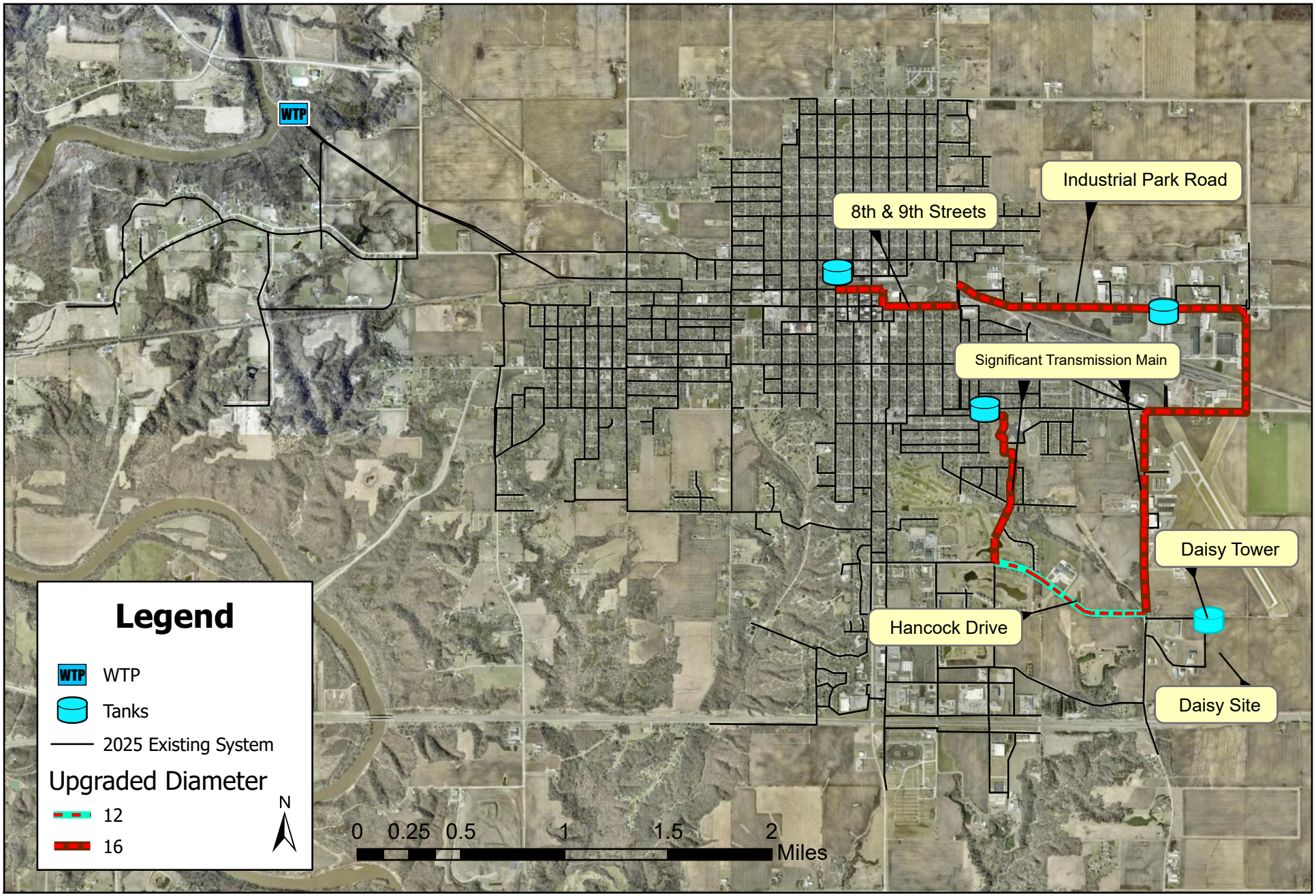
Phase 2: Future Expansion (Timeline Dependent on Funding Availability)
Phase 2 involves the construction of the North Transmission Main, which consists of approximately 6.2 miles of 16-inch and 12-inch water mains. This transmission main will provide a more direct connection from the water treatment plant to the north and east sides of town, improving system reliability and supporting future growth.

A control valve will be installed at the Industrial Tower to prevent overflow and manage pressure spikes. This valve will be activated only when two high service pumps are operating simultaneously. A failsafe mechanism is recommended to shut down the third pump prior to valve closure to mitigate pressure spikes.

The estimated cost for Phase 2, including the North Transmission Main and control valve installation, is approximately $8,600,000. This phase will be implemented when adequate funding is secured.

Appendix A

Figures



Path: X:\AE\B\BOONE\182275\5-final-dsgn\53-dsgn-info\Hydraulic Modeling\Water Model Figures\Boone Daisy Modeling Figures\Boone Daisy Modeling Figures.aprx

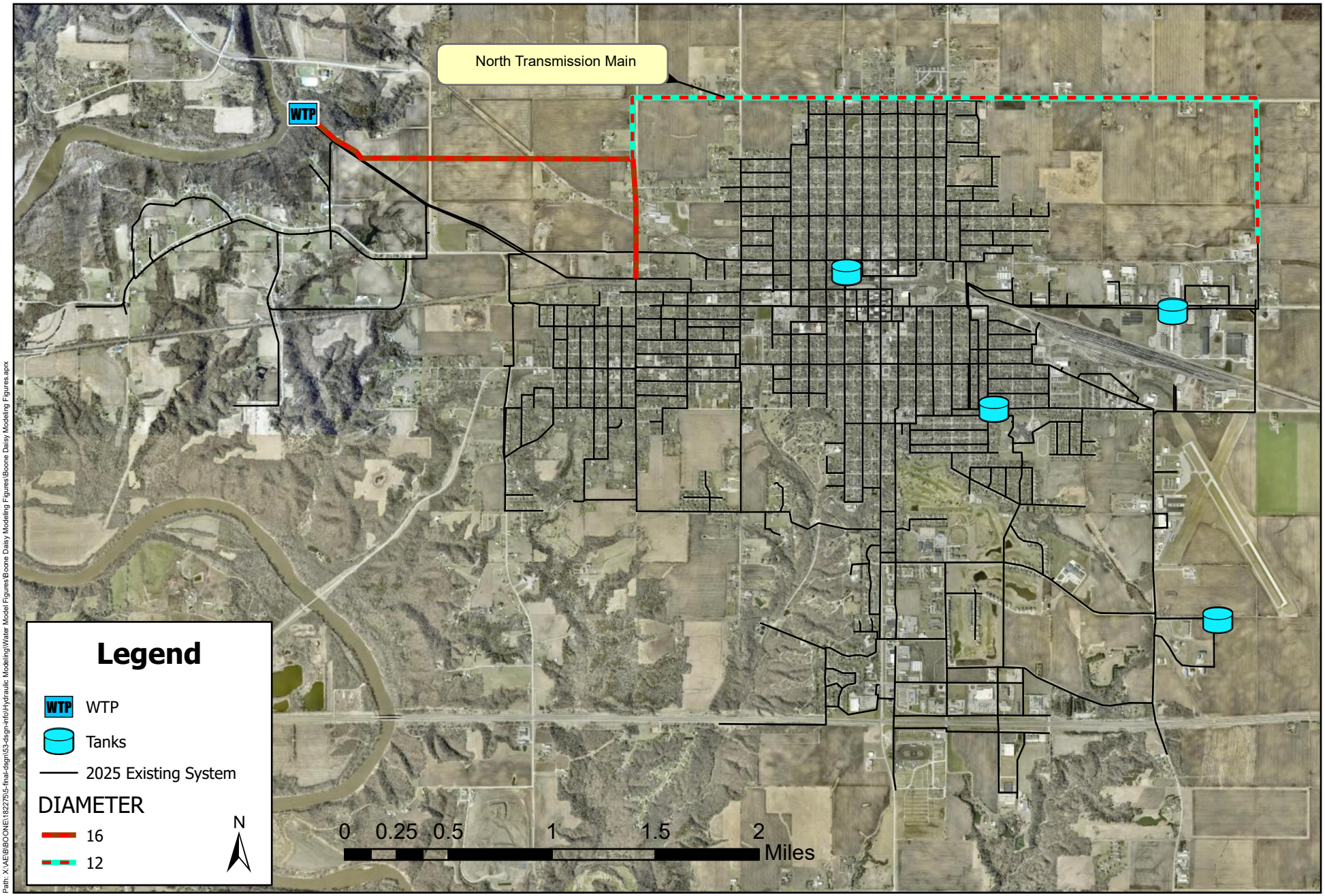
Project Number: BOONE 182275
Print Date: 8/18/2025

Map by: dbrissett
Projection:
Source:

BOONE WATER MODEL
Boone, IA

FIGURE A-1
Water Main Improvements (3 Projects) and
Expanded Water Main Improvements

This map is neither a legally recorded map nor a survey map and is not intended to be used as one. This map is a compilation of records, information, and data gathered from various sources listed on this map and is to be used for reference purposes only. SEH does not warrant that the Geographic Information System (GIS) Data used to prepare this map are error free, and SEH does not represent that the GIS Data can be used for navigational, tracking, or any other purpose requiring exacting measurement of distance or direction or precision in the depiction of geographic features. The user of this map acknowledges that SEH shall not be liable for any damages which arise out of the user's access or use of data provided.



Path: X:\AE\B\BOONE\182275\5-final-dsgn\53-dsgn-info\Hydraulic Modeling\Water Model Figures\Boone Daisy Modeling Figures\Boone Daisy Modeling Figures.aprx

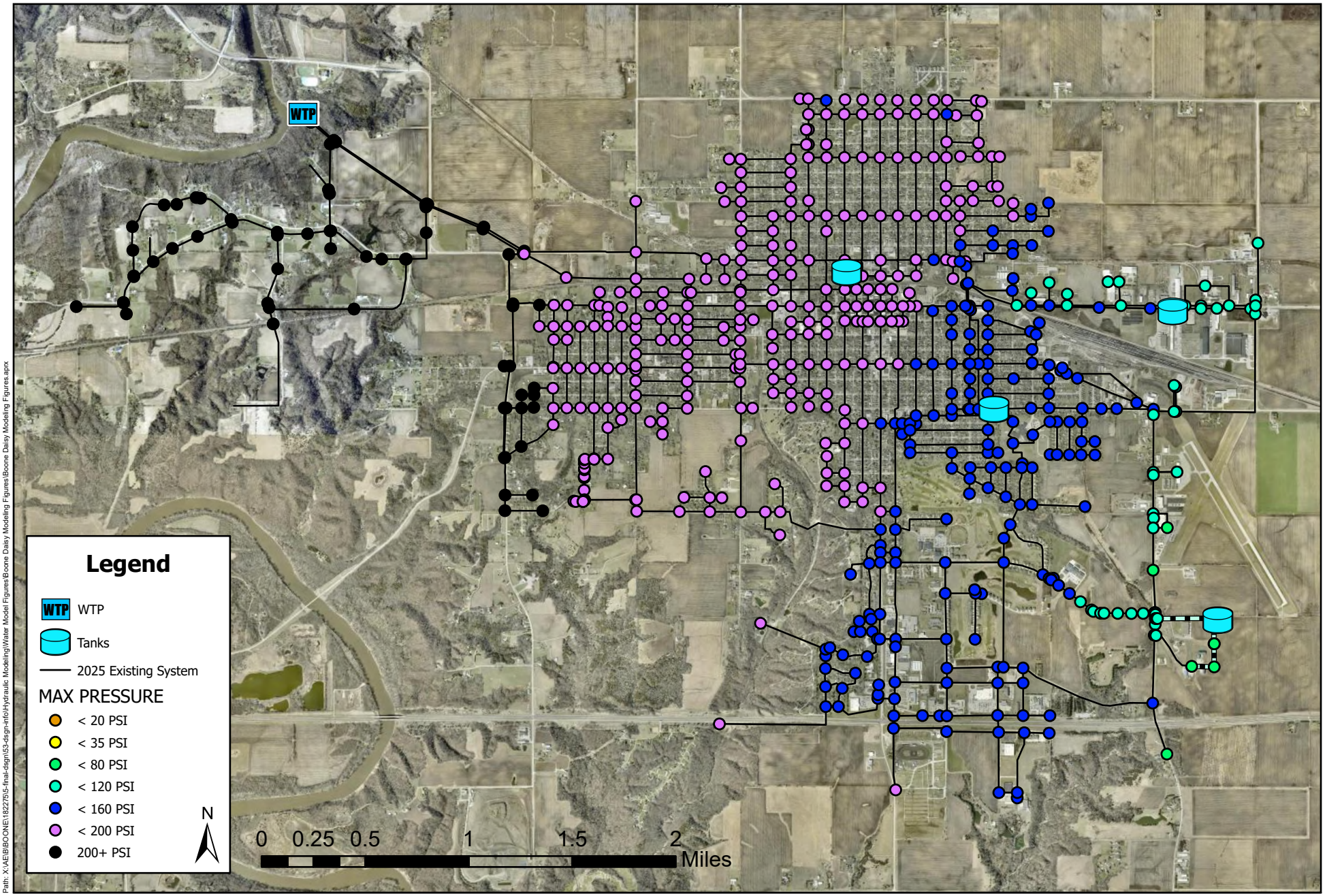
Project Number: BOONE 182275
Print Date: 8/18/2025

Map by: dbrissett
Projection:
Source:

BOONE WATER MODEL
Boone, IA

FIGURE A-2
North Transmission Main Improvement

This map is neither a legally recorded map nor a survey map and is not intended to be used as one. This map is a compilation of records, information, and data gathered from various sources listed on this map and is to be used for reference purposes only. SEH does not warrant that the Geographic Information System (GIS) Data used to prepare this map are error free, and SEH does not represent that the GIS Data can be used for navigational, tracking, or any other purpose requiring exacting measurement of distance or direction or precision in the depiction of geographic features. The user of this map acknowledges that SEH shall not be liable for any damages which arise out of the user's access or use of data provided.



Path: X:\AE\B\BOONE\182275\5-final-dsgn\53-dsgn-info\Hydraulic Modeling\Water Model Figures\Boone Daisy Modeling Figures\Boone Daisy Modeling Figures.aprx

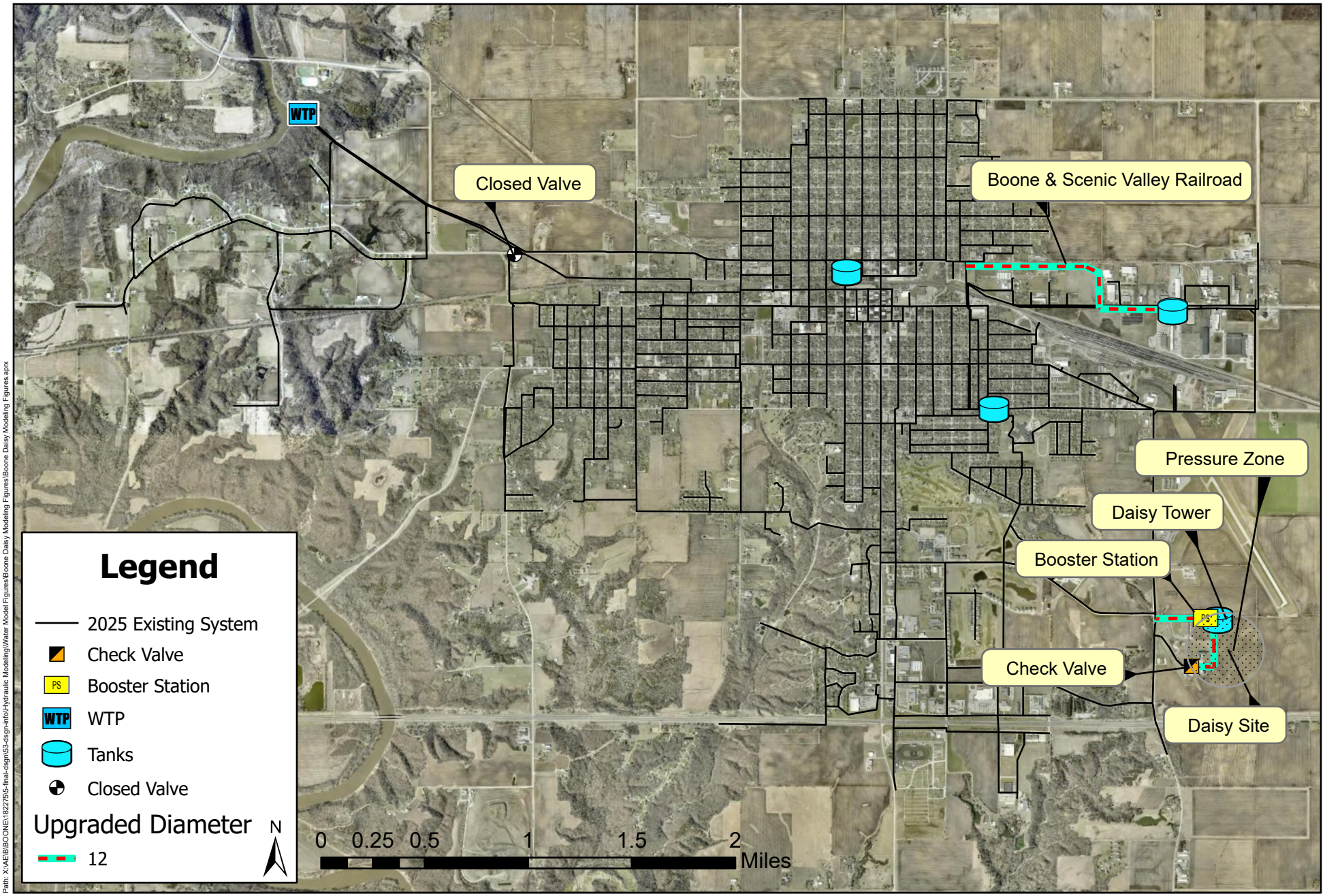
Project Number: BOONE 182275
Print Date: 8/18/2025

Map by: dbrissett
Projection:
Source:

BOONE WATER MODEL
Boone, IA

FIGURE B
Max Pressures with Altitude Valves

This map is neither a legally recorded map nor a survey map and is not intended to be used as one. This map is a compilation of records, information, and data gathered from various sources listed on this map and is to be used for reference purposes only. SEH does not warrant that the Geographic Information System (GIS) Data used to prepare this map are error free, and SEH does not represent that the GIS Data can be used for navigational, tracking, or any other purpose requiring exacting measurement of distance or direction or precision in the depiction of geographic features. The user of this map acknowledges that SEH shall not be liable for any damages which arise out of the user's access or use of data provided.



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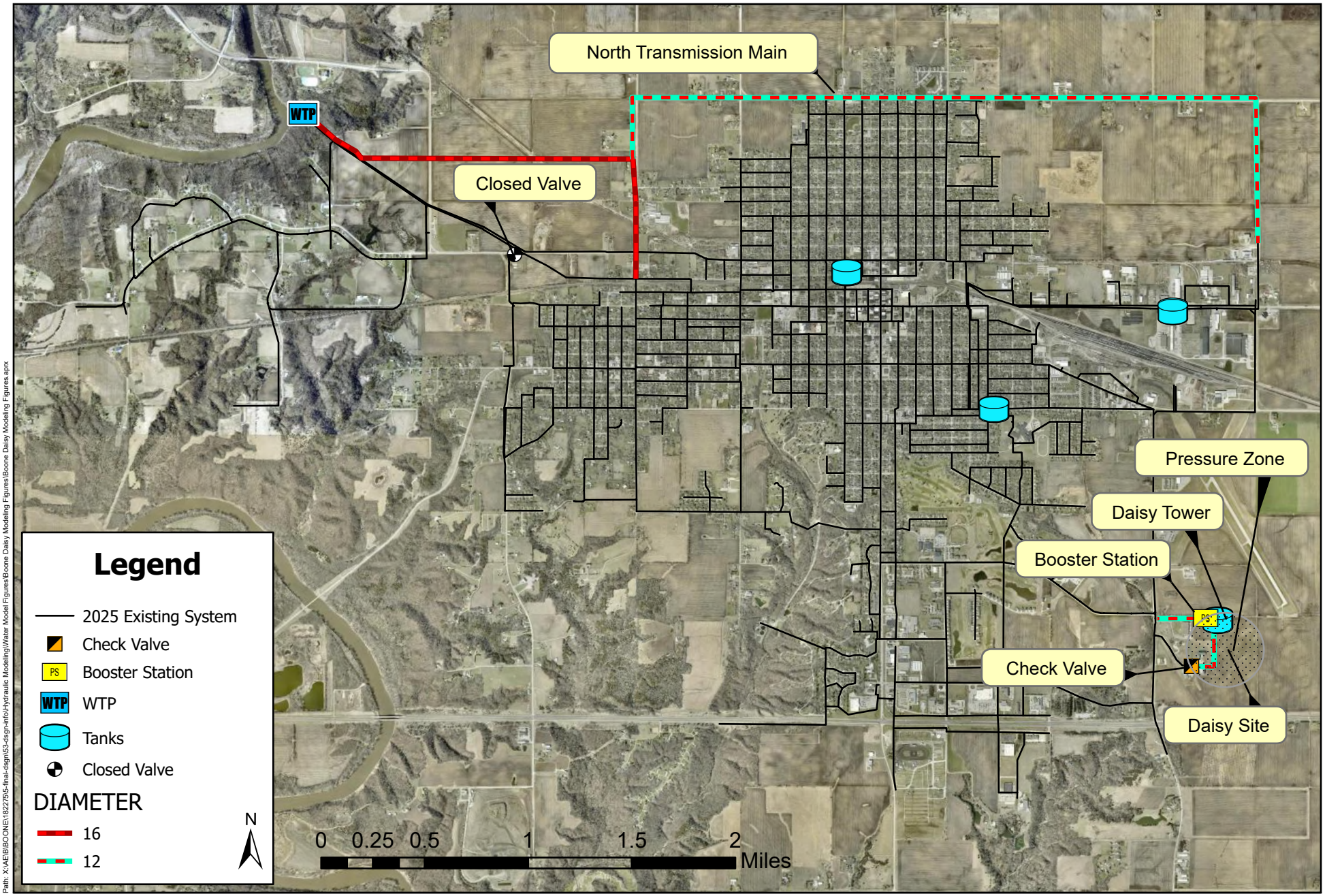
Project Number: BOONE 182275
Print Date: 10/14/2025

Map by: dbrissett
Projection:
Source:

BOONE WATER MODEL
Boone, IA

FIGURE C
Boone & Scenic Valley Railroad Water Main with Boosted Daisy Zone Improvements

This map is neither a legally recorded map nor a survey map and is not intended to be used as one. This map is a compilation of records, information, and data gathered from various sources listed on this map and is to be used for reference purposes only. SEH does not warrant that the Geographic Information System (GIS) Data used to prepare this map are error free, and SEH does not represent that the GIS Data can be used for navigational, tracking, or any other purpose requiring exacting measurement of distance or direction or precision in the depiction of geographic features. The user of this map acknowledges that SEH shall not be liable for any damages which arise out of the user's access or use of data provided.



Path: X:\AE\B\BOONE\182275\5-final-dsgn\53-dsgn-info\Hydraulic Modeling\Water Model Figures\Boone Daisy Modeling Figures\Boone Daisy Modeling Figures.aprx

Project Number: BOONE 182275
Print Date: 10/14/2025

Map by: dbrissett
Projection:
Source:

BOONE WATER MODEL
Boone, IA

FIGURE D
North Transmission Main with
Boosted Daisy Zone Improvements

This map is neither a legally recorded map nor a survey map and is not intended to be used as one. This map is a compilation of records, information, and data gathered from various sources listed on this map and is to be used for reference purposes only. SEH does not warrant that the Geographic Information System (GIS) Data used to prepare this map are error free, and SEH does not represent that the GIS Data can be used for navigational, tracking, or any other purpose requiring exacting measurement of distance or direction or precision in the depiction of geographic features. The user of this map acknowledges that SEH shall not be liable for any damages which arise out of the user's access or use of data provided.

Building a Better World for All of Us®

Sustainable buildings, sound infrastructure, safe transportation systems, clean water, renewable energy, and a balanced environment. Building a Better World for All of Us communicates a company-wide commitment to act in the best interests of our clients and the world around us.

We're confident in our ability to balance these requirements.

JOIN OUR SOCIAL COMMUNITIES

Building a Better World for All of Us®

MEMORANDUM

TO: Perry Gjersvik, PE, City of Boone

FROM: Katie Kinsey, PE
McKenzie Hunt, PE

DATE: October 20, 2025

RE: Water Project Status Memo
SEH No. BOONE 182275

Short Elliott Hendrickson Inc. prepared a Preliminary Engineering Report (PER) evaluating the City of Boone's water system needs through 2044, excluding water distribution improvements. The PER accounts for the full buildout of the Daisy Brands (Daisy) facility by 2032. Since the PER was submitted, additional projects have emerged that also require consideration and implementation. A brief description of each project is provided below, along with a summary table at the end outlining the estimated costs associated with each project.

RECOMMENDED PROJECTS

Jordan Aquifer Wells

The Preliminary Engineering Report (PER) initially identified the Jordan Aquifer as a potential alternative water source for the City of Boone due to its lower nitrate concentrations compared to the existing alluvial aquifer. However, following consultation with a hydrogeologist and the Iowa DNR, it was determined that the Jordan Aquifer could not provide sufficient yield to meet the City's projected water demands, rendering it an impractical option. Consequently, the focus shifted to designing and constructing a new well within the existing alluvial aquifer, referred to as Alluvial Well #30.

This approach is more cost-effective, as alluvial wells are shallower and less expensive to construct than Jordan Aquifer wells. Currently, only one well is proposed. Well #30 is located in an area with historically lower nitrate levels, and if those levels remain low, its addition will help reduce the nitrate concentration in the raw water supply. As water demand increases and additional wells are brought online, Well #30 will play a key role in maintaining water quality across the system.

Lime Softening Treatment Modifications

The PER outlined treatment modifications that would be necessary when the Jordan Aquifer was added as a new source water. Design work began with a preliminary pilot study, which was submitted to the Iowa DNR for review and approval. However, following the submittal, the Jordan Aquifer Well project was deemed unfeasible due to insufficient water availability. As a result, this project will be removed from the Water System Expansion Projects, resulting in some cost savings. However, because preliminary design work had already begun, the City will not realize the full savings originally anticipated.

Clearwell Modifications

The PER recommended modifications to the clearwell (chlorine contact tank) to prevent flooding of the high service pump station during the rehabilitation of the ground storage reservoir. These changes involved lowering the water level in the chlorine contact tank. However, upon reviewing the water treatment plant plans, a bypass line was identified exiting the chlorine contact tank that can achieve the same outcome without altering any internal appurtenances. As a result, this project will be removed from the Water System Expansion Projects list, resulting in full cost savings.

Ground Storage Reservoir Rehabilitation

An evaluation was completed on the ground storage reservoir in October 2022 and identified several recommended repairs to enhance the structural integrity and functionality of the reservoir. Completing these repairs before Daisy comes online in August 2028 is critical, as the reservoir will be needed to support the increased demand on the distribution system.

High Service Pump Replacement

The water treatment plant currently operates with three high service pumps (HSPs), running two at a time while keeping the third as backup. This project proposes replacing all three pumps with four HSPs equipped with variable frequency drives (VFDs), allowing operators to run three pumps simultaneously and maintain one for redundancy. Completing this upgrade by 2030 is essential to meet future distribution system demands.

1 MG Elevated Storage Tank

Daisy has an instantaneous water demand that totals approximately 750,000 gallons. Without additional storage, this demand could significantly strain the distribution system. To address this, a new 1,000,000-gallon storage tank is proposed, which will not only meet Daisy's needs but also provide a buffer for other Daisy demands. It is essential that this tank is completed by August 2028, when Daisy comes online, to ensure adequate capacity and prevent disruptions to the distribution system.

Greene Street Tower Altitude Valve Replacement

The existing Greene Street Tower currently operates using an altitude valve to regulate its high water level. However, City staff have experienced ongoing issues with the valve not functioning as intended. Hydraulic modeling has shown the Greene Street Tower to be obsolete due to minimal cycling and potential water age issues. As a result, this project will be removed from the Water System Expansion Projects list, resulting in full cost savings.

Alluvial Well #30

As noted in the Jordan Aquifer Wells project, this initiative replaces that original concept. One new well has been designed and will be constructed to draw additional source water from the alluvial aquifer. It is anticipated that this well will have low nitrate levels, which will benefit the City's blending strategy during periods of elevated nitrates in other wells. To meet water demands when Daisy comes online in August 2028, it is critical that this well be completed beforehand.

Sodium Hypochlorite Bulk Feed System

During the preliminary design phase for the high service pump replacement project, it was determined that the existing sodium hypochlorite feed system is undersized for system demands beginning in 2028. In order to adequately supply the system with disinfected water the sodium hypochlorite feed system will need to be upsized. The existing sodium hypochlorite room is undersized for the necessary storage and does not provide the space for required operator safety measures. It is recommended to construct an

addition to the high service pump building to house a bulk storage tank, feed pumps, and necessary safety equipment.

Generator Replacement

During the preliminary design phase for the high service pump improvements project, it was determined that the existing generator is undersized for the power demands beginning in 2029. In order to provide backup power for the water treatment plant, necessary wells, and high service pumps the generator will need to be upsized. It is recommended to upsize the existing generator with two 600 kW generators to meet system demands by 2029.

Water Main Upgrades – Boone & Scenic Valley Railroad Water Main and Piping Changes at W 12th Street and Coal Road

Hydraulic modeling of the City of Boone's water distribution system identified several key water main upgrades required prior to the Daisy facility becoming operational in August 2028. One of the most critical improvements is the construction of the Boone & Scenic Valley Railroad Water Main, which will convey water from a large main that crosses the Union Pacific Railroad directly to the Industrial Tower. This connection will help synchronize the floating levels of the Industrial and Clinton Street Towers, improving system balance. Another essential upgrade involves redesigning the water mains near W 12th Street and Coal Road. Once Daisy is online, elevated pressures are anticipated on the west side of the distribution system. Modifying the water main configuration in this area will help alleviate those pressures and maintain overall system stability.

Booster Station & Check Valve

Hydraulic modeling has shown that the Daisy site requires its own pressure zone due to its specific pressure needs. To achieve this, a booster station will be added at the new tower site to increase pressure to Daisy. Additionally, a check valve will be installed on Eastgate Drive to isolate the pressure zone and prevent backflow into the broader distribution system. This project must be completed before the new tower becomes operational to ensure proper functionality and pressure control.

Biological Nitrate Treatment Expansion

As noted in the Alluvial Well #30 project, a new alluvial well is proposed to be constructed with the intent being to drill a lower nitrate well to aid in the balance of incoming raw water nitrate levels. With elevated nitrate levels present in all wells during the summer months, the project team preliminarily explored reverse osmosis and ion exchange for nitrate removal. Both of these technologies produce waste streams that are difficult to treat with the existing configuration of the water treatment plant waste disposal. The existing waste stream from the water treatment plant goes to the lime waste ponds and then to the Des Moines River. The waste streams associated with ion exchange and reverse osmosis contain contaminants like chloride and nitrate at levels higher than the approved NPDES permit. To avoid these waste streams and provide nitrate removal biological nitrate treatment was explored.

Biological denitrification treatment has the capacity to reduce nitrate concentrations to levels established by the City through integration with the existing water treatment infrastructure. The U.S. Environmental Protection Agency (EPA) has set the Maximum Contaminant Level (MCL) for nitrates at 10 mg/L. With the anticipated increase in water demand associated with the commissioning of the Daisy facility, raw water nitrate concentrations are projected to range between 7.0 and 10 mg/L during the summer months. As current nitrate levels remain below the EPA's regulatory threshold of 10 mg/L, the City of Boone is not presently required to implement additional nitrate treatment measures.

Alluvial Well #31

A supplemental alluvial well may be designed and constructed to extract additional source water from the alluvial aquifer. The primary objective of this well is to provide a water source with low nitrate concentrations, thereby enhancing the City's blending strategy during periods of elevated nitrate levels in existing wells. A comparative evaluation of constructing an additional alluvial well versus implementing a nitrate treatment system should be conducted when nitrate concentrations exceed regulatory or operational thresholds.

Water Main Upgrades – North Transmission Main and Industrial Tower Altitude Valve

Hydraulic modeling conducted for the distribution system identified a key water main upgrade that will provide operators with a redundant water main from the water treatment plant to the east side of town, increasing system reliability. This water main also supports future expansion by enabling the addition of new water users on the north and east sides of town. Additionally, to prevent the Industrial Tower from overflowing, an altitude valve will need to be installed at the Industrial Tower.

ESTIMATED TOTAL PROJECT COSTS FOR RECOMMENDED PROJECTS

PER Recommended Projects		Current Project List	
Project Description	**Total Cost**	**Project Description**	**Total Cost**
Jordan Aquifer Well (2EA)	$3,112,560	Alluvial Well #30 (Design Complete)	$1,101,480
Lime Softening Treatment Modifications	$720,720	**Not needed**	$17,000
Clearwell Modifications	$98,868	**Not needed**	
Ground Storage Reservoir Rehabilitation	$1,128,361	Ground Storage Reservoir Rehabilitation (Design Complete)	$1,605,582
High Service Pumps Replacement	$957,330	High Service Pump Replacement (Design Complete)	$1,673,950
1 MG Elevated Storage Tank	$4,791,600	1 MG Elevated Storage Tank	$4,791,600
Greene Street Tower Altitude Valve Replacement	$71,280	**Not needed**	
		Sodium Hypochlorite Bulk Feed System	$900,000
		Generator Replacement	$700,000
		Water Main Upgrades - Boone & Scenic Valley Railroad Water Main Piping Changes at W 12th St & Coal Rd	$2,800,000
		Booster Station & Check Valve	$700,000
Total Cost	**$10,880,719**	**Total Cost**	**$14,289,612**
		Projects On Hold	
		Biological Nitrate Treatment Expansion	$12,000,000
		Alluvial Well #31	$1,500,000
		Water Main Upgrades - North Transmission Main Industrial Tower Altitude Valve	$8,600,000

AUGUST 2025

City of Boone, Iowa

Water & Wastewater Treatment Facilities, Storage, and Lift Stations

Monthly Operations & Maintenance Report

Prepared by:

USW UTILITY GROUP

1406 Central Avenue
Fort Dodge, IA 50501
(515) 269-2338

Prepared For:

City of Boone

923 8th Street
Boone, IA 50036
(515) 432-4211

August 2025

City of Boone
Ondrea Elmquist, City Administrator
923 8th Street
Boone, IA 50036

August Monthly Water & Wastewater Operations Report

Dear Ms. Elmquist:

In accordance with contract requirements, we are pleased to provide the following monthly report for August 2025. Below is a list of the significant events that occurred during the month:

SUBMITTED TO: **Ondrea Elmquist**, City Administrator
Utility Committee and City Council, City of Boone
Aaron Voss, U.S. Water Services Corporation

We appreciate the opportunity to be of service to the City of Boone. We are available to discuss this report, or any other aspect of our operations, at your convenience. Should you have any questions or need additional information, please do not hesitate to contact us.

Sincerely,

J.D. Roberts, Water Environment Plant Supervisor
USW Utility Group
(712) 259-0805
JRoberts@USWaterCorp.net

Dave Moore, Water Works Supervisor
USW Utility Group
(515) 230-3130
DMoore@USWaterCorp.net

Water Treatment Facility

Finished Water Monthly Flows and Hardness			
		August-2024	August-2025
Water	**Units**		
Average Daily Pumped	gallons	1,833,000	1,781,000
Maximum Daily Pumped	gallons	2,238,000	1,999,000
Minimum Daily Pumped	gallons	1,564,000	1,491,000
Hardness			
Hardness - Avg Raw	grains	19.9	20.2
Hardness - Avg Finish	grains	8.6	9.0
Iron mg/l			
Avg Raw	mg/L	.01	.01
Avg Finish	mg/L	.01	.01
Fluoride mg/l			
Avg Raw Fl.	mg/L	.47	.47
Avg Finish Fl.	mg/L	.70	.70

Water Storage

During the month of August, Greene Street, Industrial Park and Clinton Street Towers were in service as well as the 2-million-gallon reservoir and 550,000-gallon contact basin for a total of 4,150,000-gallons of storage.

Maintenance Report

During the month of August, the following tasks were completed:

- Cleaned pipping and adjusted altitude valve at pump station
- SCADA issues were fixed
- Repaired plugged tubing on Pump Station Chorine analyzer
- Sprayed for weeds around buildings and fence lines
- Unplugged Lime Pond drain lines

- Changed oil in the City's Ford F250 truck
- Cleaned out lime slurry troughs
- Washed trucks and tractors
- Mowed main plant, pump Station, water towers and well fields
- Mowed around lime ponds
- Verified all five turbidity meters weekly
- Calibrated all five turbidity meters
- Cleaned and verified calibration on all four CL-17 chlorine analyzers weekly
- Cleaned chlorine injector at pump station
- Replaced rooftop dehumidifier filters
- Misc. cleaning around water plant

Current & Planned Projects

During the month of September, the following tasks are planned:

- Change oils in backwash pumps and High Service Pumps
- Continue with miscellaneous yard work
- Serviced Claricone #1
- Serviced Slaker #1

Health & Safety

There were no safety violations to report for the current month.

The subjects of the weekly safety training were:

1. Climb Onto Ladder Safety.
2. Heat Illness.
3. Hand Safety.
4. Safety Data Sheets.
5. Arc Flash/Arc Blast Awareness and Safety.

Regulatory Reports

See attached documents

WASTEWATER

Wastewater Treatment Facility

Wastewater Treatment Facility Flows			
	Plant Influent	**Plant Effluent**	**Units**
Total	134.93	•	MGD
Average per day	4.35	•	MGD
Minimum	1.99	•	MGD
Maximum	12.92	•	MGD

	Wastewater Influent & Effluent Quality							
	Influent		**Effluent**					
Parameter	**Daily Ave MG/L**	**Daily Ave LBS/Day**	**Daily Max MG/L**	**Permit Daily MG/L Limit**	**7 Day Max Ave MG/L**	**Permit 7 Day Max Limit**	**30 Day Average**	**Permit 30 Day Ave**
BOD_5	**57**	**1628**	•	•	•	•	•	•
$CBOD_5$	•	•	**4**	•	**4**	**40**	**3.1**	**25**
Suspended solids	**84.7**	**2673**	**8**	•	**4.75**	**45**	**4.1**	**30**
Nitrogen Ammonia	**6.1**	**169**	**.241**	**14.70**	**.135**	•	**.108 MG/L**	**2.4 MG/L**
Nitrate Nitrogen	•	•	**522 LBS/Day**	**1075 LBS/Day**	**522 LBS/Day**	•	•	**657 LBS/Day**
Dissolved Oxygen	•	•	**8.9**	**>5.0**	**8.68**	•	**8.22**	**>5.0**
pH	**7.42**	•	**8.0**	**6.5 to 9 STD Units**	**8.0**	•	**7.93**	**6.5 to 9 STD Units**

ND= No Detection

- **= No limit set**

Solids Inventory

During the month of August, we pressed one day (12,000 gallons) and hauled 7.90 wet tons.

- **Solids Inventory:**

  Stable but not improving.

  Inventory is currently ~100,000 lbs, which is 2x the normal operating mass.

- **Volatile Solids (VS):**

  Currently at ~54%, up 1% over the past 30 days — this indicates a slow recovery in microbial activity or health.

- **Flows and Loadings:**

  Back to normal, which should help stabilize the system further.

- **Reseeding:**

  Still an option — on standby if further biological recovery stalls or regresses

Lift Stations

All lift stations are inspected at least twice per week to ensure proper operations. Airport Road Lift Station pump #1 does not keep a prime. Electric Pump and Iowa Pump have both provided repairs, but pump continues to fail. This station is on the R&R list for replacement.

- Lift Station pumps were inspected August 28, 2025.

Linn Street Lift Station – Pump 1:

Pump 1 was pulled and taken to Iowa Pump for further inspection. The Ohms readings were outside the normal range, prompting a more detailed evaluation by their team.

Snedden Drive Lift Station – Pump 1:

Iowa Pump was initially able to get Pump 1 operational. However, the following day, the pump lost its prime and is currently out of service.

Maintenance Report

64 - (Sixty-Four) Preventive Maintenance Work orders Completed

- 8-6-25: Sludge Pump 2 gasket replacement
- 8-6-25: Raised both entrance gates 6’’
- 8-19-25: Updated SC200 Controller and LDO Probes for the VLR
- 8-20-25: Replaced motor assembly for ISCO Influent Sampler
- 8-20-25: Built a Winterization Storage for UV Sleeves and Bulbs
- 8-21-25: Emptied and Inspected the East Digester. Clean out diffusers that were plugged
- 8-28-25: Tree and Brush removal on west side of plant.

Current & Planned Projects

- Roof Replacements- (Waiting on Manufacturer for safety Guiderail)
- In-plant Lift Station-(Currently in Engineering)
- Preliminary Screen Install-(Awarded to Shank Construction)
- North Clarifier Rehabilitation-Story Construction September

Health & Safety

There were no safety violations to report for the current month.

The subjects of the monthly safety training were:

- Arc Flash/Arc Blast Awareness and Safety
- Heat Illness
- Hackers that use social engineering don’t hack computers—they hack people
- Hand Safety
- Phishing Types
- Safety Data Sheets
- Security Awareness Training (SAT) program

Regulatory Reports

See attached documents

SURFACE WATER/INFLUENCED GROUNDWATER MONTHLY OPERATION REPORT

IOWA DNR WATER SUPPLY SECTION

Basic Information

S/EP #: 1

SYSTEM NAME: Boone Water Works **PWSID #:** 0819033 **MONTH:** August **YEAR:** 2025

DAY	Pumpage		Operating Hours	Fluoride		Chlorine Residual								CT	Cl_2 Used
						Source/Entry Point (S/EP)				Distribution					
	Raw in 1,000s Gallons Per Day	To System in 1,000s Gallons Per Day	Number of Hours of Treatment Plant Operation Per Day	Quantity Used in lbs.	Finished Water (mg/L)	Number of Tests Taken*	Specify Free (F) or Total (T)	Lowest Measured Residual (mg/L)	Continuous Hours Less Than 0.3 mg/L Free or 1.5 mg/L Total	Number of Tests Taken	Lowest Measured Residual Free (mg/L)	Number With Undetected Residual	Highest Measured Residual Free (mg/L)	Ratio of CT Obtained to CT Required	Chlorine in lbs.
1	2,085	1,628	17.50	28	0.69	"C"	(F)	1.78	0	1	0.28	0	0.28	4.7	34
2	2,010	1,608	17.00	28	0.72	"C"	(F)	1.86	0	1	0.26	0	0.26	4.9	33
3	2,139	1,752	18.00	30	0.73	"C"	(F)	2.00	0	1	0.26	0	0.26	4.1	36
4	2,496	1,999	21.50	34	0.70	"C"	(F)	2.09	0	1	0.29	0	0.29	3.5	40
5	2,430	1,947	20.75	36	0.69	"C"	(F)	2.09	0	1	0.32	0	0.32	4.0	42
6	2,153	1,736	18.50	28	0.68	"C"	(F)	2.33	0	6	0.35	0	0.35	4.9	36
7	2,114	1,682	18.00	30	0.70	"C"	(F)	2.23	0	1	0.38	0	0.38	5.0	38
8	2,389	1,937	20.50	33	0.73	"C"	(F)	2.31	0	1	0.43	0	0.43	4.7	38
9	1,886	1,491	16.50	27	0.70	"C"	(F)	2.35	0	1	0.53	0	0.53	6.1	30
10	2,218	1,811	19.25	30	0.65	"C"	(F)	2.52	0	1	0.55	0	0.55	5.1	37
11	2,116	1,715	18.25	30	0.69	"C"	(F)	2.23	0	6	0.57	0	0.57	5.2	36
12	2,071	1,665	17.75	29	0.65	"C"	(F)	2.25	0	1	0.62	0	0.62	5.5	38
13	2,237	1,832	19.00	31	0.62	"C"	(F)	1.92	0	1	0.65	0	0.65	4.9	40
14	2,328	1,876	20.00	32	0.73	"C"	(F)	2.14	0	1	0.70	0	0.70	4.8	41
15	2,188	1,766	18.75	33	0.73	"C"	(F)	2.11	0	1	0.73	0	0.73	5.0	39
16	2,232	1,779	19.25	30	0.70	"C"	(F)	2.38	0	1	0.74	0	0.74	4.7	34
17	2,441	1,970	21.00	34	0.74	"C"	(F)	2.54	0	1	0.72	0	0.72	4.2	40
18	2,191	1,764	20.00	30	0.71	"C"	(F)	2.09	0	1	0.69	0	0.69	4.7	36
19	2,132	1,685	18.50	28	0.70	"C"	(F)	2.23	0	1	0.70	0	0.70	5.1	37
20	2,218	1,780	19.25	32	0.73	"C"	(F)	2.10	0	1	0.67	0	0.67	5.0	34
21	2,185	1,721	18.75	30	0.68	"C"	(F)	2.16	0	1	0.69	0	0.69	5.3	37
22	2,163	1,733	18.50	30	0.71	"C"	(F)	2.07	0	1	0.70	0	0.70	5.6	36
23	2,216	1,706	19.25	26	0.74	"C"	(F)	2.03	0	1	0.70	0	0.70	5.1	38
24	2,323	1,803	20.00	34	0.70	"C"	(F)	1.99	0	1	0.70	0	0.70	5.2	38
25	2,183	1,744	18.75	30	0.70	"C"	(F)	2.07	0	1	0.71	0	0.71	4.9	36
26	2,330	1,844	19.75	28	0.73	"C"	(F)	2.19	0	1	0.72	0	0.72	4.8	38
27	2,268	1,836	19.00	33	0.72	"C"	(F)	2.10	0	1	0.73	0	0.73	4.9	38
28	2,353	1,878	19.75	30	0.77	"C"	(F)	2.06	0	1	0.77	0	0.77	4.8	42
29	2,316	1,880	19.5	32	0.70	"C"	(F)	2.18	0	1	0.77	0	0.77	5.0	40
30	2,287	1,842	19.50	35	0.65	"C"	(F)	2.29	0	1	0.79	0	0.79	5.4	38
31	2,228	1,789	18.75	32	0.74	"C"	(F)	2.13	0	1	0.83	0	0.83	5.1	40
Total	68,926	55,199	590.75	953						41		0			1,160
Avg	2,223	1,781	19.18	31	0.70										37
Max	2,496	1,999	21.50	36	0.77				0				0.83		42
Min	1,886	1,491	16.50	26	0.62			1.78			0.26			3.5	30

*If continuous monitoring of chlorine is provided, enter "C" in the space provided.

I certify that I am familiar with the information contained in this report and that the information is true, complete, and accurate.

DRC Operator's or Designee's Signature: David Moore

Certificate #: 4108 Grade: IV Date: 9/4/2025

SURFACE WATER/INFLUENCED GROUNDWATER MONTHLY OPERATION REPORT

IOWA DNR WATER SUPPLY SECTION

Turbidity Data Page 1 of 1

S/EP: #1

SYSTEM NAME: Boone Water Works **PWSID #:** 0819033 **MONTH:** August **YEAR:** 2025

DAY	Finished Water			Filter Effluent																Raw Water Turbidity (Highest Daily Reading NTU)
				#1				#2				#3				#4				
	Number of Readings Taken **	Number of Readings >0.3 NTU	Highest Daily Reading (NTU)	Highest Consecutive Results >0.5 NTU Anytime After 4 Hours From Start Up or Backwash		Daily Highest (NTU)	# of Consec Results >10 NTU	Highest Consecutive Results >0.5 NTU Anytime After 4 Hours From Start Up or Backwash		Daily Highest (NTU)	# of Consec Results >10 NTU	Highest Consecutive Results >0.5 NTU Anytime After 4 Hours From Start Up or Backwash		Daily Highest (NTU)	# of Consec Results >10 NTU	Highest Consecutive Results >0.5 NTU Anytime After 4 Hours From Start Up or Backwash		Daily Highest (NTU)	# of Consec Results >10 NTU	
1	17	0	.02	.01	.01	.02	0	.01	.01	.02	0	.02	.02	.03	0	.02	.02	.02	0	0.08
2	18	0	.02	.02	.02	.02	0	.01	.01	.02	0	.02	.02	.02	0	.01	.01	.02	0	0.09
3	17	0	.02	.02	.02	.02	0	.01	.01	.02	0	.02	.02	.03	0	.02	.02	.02	0	0.09
4	19	0	.02	.01	.01	.02	0	.01	.01	.02	0	.02	.02	.02	0	.01	.01	.02	0	0.10
5	21	0	.02	.01	.01	.02	0	.01	.01	.02	0	.02	.02	.02	0	.01	.01	.02	0	0.09
6	21	0	.01	.02	.02	.02	0	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.01	0	0.09
7	19	0	.02	.02	.02	.02	0	.02	.02	.02	0	.01	.01	.02	0	.01	.01	.02	0	0.09
8	18	0	.02	.01	.01	.02	0	.01	.01	.02	0	.02	.01	.02	0	.01	.01	.02	0	0.09
9	20	0	.02	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	0.11
10	16	0	.02	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	0.11
11	21	0	.02	.03	.02	.03	0	.01	.01	.03	0	.01	.01	.02	0	.01	.01	.02	0	0.10
12	19	0	.02	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	0.08
13	18	0	.02	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.01	0	.01	.01	.02	0	0.08
14	19	0	.02	.02	.02	.03	0	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.01	0	0.08
15	20	0	.02	.02	.02	.02	0	.01	.01	.03	0	.01	.01	.02	0	.01	.01	.02	0	0.09
16	19	0	.02	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	0.08
17	20	0	.02	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	0.09
18	22	0	.02	.02	.02	.02	0	.01	.01	.02	0	.01	.01	.02	0	.02	.01	.02	0	0.09
19	19	0	.02	.02	.02	.02	0	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	0.09
20	20	0	.02	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	0.11
21	20	0	.02	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	0.09
22	19	0	.02	.02	.02	.02	0	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	0.08
23	19	0	.02	.02	.02	.02	0	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	0.09
24	19	0	.02	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	0.09
25	19	0	.02	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.01	0	.01	.01	.02	0	0.09
26	19	0	.02	.03	.03	.03	0	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.01	0	0.09
27	20	0	.02	.03	.02	.03	0	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	0.09
28	19	0	.02	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	0.09
29	20	0	.02	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	0.07
30	20	0	.02	.02	.02	.03	0	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.01	0	0.08
31	20	0	.02	.02	.02	.02	0	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.01	0	0.07
Total	597	0					0				0				0				0	
Avg																				0.09
Max			.02			.03				.03				.03				.02		0.11
Min																				0.07

**If continuous monitoring of turbidity is provided, measurements must be recorded at equal time intervals at least once every four hours or hourly for plants w/pop. >100,000.

I certify that I am familiar with the information contained in this report and that the information is true, complete, and accurate.

DRC Operator's or Designee's Signature: David Moore

Certificate #: 4108 Grade: IV Date: 9/4/2025

SURFACE WATER/INFLUENCED GROUNDWATER MONTHLY OPERATION REPORT

IOWA DNR WATER SUPPLY

Basic Information

S/EP: #1

System Name: **PWSID #:** 819033 **Month:** August **Year:** 2025

Day	Operating Hours	Pumpage		Fluoride		Raw Turbidity	Settled Turbidity (individual sedimentation basin)							
	Number of hours the plant operated per day.	Raw in 1,000s Gallons Per Day	To System in 1,000s Gallons Per Day	Quantity Used in lbs. or gal. (circle one)	Finished Water (mg/L)	Highest Daily Reading (NTU)	Highest Daily Reading Sed 1 (NTU)	Highest Daily Reading Sed 2 (NTU)	Highest Daily Reading Sed 3 (NTU)	Highest Daily Reading Sed 4 (NTU)	Gallons Of Liquid Chlorine Used 15%	Wett Well Residual		
1	17.50	2085	1628	28.00	0.69	0.08		0.94			19.40	0.48		
2	17.00	2010	1608	28.00	0.72	0.09		0.83			19.80	0.49		
3	18.00	2139	1752	30.00	0.73	0.09		2.30			20.40	0.44		
4	21.50	2496	1999	34.00	0.70	0.10		1.00			23.60	0.45		
5	20.75	2430	1947	36.00	0.69	0.09		1.51			23.00	0.50		
6	18.50	2153	1736	28.00	0.68	0.09		0.70			20.90	0.55		
7	18.00	2114	1682	30.00	0.70	0.09		1.19			19.60	0.54		
8	20.50	2389	1937	33.00	0.73	0.09		2.33			22.80	0.58		
9	16.50	1886	1491	27.00	0.70	0.11		0.82			17.80	0.57		
10	19.25	2218	1811	30.00	0.65	0.11		1.02			20.90	0.55		
11	18.25	2116	1715	30.00	0.69	0.10		1.33			19.80	0.57		
12	17.75	2071	1665	29.00	0.65	0.08		1.19			19.20	0.57		
13	19.00	2237	1832	31.00	0.62	0.08		1.83			21.00	0.55		
14	20.00	2328	1876	32.00	0.73	0.08		1.10			20.20	0.56		
15	18.75	2188	1766	33.00	0.73	0.09		0.65			20.50	0.54		
16	19.25	2232	1779	30.00	0.70	0.08		1.01			20.20	0.53		
17	21.00	2441	1970	34.00	0.74	0.09		0.71			22.90	0.52		
18	20.00	2191	1764	30.00	0.71	0.09		1.98			20.00	0.53		
19	18.50	2132	1685	28.00	0.70	0.09		1.20			20.00	0.53		
20	19.25	2218	1780	32.00	0.73	0.11		2.50			20.00	0.53		
21	18.75	2185	1721	30.00	0.68	0.09		0.91			19.10	0.56		
22	18.50	2163	1733	30.00	0.71	0.08		2.07			20.00	0.57		
23	19.25	2216	1706	26.00	0.74	0.09		1.18			19.80	0.55		
24	20.00	2323	1803	34.00	0.70	0.09		2.34			21.00	0.59		
25	18.75	2183	1744	30.00	0.70	0.09		1.26			20.20	0.53		
26	19.75	2330	1844	28.00	0.73	0.09		1.45			22.90	0.55		
27	19.00	2268	1836	33.00	0.72	0.09		0.82			22.20	0.54		
28	19.75	2353	1878	30.00	0.77	0.09		1.28			23.00	0.56		
29	19.50	2316	1880	32.00	0.70	0.07		2.17			22.80	0.57		
30	19.50	2287	1842	35.00	0.65	0.08		1.40			22.10	0.60		
31	18.75	2228	1789	32.00	0.74	0.07		1.28			21.80	0.56		
Total	591	68,926	55,199	953							646.90		0	0
Avg	19.06	2,223	1,781	30.74	0.70	0.09	#DIV/0!	1.36	#DIV/0!	#DIV/0!	20.87	0.54	#DIV/0!	#DIV/0!
Max	21.50	2,496	1,999	36.00	0.77	0.11	0.00	2.5	0.0	0.00	23.60	0.60	0.00	0.00
Min	16.50	1,886	1,491	26.00	0.62	0.07	0.00	0.65	0.00	0.00	17.80	0.44	0.00	0.00

I certify that I am familiar with the information contained in this report and that the information is true, complete, and accurate.

DRC Operator or Designee's Signature: David Moore

Certificate #: 4108 Grade: IV Date: 9/4/2025

October 2018 FORM 542-8027

	FLUORIDE		HARDNESS		PH		TOTAL ALK		IRON		MANGANESE		ORTHO	H_2O	Cl_2	NITRATE		RAW
DATE	RAW	FIN	RAW	FIN	RAW	FIN	RAW	FIN	RAW	FIN	RAW	FIN	PHOS	TEMP	FREE	RAW	FIN	TURB.
1		0.69	332	162	7.53	9.33	240	68	0.01	0.01			1.39	62	1.89	7.7	7.9	0.08
2		0.72	330	156	7.51	9.37	248	66	0.01	0.01			1.43	62	1.70	7.7	7.8	0.09
3		0.73	332	158	7.51	9.38	264	66	0.01	<.01			1.37	62	2.11	7.7	7.9	0.09
4		0.70	330	156	7.52	9.45	250	66	0.01	0.01			1.49	62	1.99	7.7	7.9	0.10
5		0.69	334	160	7.54	9.45	252	68	<.01	0.01			1.54	62	2.06	7.7	8.0	0.09
6		0.68	344	158	7.54	9.46	266	74	0.01	0.01			1.58	62	2.22	7.4	7.8	0.09
7		0.70	340	160	7.42	9.42	260	66	<.01	0.01			1.45	62	2.17	7.6	7.9	0.09
8		0.73	336	156	7.45	9.43	260	66	0.02	0.01			1.47	62	2.16	7.5	7.8	0.09
9		0.70	340	160	7.31	9.31	260	68	0.01	0.01			1.43	62	2.27	7.4	7.8	0.11
10		0.65	338	160	7.39	9.30	258	68	0.01	0.01			1.43	62	2.14	7.5	7.8	0.11
11		0.69	338	160	7.47	9.47	258	68	0.01	0.01			1.46	62	2.11	7.1	7.5	0.10
12		0.65	348	160	7.45	9.36	268	64	0.01	<.01			1.42	62	2.19	7.0	7.3	0.08
13		0.62	342	158	7.39	9.39	260	66	<.01	0.01			1.45	62	2.03	7.1	7.3	0.08
14		0.73	342	158	7.42	9.39	260	66	<.01	<.01			1.46	62	2.18	7.1	7.3	0.08
15	0.47	0.73	352	145	7.45	9.35	270	78	0.01	<.01	.35	.01	1.48	62	2.07	6.8	7.2	0.09
16		0.70	342	158	7.46	9.42	264	68	0.01	0.01			1.44	62	2.25	6.7	7.0	0.08
17		0.74	350	160	7.46	9.40	262	68	0.01	0.01			1.42	62	2.08	6.7	7.0	0.09
18		0.71	352	156	7.47	9.42	250	76	0.02	0.01			1.43	62	2.15	6.6	6.8	0.09
19		0.70	350	158	7.42	9.42	258	70	0.01	0.01			1.48	63	2.14	6.5	6.7	0.09
20		0.73	350	152	7.47	9.34	270	74	<.01	<.01			1.41	63	2.04	6.5	6.5	0.11
21		0.68	348	156	7.44	9.37	272	72	<.01	<.01			1.36	63	2.24	6.6	6.5	0.09
22		0.71	346	154	7.43	9.31	268	70	<.01	<.01			1.40	63	2.02	6.6	6.5	0.08
23		0.74	348	154	7.42	9.39	264	70	<.01	<.01			1.37	63	2.12	6.6	6.5	0.09
24		0.70	356	58	7.44	9.39	276	74	0.01	<.01			1.42	63	2.10	6.4	6.3	0.09
25		0.70	357	158	7.43	9.45	268	70	0.01	0.01			1.47	63	1.95	6.3	6.4	0.09
26		0.73	352	158	7.45	9.43	268	70	0.01	0.01			1.40	63	2.12	6.2	6.6	0.09
27		0.72	360	154	7.50	9.41	278	68	0.01	0.01			1.43	63	2.09	6.1	6.5	0.09
28		0.77	356	154	7.41	9.44	268	66	0.01	0.01			1.44	63	2.12	6.4	6.5	0.09
29		0.70	356	158	7.37	9.41	268	66	<.01	0.01			1.39	63	1.98	6.3	6.5	0.07
30		0.65	354	158	7.42	9.39	270	72	0.01	<.01			1.37	63	2.04	6.2	6.7	0.08
31		0.74	364	158	7.38	9.44	266	74	<.01	<.01			1.38	63	2.13	6.2	6.5	0.07
AVG		**0.70**	**346**	**154**	**7.4**	**9.4**	**263**	**69**	**0.01**	**0.01**	**0.35**	**0.01**	**1.43**	**62**	**2.09**	**6.9**	**7.1**	**0.09**
MAX		**0.77**	**364**	**162**	**7.5**	**9.5**	**278**	**78**	**0.02**	**0.01**	**0.35**	**0.01**	**1.58**	**63**	**2.27**	**7.7**	**8.0**	**0.11**
MIN		**0.62**	**330**	**58**	**7.3**	**9.3**	**240**	**64**	**0.01**	**0.01**	**0.35**	**0.01**	**1.36**	**62**	**1.70**	**6.1**	**6.3**	**0.07**

IOWA DEPARTMENT OF NATURAL RESOURCES
NPDS REPORTING SYSTEM - DISCHARGE MONITORING REPORT
FACILITY INFORMATION

This form is valid 12/1/2024 to 11/30/2029

Facility Name: BOONE CITY OF STP

Permit #: 0819001

Month/Year: 8 2025

Outfall #(s): 001 - DISCHARGE FROM AN ACTIVATED SLUDGE WASTEWATER TREATMENT FACILITY.

Operator Name: John Roberts

Certification #: 10924

Phone #: 7122590805

Lab Cert. #: 156

Comments:

*Include Comments longer than 1000 characters in email

Signature:

John Roberts

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibilityof fine and imprisonment for known violations.

Permit # 0819001
Facility Name: BOONE CITY OF STP

Monthly Operation Report
IOWA DEPARTMENT OF NATURAL RESOURCES
NPDS - Operation Permit System
INFLUENT Data

Outfall #: 001
Month/Year: 8-2025

Mon. Point	RAW WASTE												
Parameter	FLOW	BOD5		TSS		TOT-N		TKN		PHOS		TEMP	PH
Units	MGD	MG/L	LBS/DAY	MG/L	LBS/DAY	MG/L	LBS/DAY	MG/L	LBS/DAY	MG/L	LBS/DAY	FAHRENHEIT	STD UNITS
Frequency	7/WEEK OR DAILY	2 TIMES PER WEEK	2 TIMES PER WEEK	2 TIMES PER WEEK	2 TIMES PER WEEK	1 TIME PER WEEK	1 TIME PER WEEK	1 EVERY MONTH	1 EVERY MONTH	1 TIME PER WEEK	1 TIME PER WEEK	2 TIMES PER WEEK	2 TIMES PER WEEK
Start Date													
End Date	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration
No Discharge													
LOQ													
Day: 1	7.346	27	1654.17228	35	2144.2974							66	7.4
2	5.943												
3	5.144												
4	4.623	45	1735.0119	43	1657.90026							67	7.3
5	4.284	47	1679.24232	52	1857.88512	10.3	368.004168	6.3	225.089928	1.7	60.738552	68	7.3
6	5.273	39	1715.09598	62	2726.56284							68	7.3
7	4.699											68	7.4
8	4.607											70	8
9	5.312												
10	12.922												
11	8.33			58	4029.3876							69	7.4
12	6.669					10.4	578.442384	4.5	250.28757	0.76	42.2707896	68	7.4
13	5.738	18	861.38856	18	861.38856							68	7.4
14	4.824	31	1247.19696									68	7.3
15	4.454											69	7.3
16	3.902												
17	3.66												
18	4.172			113	3931.77624							69	7.4
19	3.473					12.4	359.163768	11	318.61302	4.1	118.755762	70	7.5
20	3.172	52	1375.63296	91	2407.35768							70	7.4
21	2.994	60	1498.1976									69	7.5
22	2.842												7.4
23	2.614												
24	2.526												
25	2.354			158	3101.91288							66	7.4
26	2.342					30.52	596.1251856	30	585.9684	3.9	76.175892	66	7.5
27	2.304											68	7.5
28	2.219	131	2424.34626	217	4015.90182							68	7.4
29	2.094	120	2095.6752									69	7.5
30	1.988												
31	2.106												
Total	134.93	570	16285.96002	847	26734.3704	63.62	1901.735506	51.8	1379.958918	10.46	297.9409956	1364	156
Monthly Avg.	4.352580645	57	1628.596002	84.7	2673.43704	15.905	475.4338764	12.95	344.9897295	2.615	74.4852489	68.2	7.428571429
Daily Max.	12.922	131	2424.34626	217	4029.3876	30.52	596.1251856	30	585.9684	4.1	118.755762	70	8
Daily Min.	1.988	18	861.38856	18	861.38856	10.3	359.163768	4.5	225.089928	0.76	42.2707896	66	7.3
Max. 7/Avg.	6.914571429	131	2424.34626	187.5	3558.90735	30.52	596.1251856	30	585.9684	4.1	118.755762	69.4	7.5

Permit # 0819001
Facility Name: BOONE CITY OF STP

Monthly Operation Report
IOWA DEPARTMENT OF NATURAL RESOURCES
NPDS - Operation Permit System
EFFLUENT Data

Outfall #: 001
Month/Year: 8-2025

Mon. Point	FINAL EFFLUENT																								
Parameter	CBOD5		TSS		NH3-N		CHLORIDE		CN(T)		NO3-N		TOT-N		PHENOLS		PHOS		TEMP	PB		TOX CER	TOX PIM	DO	PH	E. COLI
Units	MG/L	LBS/DAY	MG/L	LBS/DAY	MG/L	LBS/DAY	MG/L	LBS/DAY	MG/L	LBS/DAY	MG/L	LBS/DAY	MG/L	LBS/DAY	MG/L	LBS/DAY	MG/L	LBS/DAY	FAHRENHEIT	MG/L	LBS/DAY	NO TOXICITY	NO TOXICITY	MG/L	STD UNITS	#/100 ML
Frequency	2 TIMES PER WEEK	2 TIMES PER WEEK	2 TIMES PER WEEK	2 TIMES PER WEEK	2 TIMES PER WEEK	2 TIMES PER WEEK	1 EVERY MONTH	1 EVERY MONTH	1 TIME PER WEEK	1 TIME PER WEEK	1 EVERY MONTH	1 EVERY MONTH	1 TIME PER WEEK	1 TIME PER WEEK	1 EVERY MONTH	1 EVERY MONTH	1 TIME PER WEEK	1 TIME PER WEEK	2 TIMES PER WEEK	1 TIME PER WEEK	1 TIME PER WEEK	1 EVERY 12 MONTHS	1 EVERY 12 MONTHS	2 TIMES PER WEEK	5 TIMES PER WEEK	GEO. MEAN 1/3 MONTHS
Start Date																										
End Date	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration
No Discharge																						06 - NOT REQ / MP	06 - NOT REQ / MP			06 - NOT REQ / MP
LOQ																										
Day: 1	3	183.79692	8	490.12512	0.24	14.7037536													67					8.9	8	
2																										
3																										
4	3	115.66746	5	192.7791															68					8.7	7.9	
5	3	107.18568	4	142.91424	0.1	3.572856			0.0035	0.12504996			12.5	446.607			0.74	26.4391344	68	0.001	0.03572856			8.8	7.9	
6	3	131.93046	2	87.95364	0.1	4.397682													68					8.4	7.9	
7					0.1	3.918966													68					8.6	7.9	
8					0.1	3.842238													70					8.6	8	
9																										
10																										
11			6	416.8332															69					8.6	8	
12					0.1	5.561946	84	4672.03464	0.0035	0.19466811	9.4	522.822924	10.3	572.880438	0.0192	1.067893632	0.52	28.9221192	68	0.001	0.05561946			8.6	8	
13	3	143.56476	2	95.70984	0.1	4.785492													68					8.6	8	
14	3	120.69648			0.1	4.023216													68					8.4	8	
15					0.1	3.714636													68					8.6	7.9	
16																										
17																										
18			4	139.17792	0.1	3.479448													70					8.1	7.9	
19					0.1	2.896482			0.0035	0.10137687			11.62	336.5712084			1.2	34.757784	70	0.001	0.02896482			8.3	8	
20	3	79.36344	2	52.90896	0.1	2.645448													70					8.2	7.9	
21	3	74.90988			0.1	2.496996													70					8.1	8	
22					0.1	2.370228																		7.6	8	
23																										
24																										
25			5	98.1618															68					7.4	7.8	
26					0.1	1.953228			0.0035	0.06836298	13	253.91964	17.79	347.4792612			1.4	27.345192	67	0.001	0.01953228			7.5	7.9	
27					0.1	1.921536													69					7.8	7.9	
28	4	74.02584	3	55.51938	0.1	1.850646													70					7.5	7.9	
29	3	52.39188			0.1	1.746396													70					7.3	7.8	
30																										
31					0.1	1.756404																				
Total	31	1083.5328	41	1772.0832	2.04	71.6375976	84	4672.03464	0.014	0.48945792	22.4	776.742564	52.21	1703.537908	0.0192	1.067893632	3.86	117.4642296	1374	0.004	0.13984512			172.6	166.6	
Monthly Avg.	3.1	108.35328	4.1	177.20832	0.107368421	3.770399874	84	4672.03464	0.0035	0.12236448	11.2	388.371282	13.0525	425.8844769	0.0192	1.067893632	0.965	29.3660574	68.7	0.001	0.03496128			8.219047619	7.933333333	
Daily Max.	4	183.79692	8	490.12512	0.24	14.7037536	84	4672.03464	0.0035	0.19466811	13	522.822924	17.79	572.880438	0.0192	1.067893632	1.4	34.757784	70	0.001	0.05561946			8.9	8	
Daily Min.	3	52.39188	2	52.90896	0.1	1.746396	84	4672.03464	0.0035	0.06836298	9.4	253.91964	10.3	336.5712084	0.0192	1.067893632	0.52	26.4391344	67	0.001	0.01953228			7.3	7.8	
Max. 7/Avg.	4	134.64513	4.75	256.27152	0.135	6.6483144	84	4672.03464	0.0035	0.19466811	13	522.822924	17.79	572.880438	0.0192	1.067893632	1.4	34.757784	69.6	0.001	0.05561946			8.68	8	

1406 Central Avenue
Fort Dodge, Iowa 50501
515-269-2338

SEPTEMBER 2025

City of Boone, Iowa

Water & Wastewater Treatment Facilities, Storage, and Lift Stations

Monthly Operations & Maintenance Report

Prepared by:

USW UTILITY GROUP

1406 Central Avenue
Fort Dodge, IA 50501
(515) 269-2338

Prepared For:

City of Boone

923 8th Street
Boone, IA 50036
(515) 432-4211

September 2025

City of Boone
Ondrea Elmquist, City Administrator
923 8th Street
Boone, IA 50036

September Monthly Water & Wastewater Operations Report

Dear Ms. Elmquist:

In accordance with contract requirements, we are pleased to provide the following monthly report for September 2025. Below is a list of the significant events that occurred during the month:

SUBMITTED TO: **Ondrea Elmquist**, City Administrator
Utility Committee and City Council, City of Boone
Aaron Voss, U.S. Water Services Corporation

We appreciate the opportunity to be of service to the City of Boone. We are available to discuss this report, or any other aspect of our operations, at your convenience. Should you have any questions or need additional information, please do not hesitate to contact us.

Sincerely,

J.D. Roberts, Water Environment Plant Supervisor
USW Utility Group
(712) 259-0805
JRoberts@USWaterCorp.net

Dave Moore, Water Works Supervisor
USW Utility Group
(515) 230-3130
DMoore@USWaterCorp.net

Water Treatment Facility

Finished Water Monthly Flows and Hardness			
		September-2024	September-2025
Water	**Units**		
Average Daily Pumped	gallons	2.002,000	1,880,000
Maximum Daily Pumped	gallons	2,278,000	2,652,000
Minimum Daily Pumped	gallons	1,546,000	1,632,000
Hardness			
Hardness - Avg Raw	grains	19.2	20.6
Hardness - Avg Finish	grains	8.6	9.2
Iron mg/l			
Avg Raw	mg/L	.01	.02
Avg Finish	mg/L	.01	.01
Fluoride mg/l			
Avg Raw Fl.	mg/L	.52	.45
Avg Finish Fl.	mg/L	.82	.73

Water Storage

During the month of September, Greene Street, Industrial Park and Clinton Street Towers were in service as well as the 2-million-gallon reservoir and 550,000-gallon contact basin for a total of 4,150,000-gallons of storage.

Maintenance Report

During the month of September, the following tasks were completed:

- Repaired leaking ball valve at Greene Street Tower
- Cleaned and serviced wells #25 and #27
- Collected Nitrate samples from all 14 wells
- Rebuilt check valve on gas chlorine feed system
- Rotated lime slakers

- Rotated backwash pumps and blowers
- Repaired electrical issue with backwash pump #2
- Services US Water F150 truck
- Changed oil in backwash pumps #1 and #2
- Washed trucks and tractors
- Mowed main plant, pump Station, water towers and well fields
- Mowed around lime ponds
- Verified all five turbidity meters weekly
- Calibrated all five turbidity meters
- Cleaned and verified calibration on all four CL-17 chlorine analyzers weekly
- Cleaned and serviced chlorine injector at pump station
- Replaced rooftop dehumidifier filters
- Misc. cleaning around water plant

Current & Planned Projects

During the month of October, the following tasks are planned:

- Change oils in High Service Pumps
- Continue with miscellaneous yard work
- Service Claricone #1
- Service Slaker #1

Health & Safety

There were no safety violations to report for the current month.

The subjects of the weekly safety training were:

1. Trenching Safety
2. Biohazards
3. Laboratory Safety
4. Working On The Road
5. Eye Protection
6. First Aid Basics

Regulatory Reports

See attached documents

WASTEWATER

Wastewater Treatment Facility

Wastewater Treatment Facility Flows			
	Plant Influent	**Plant Effluent**	**Units**
Total	46.12	•	MGD
Average per day	1.54	•	MGD
Minimum	1.185	•	MGD
Maximum	2.08	•	MGD

	Wastewater Influent & Effluent Quality							
	Influent		**Effluent**					
Parameter	**Daily Ave MG/L**	**Daily Ave LBS/Day**	**Daily Max MG/L**	**Permit Daily MG/L Limit**	**7 Day Max Ave MG/L**	**Permit 7 Day Max Limit**	**30 Day Average**	**Permit 30 Day Ave**
BOD_5	**178.25**	**2278**	•	•	•	•	•	•
$CBOD_5$	•	•	**3**	•	**3**	**40**	**3**	**25**
Suspended solids	**243**	**3116**	**8.0**	•	**5.5**	**45**	**3.11**	**30**
Nitrogen Ammonia	**19.8**	**244**	**.1**	**16.50**	**.1**	•	**.1 MG/L**	**1.5 MG/L**
Nitrate Nitrogen	•	•	**146 LBS/Day**	**1075 LBS/Day**	•	•	•	**657 LBS/Day**
Dissolved Oxygen	•	•	**8**	**>5.0**	**7.34**	•	**7.13**	**>5.0**
pH	**7.42**	•	**8.0**	**6.5 to 9 STD Units**	**7.76**	•	**7.72**	**6.5 to 9 STD Units**

ND= No Detection

- **= No limit set**

Solids Inventory

During the month of September, we pressed two days (68,000 gallons) and hauled 25.40 wet tons.

- **Solids Inventory:**

  Improving Slowly

  The Average Inventory for the month: 112,000 lbs, which is 2x the normal operating mass.

- **Volatile Solids (VS):**

  The average for the month: 55.5%, up 2.4% from August — this indicates a slow recovery in microbial activity or health.

- **Flows and Loadings:**

  Back to normal, which should help stabilize the system further.

- **Reseeding:**

  Still an option — on standby if further biological recovery stalls or regresses

Lift Stations

All lift stations are inspected at least twice per week to ensure proper operations. Airport Road Lift Station pump #1 does not keep a prime. Electric Pump and Iowa Pump have both provided repairs, but pump continues to fail. This station is on the R&R list for replacement.

Maintenance Report

45 - (Forty-Five) Preventive Maintenance Work orders Completed

- Fixed leak on VLR Blower 3
- Removed trees along West Fence Line
- Replaced Lab Refrigerator
- Story Construction Completed North Clarifier Drive

Current & Planned Projects

- Roof Replacements- Completed
- In-plant Lift Station-(Currently in Engineering)
- Preliminary Screen Install-(Awarded to Shank Construction)
- North Clarifier Rehabilitation-Completed

Health, Safety and Cybersecurity

There were no safety violations to report for the current month.

The subjects of the monthly safety training were:

- Material Storage & Handling
- Combatting Phishing
- Eye Protection
- Working on the Road
- Communication and Safety
- Laboratory Safety
- Biohazards
- Vishing
- Money Transfer Fraud
- Hazardous Substances: Incidental Spill Response

Regulatory Reports

See attached documents

SURFACE WATER/INFLUENCED GROUNDWATER MONTHLY OPERATION REPORT

IOWA DNR WATER SUPPLY SECTION

Basic Information

S/EP #: 1

SYSTEM NAME: Boone Water Works **PWSID #:** 0819033 **MONTH:** September **YEAR:** 2025

DAY	Pumpage		Operating Hours	Fluoride		Chlorine Residual								CT	Cl_2 Used
						Source/Entry Point (S/EP)				Distribution					
	Raw in 1,000s Gallons Per Day	To System in 1,000s Gallons Per Day	Number of Hours of Treatment Plant Operation Per Day	Quantity Used in lbs.	Finished Water (mg/L)	Number of Tests Taken*	Specify Free (F) or Total (T)	Lowest Measured Residual (mg/L)	Continuous Hours Less Than 0.3 mg/L Free or 1.5 mg/L Total	Number of Tests Taken	Lowest Measured Residual Free (mg/L)	Number With Undetected Residual	Highest Measured Residual Free (mg/L)	Ratio of CT Obtained to CT Required	Chlorine in lbs.
1	2,332	1,874	19.75	31	0.75	"C"	(F)	2.34	0	1	0.82	0	0.82	4.9	37
2	2,305	1,882	19.50	30	0.72	"C"	(F)	2.12	0	6	0.47	0	1.62	4.8	38
3	2,383	1,921	20.50	32	0.67	"C"	(F)	2.03	0	1	0.82	0	0.82	4.8	41
4	2,155	1,730	18.50	32	0.77	"C"	(F)	2.11	0	1	0.91	0	0.91	5.4	35
5	2,313	1,855	20.25	32	0.67	"C"	(F)	2.17	0	1	0.86	0	0.86	5.1	42
6	2,204	1,775	19.25	30	0.68	"C"	(F)	2.17	0	1	0.88	0	0.88	5.3	38
7	2,360	1,914	20.75	34	0.64	"C"	(F)	2.18	0	1	0.88	0	0.88	5.1	40
8	2,301	1,856	20.25	30	0.72	"C"	(F)	2.15	0	1	0.88	0	0.88	5.1	35
9	2,423	1,885	21.00	30	0.60	"C"	(F)	2.19	0	6	0.85	0	1.44	5.1	41
10	2,510	1,880	21.75	37	0.74	"C"	(F)	2.22	0	1	0.91	0	0.91	4.8	43
11	2,585	1,916	21.50	37	0.74	"C"	(F)	2.20	0	1	0.91	0	0.91	4.4	43
12	2,687	1,977	20.75	38	0.73	"C"	(F)	2.08	0	1	0.90	0	0.90	4.7	44
13	2,613	2,003	20.00	36	0.80	"C"	(F)	1.93	0	1	0.89	0	0.89	4.5	45
14	1,992	2,652	21.25	38	0.89	"C"	(F)	2.11	0	1	0.88	0	0.88	4.6	44
15	2,483	1,999	20.00	34	0.65	"C"	(F)	2.06	0	1	0.83	0	0.83	3.8	43
16	2,212	1,815	17.75	31	0.71	"C"	(F)	1.95	0	1	0.80	0	0.80	4.3	39
17	2,174	1,734	17.50	30	0.74	"C"	(F)	2.16	0	1	0.77	0	0.77	4.9	37
18	2,179	1,722	18.00	30	0.80	"C"	(F)	2.05	0	1	0.76	0	0.76	4.5	37
19	2,055	1,632	16.25	30	0.74	"C"	(F)	2.16	0	1	0.77	0	0.77	5.0	37
20	2,034	1,655	16.25	27	0.73	"C"	(F)	2.12	0	1	0.76	0	0.76	4.8	37
21	2,353	1,930	18.75	34	0.72	"C"	(F)	2.21	0	1	0.77	0	0.77	4.3	42
22	2,181	1,753	18.75	28	0.68	"C"	(F)	2.23	0	1	0.79	0	0.79	4.6	39
23	2,213	1,787	19.25	32	0.79	"C"	(F)	2.17	0	1	0.81	0	0.81	4.5	38
24	2,148	1,740	18.75	30	0.76	"C"	(F)	2.18	0	1	0.83	0	0.83	4.5	37
25	2,349	1,898	20.50	34	0.75	"C"	(F)	2.12	0	1	0.83	0	0.83	4.2	40
26	2,266	1,780	19.75	31	0.73	"C"	(F)	2.09	0	1	0.83	0	0.83	4.4	39
27	2,337	1,833	20.50	31	0.73	"C"	(F)	2.21	0	1	0.82	0	0.82	4.0	45
28	2,656	2,194	23.25	39	0.72	"C"	(F)	2.38	0	1	0.84	0	0.84	5.4	49
29	2,300	1,939	20.00	28	0.67	"C"	(F)	1.89	0	1	0.83	0	0.83	7.3	42
30	2,298	1,872	20.25	32	0.72	"C"	(F)	2.22	0	1	0.85	0	0.85	6.3	40
Total	69,401	56,403	590.50	968						40		0			1,207
Avg	2,313	1,880	19.69	32	0.73										40
Max	2,687	2,652	23.25	39	0.89				0				1.62		49
Min	1,992	1,632	16.25	27	0.60			1.89			0.47			3.8	35

*If continuous monitoring of chlorine is provided, enter "C" in the space provided.

I certify that I am familiar with the information contained in this report and that the information is true, complete, and accurate.

DRC Operator's or Designee's Signature: David Moore

Certificate #: 4108 Grade: IV Date: 10/2/2025

SURFACE WATER/INFLUENCED GROUNDWATER MONTHLY OPERATION REPORT

IOWA DNR WATER SUPPLY SECTION

Turbidity Data Page 1 of 1

S/EP: #1

SYSTEM NAME: Boone Water Works **PWSID #:** 0819033 **MONTH:** September **YEAR:** 2025

DAY	Finished Water			Filter Effluent																Raw Water Turbidity (Highest Daily Reading NTU)
				#1				#2				#3				#4				
	Number of Readings Taken **	Number of Readings >0.3 NTU	Highest Daily Reading (NTU)	Highest Consecutive Results >0.5 NTU Anytime After 4 Hours From Start Up or Backwash		Daily Highest (NTU)	# of Consec Results >1.0 NTU	Highest Consecutive Results >0.5 NTU Anytime After 4 Hours From Start Up or Backwash		Daily Highest (NTU)	# of Consec Results >1.0 NTU	Highest Consecutive Results >0.5 NTU Anytime After 4 Hours From Start Up or Backwash		Daily Highest (NTU)	# of Consec Results >1.0 NTU	Highest Consecutive Results >0.5 NTU Anytime After 4 Hours From Start Up or Backwash		Daily Highest (NTU)	# of Consec Results >1.0 NTU	
1	20	0	.02	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	0.10
2	20	0	.02	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.01	0	.01	.01	.02	0	0.09
3	20	0	.01	.02	.02	.02	0	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.01	0	0.08
4	21	0	.02	.02	.01	.02	0	.01	.01	.02	0	.02	.01	.02	0	.01	.01	.02	0	0.13
5	19	0	.02	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	0.14
6	20	0	.02	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	0.11
7	19	0	.02	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	0.11
8	21	0	.02	.02	.02	.02	0	.02	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	0.12
9	20	0	.02	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.01	0	.01	.01	.02	0	0.38
10	21	0	.02	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.01	0	.01	.01	.02	0	0.09
11	21	0	.01	.02	.02	.02	0	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.01	0	0.09
12	22	0	.02	.02	.02	.02	0	.01	.01	.01	0	.01	.01	.02	0	.01	.01	.02	0	0.08
13	21	0	.02	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	0.24
14	21	0	.02	.02	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	0.13
15	21	0	.01	.02	.02	.02	0	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.01	0	0.09
16	19	0	.02	.02	.02	.02	0	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	0.09
17	18	0	.02	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.01	0	.01	.01	.02	0	0.11
18	18	0	.02	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.01	0	.01	.01	.02	0	0.09
19	18	0	.02	.02	.02	.03	0	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	0.09
20	17	0	.02	.02	.03	.03	0	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.01	0	0.10
21	16	0	.01	.01	.01	.02	0	.01	.01	.01	0	.01	.01	.02	0	.01	.01	.02	0	0.09
22	19	0	.02	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.01	0	0.08
23	19	0	.02	.02	.02	.02	0	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	0.07
24	20	0	.02	.02	.02	.03	0	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	0.08
25	19	0	.02	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	0.08
26	21	0	.02	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.01	0	.01	.01	.02	0	0.09
27	20	0	.02	.02	.02	.02	0	.01	.01	.02	0	.01	.01	.02	0	.01	.02	.02	0	0.08
28	21	0	.02	.02	.02	.03	0	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	0.08
29	24	0	.01	.01	.01	.01	0	.01	.01	.01	0	.01	.01	.01	0	.01	.01	.01	0	0.07
30	20	0	.02	.02	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	0.08
Total	596	0					0				0				0				0	
Avg																				0.11
Max			.02			.03				.02				.02				.02		0.24
Min																				0.07

**If continuous monitoring of turbidity is provided, measurements must be recorded at equal time intervals at least once every four hours or hourly for plants w/pop. >100,000.

I certify that I am familiar with the information contained in this report and that the information is true, complete, and accurate.

DRC Operator's or Designee's Signature: David Moore

Certificate #: 4108 Grade: IV Date: 10/2/2025

SURFACE WATER/INFLUENCED GROUNDWATER MONTHLY OPERATION REPORT

IOWA DNR WATER SUPPLY

Basic Information

S/EP: #1

System Name: **PWSID #:** 819033 **Month:** September **Year:** 2025

Day	Operating Hours	Pumpage		Fluoride		Raw Turbidity	Settled Turbidity (individual sedimentation basin)							
	Number of hours the plant operated per day.	Raw in 1,000s Gallons Per Day	To System in 1,000s Gallons Per Day	Quantity Used in lbs. or gal. (circle one)	Finished Water (mg/L)	Highest Daily Reading (NTU)	Highest Daily Reading Sed 1 (NTU)	Highest Daily Reading Sed 2 (NTU)	Highest Daily Reading Sed 3 (NTU)	Highest Daily Reading Sed 4 (NTU)	Gallons Of Liquid Chlorine Used 15%	Wett Well Residual		
1	19.75	2332	1874	31.00	0.75	0.10		0.91			22.90	0.60		
2	19.50	2305	1882	30.00	0.72	0.09		0.91			23.00	0.58		
3	20.50	2383	1921	32.00	0.67	0.08		1.75			23.10	0.56		
4	18.50	2155	1730	32.00	0.77	0.13		1.12			21.00	0.57		
5	20.25	2313	1855	32.00	0.67	0.14		0.53			23.00	0.56		
6	19.25	2204	1775	30.00	0.68	0.11		0.67			21.80	0.57		
7	20.75	2360	1914	34.00	0.64	0.11		1.20			22.70	0.59		
8	20.25	2301	1856	30.00	0.72	0.12		2.65			21.80	0.58		
9	21.00	2423	1885	30.00	0.60	0.38		2.09			21.30	0.58		
10	21.75	2510	1880	37.00	0.74	0.09		0.78			22.00	0.57		
11	21.50	2585	1916	37.00	0.74	0.09		1.72			23.00	0.51		
12	20.75	2687	1977	38.00	0.73	0.08		0.76			21.90	0.60		
13	20.00	2613	2003	36.00	0.80	0.24		2.94			23.80	0.51		
14	21.25	1992	2652	38.00	0.89	0.13		2.78			23.10	0.43		
15	20.00	2483	1999	34.00	0.65	0.09		0.84			24.00	0.46		
16	17.75	2212	1815	31.00	0.71	0.09		1.59			20.90	0.46		
17	17.50	2174	1734	30.00	0.74	0.11		1.35			20.40	0.52		
18	18.00	2179	1722	30.00	0.80	0.09		1.30			20.10	0.47		
19	16.25	2055	1632	30.00	0.74	0.09		0.91			19.00	0.50		
20	16.25	2034	1655	27.00	0.73	0.10		0.97			19.30	0.46		
21	18.75	2353	1930	34.00	0.72	0.09		2.56			23.00	0.46		
22	18.75	2181	1753	28.00	0.68	0.08		1.56			20.80	0.47		
23	19.25	2213	1787	32.00	0.79	0.07		0.90			20.60	0.45		
24	18.75	2148	1740	30.00	0.76	0.08		0.91			21.00	0.45		
25	20.50	2349	1898	34.00	0.75	0.08		1.10			22.50	0.44		
26	19.75	2266	1780	31.00	0.73	0.09		0.84			21.00	0.43		
27	20.50	2337	1833	31.00	0.73	0.08		0.40			21.50	0.40		
28	23.25	2656	2194	39.00	0.72	0.08		0.82			25.60	0.63		
29	20.00	2300	1939	28.00	0.67	0.07		0.99			22.20	0.78		
30	20.25	2298	1872	32.00	0.72	0.08		2.56			21.10	0.67		
Total	591	69,401	56,403	968							657.40	0	0	0
Avg	19.05	2,239	1,819	31.23	0.70	0.11	#DIV/0!	1.35	#DIV/0!	#DIV/0!	21.91	0.53	#DIV/0!	#DIV/0!
Max	23.25	2,687	2,652	39.00	0.89	0.38	0.00	2.9	0.0	0.00	25.60	0.78	0.00	0.00
Min	0.00	0	0	0.00	0.00	0.00	0.00	0.40	0.00	0.00	19.00	0.40	0.00	0.00

I certify that I am familiar with the information contained in this report and that the information is true, complete, and accurate.

DRC Operator or Designee's Signature: David Moore

Certificate #: 4108 Grade: IV Date: 10/2/2025

October 2018 FORM 542-8027

	FLUORIDE		HARDNESS		PH		TOTAL ALK		IRON		MANGANESE		ORTHO	H_2O	Cl_2	NITRATE		RAW
DATE	RAW	FIN	RAW	FIN	RAW	FIN	RAW	FIN	RAW	FIN	RAW	FIN	PHOS	TEMP	FREE	RAW	FIN	TURB.
1		0.75	358	158	7.5	9.6	266	72	0.02	<.01			1.39	63	2.04	5.9	6.3	0.10
2		0.72	358	160	7.5	9.6	266	70	<.01	0.01			1.44	63	1.98	5.9	6.3	0.09
3		0.67	354	160	7.5	9.4	278	76	0.01	<.01			1.44	63	2.04	5.7	6.0	0.08
4		0.77	358	160	7.4	9.4	272	70	0.01	0.01			1.45	63	2.28	5.5	6.1	0.13
5		0.67	354	160	7.5	9.4	280	76	0.02	<.01			1.43	64	2.22	5.7	6.0	0.14
6		0.68	352	156	7.5	9.4	284	68	0.01	<.01			1.45	63	2.26	5.4	5.6	0.11
7		0.64	356	156	7.5	9.4	276	76	0.01	<.01			1.42	63	2.35	5.3	5.4	0.11
8		0.72	362	154	7.5	9.4	284	80	0.01	<.01			1.43	63	2.25	5.2	5.2	0.12
9		0.60	378	158	7.4	9.4	278	78	0.15	<.01			1.44	64	2.27	5.5	5.2	0.38
10		0.74	364	166	7.5	9.4	270	84	0.01	<.01			1.43	64	2.32	5.5	5.4	0.09
11		0.74	352	158	7.5	9.4	276	72	0.01	<.01			1.49	65	1.83	5.2	5.3	0.09
12		0.73	352	154	7.5	9.5	276	70	0.01	<.01			1.40	65	2.10	5.0	5.3	0.08
13		0.80	350	162	7.5	9.3	274	76	0.14	<.01			1.45	65	2.23	4.5	4.9	0.24
14		0.89	362	162	7.5	9.4	272	72	0.04	0.01			1.48	64	2.05	4.4	4.7	0.13
15	0.45	0.65	352	154	7.6	9.5	272	78	0.02	0.01	.44	.01	1.45	64	2.10	4.3	4.5	0.09
16		0.71	352	158	7.4	9.5	272	72	0.02	0.01			1.41	64	2.10	4.1	4.5	0.09
17		0.74	356	160	7.5	9.5	270	70	0.01	0.01			1.44	64	2.15	4.1	4.4	0.11
18		0.80	356	160	7.5	9.5	272	72	0.01	0.01			1.46	64	2.04	3.9	4.3	0.09
19		0.74	356	164	7.5	9.5	270	72	<.01	0.01			1.44	64	2.30	3.8	4.2	0.09
20		0.73	350	162	7.5	9.4	264	74	0.01	0.01			1.47	64	1.83	4.1	4.4	0.10
21		0.72	346	160	7.5	9.4	256	68	<.01	0.01			1.42	65	2.17	4.0	4.3	0.09
22		0.68	344	150	7.5	9.5	268	76	0.01	<.01			1.43	65	2.24	3.6	4.0	0.08
23		0.79	348	156	7.5	9.4	264	70	0.01	0.01			1.43	65	2.18	3.5	4.0	0.07
24		0.76	346	160	7.5	9.5	268	74	0.01	0.01			1.42	65	2.17	3.4	3.8	0.08
25		0.75	348	154	7.5	9.4	264	72	0.01	0.01			1.45	65	2.23	3.4	3.6	0.08
26		0.73	346	154	7.5	9.4	270	74	0.02	<.01			1.47	66	2.23	3.5	3.5	0.09
27		0.73	350	160	7.6	9.4	268	72	<.01	0.01			1.49	66	2.14	3.5	3.3	0.08
28		0.72	350	160	7.5	9.4	268	72	0.01	0.01			1.41	66	2.29	3.5	3.7	0.08
29		0.67	348	152	7.5	9.5	274	76	<.01	0.01			1.42	66	2.36	3.5	3.6	0.07
30		0.72	342	160	7.5	9.5	266	78	0.01	0.01			1.40	66	2.08	3.6	3.1	0.08
AVG		**0.73**	**353**	**158**	**7.5**	**9.4**	**271**	**74**	**0.02**	**0.01**			**1.44**	**64**	**2.16**	**4.5**	**4.7**	**0.11**
MAX		**0.89**	**378**	**166**	**7.6**	**9.6**	**284**	**84**	**0.15**	**0.01**	**0.44**	**0.01**	**1.49**	**66**	**2.36**	**5.9**	**6.3**	**0.38**
MIN		**0.60**	**342**	**150**	**7.4**	**9.3**	**256**	**68**	**0.01**	**0.01**	**0.44**	**0.01**	**1.39**	**63**	**1.83**	**3.4**	**3.1**	**0.07**

IOWA DEPARTMENT OF NATURAL RESOURCES
NPDS REPORTING SYSTEM - DISCHARGE MONITORING REPORT
FACILITY INFORMATION

This form is valid 12/1/2024 to 11/30/2029

Facility Name: BOONE CITY OF STP

Permit #: 0819001

Month/Year: 9 2025

Outfall #(s): 001 - DISCHARGE FROM AN ACTIVATED SLUDGE WASTEWATER TREATMENT FACILITY.

Operator Name:	John Roberts
Certification #:	10924
Phone #:	7122590805
Lab Cert. #:	156
Comments:	

*Include Comments longer than 1000 characters in email

Signature:

John Roberts

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibilityof fine and imprisonment for known violations.

Permit # 0819001
Facility Name: BOONE CITY OF STP

Monthly Operation Report
IOWA DEPARTMENT OF NATURAL RESOURCES
NPDS - Operation Permit System
INFLUENT Data

Outfall #: 001
Month/Year: 9-2025

Mon. Point	RAW WASTE													
Parameter	FLOW	BOD5		TSS		TOT-N		TKN		PHOS		TEMP	PH	
Units	MGD	MG/L	LBS/DAY	MG/L	LBS/DAY	MG/L	LBS/DAY	MG/L	LBS/DAY	MG/L	LBS/DAY	FAHRENHEIT	STD UNITS	
Frequency	7/WEEK OR DAILY	2 TIMES PER WEEK	2 TIMES PER WEEK	2 TIMES PER WEEK	2 TIMES PER WEEK	1 TIME PER WEEK	1 TIME PER WEEK	1 EVERY MONTH	1 EVERY MONTH	1 TIME PER WEEK	1 TIME PER WEEK	2 TIMES PER WEEK	2 TIMES PER WEEK	
Start Date														
End Date	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	
No Discharge														
LOQ														
Day: 1	2.08			165	2862.288							69	7.5	
2	1.968					21.34	350.2559808	21	344.67552	4.4	72.217728	69	7.4	
3	2.042			165	2809.9962							67	7.4	
4	1.864	163	2533.95888									65	7.6	
5	1.76	194	2847.6096									65	7.6	
6	1.727													
7	1.768													
8	1.689			273	3845.54898							66	7.4	
9	1.634					28.3	385.659948	28	381.57168	5.7	77.677092	66	7.5	
10	1.604	144	1926.33984	300	4013.208							69	7.5	
11	1.602	213	2845.82484									69	7.5	
12	1.585												7.4	
13	1.56													
14	1.573													
15	1.495			262	3266.6946							69	7.4	
16	1.502					29.25	366.40539	29	363.27372	5.1	63.886068	70	7.5	
17	1.48	164	2024.2848	207	2555.0424							68	7.2	
18	1.466	171	2090.72124									68	7.5	
19	1.391											68	7.3	
20	1.313													
21	1.481													
22	1.421											72	7.3	
23	1.305			251	2731.8087	32.03	348.604911	32	348.2784	4.5	48.97665	68	7.3	
24	1.261	170	1787.8458	225	2366.2665							68	7.3	
25	1.316											68	7.4	
26	1.256	207	2168.33328									70	7.4	
27	1.237													
28	1.301													
29	1.251			345	3599.5023							70	7.4	
30	1.185											68	7.4	
31														
Total	46.117	1426	18224.91828	2193	28050.35568	110.92	1450.92623	110	1437.79932	19.7	262.757538	1432	163.2	
Monthly Avg.	1.537233333	178.25	2278.114785	243.6666667	3116.706187	27.73	362.7315575	27.5	359.44983	4.925	65.6893845	68.19047619	7.418181818	
Daily Max.	2.08	213	2847.6096	345	4013.208	32.03	385.659948	32	381.57168	5.7	77.677092	72	7.6	
Daily Min.	1.185	144	1787.8458	165	2366.2665	21.34	348.604911	21	344.67552	4.4	48.97665	65	7.2	
Max. 7/Avg.	1.887	188.5	2690.78424	286.5	3929.37849	32.03	385.659948	32	381.57168	5.7	77.677092	69.2	7.5	

Permit # 0819001
Facility Name: BOONE CITY OF STP

Monthly Operation Report
IOWA DEPARTMENT OF NATURAL RESOURCES
NPDS - Operation Permit System
EFFLUENT Data

Outfall #: 001
Month/Year: 9-2025

Mon. Point	FINAL EFFLUENT																													
Parameter	CBOD5		TSS		NH3-N		CHLORIDE		CN(T)		NO3-N		TOT-N		PHENOLS		PHOS		TEMP	PB		TOX CER	TOX PIM	DO	PH	E. COLI					
Units	MG/L	LBS/DAY	MG/L	LBS/DAY	MG/L	LBS/DAY	MG/L	LBS/DAY	MG/L	LBS/DAY	MG/L	LBS/DAY	MG/L	LBS/DAY	MG/L	LBS/DAY	MG/L	LBS/DAY	FAHRENHEIT	MG/L	LBS/DAY	NO TOXICITY	NO TOXICITY	MG/L	STD UNITS	#/100 ML					
Frequency	2 TIMES PER WEEK	2 TIMES PER WEEK	2 TIMES PER WEEK	2 TIMES PER WEEK	2 TIMES PER WEEK	2 TIMES PER WEEK	1 EVERY MONTH	1 EVERY MONTH	1 TIME PER WEEK	1 TIME PER WEEK	1 EVERY MONTH	1 EVERY MONTH	1 TIME PER WEEK	1 TIME PER WEEK	1 EVERY MONTH	1 EVERY MONTH	1 TIME PER WEEK	1 TIME PER WEEK	2 TIMES PER WEEK	1 TIME PER WEEK	1 TIME PER WEEK	1 EVERY 12 MONTHS	1 EVERY 12 MONTHS	2 TIMES PER WEEK	5 TIMES PER WEEK	GEO. MEAN 1/3 MONTHS					
Start Date																														
End Date	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration					
No Discharge																						06 - NOT REQ / MP	06 - NOT REQ / MP			06 - NOT REQ / MP					
LOQ																														
Day: 1			1	17.3472															70					6.6	7.9					
2					0.1	1.641312			0.0035	0.05744592			16.71	274.2632352			1.8	29.543616	70	0.001	0.01641312				7.8	4.2					
3			3	51.09084	0.1	1.703028													70					6.6	7.8					
4	3	46.63728			0.1	1.554576													68						7.6	5.2				
5	3	44.0352			0.1	1.46784													67					6.9	7.7					
6																														
7																														
8			8	112.69008															68					7.1	7.8					
9					0.1	1.362756	150	2044.134	0.0035	0.04769646	14	190.78584	13.67	186.2887452	0.0224	0.305257344	2.2	29.980632	68	0.001	0.01362756			6.3	7.7	5.1					
10	3	40.13208	3	40.13208	0.1	1.337736													69					6.9	7.8					
11	3	40.08204			0.1	1.336068													70					7.4	7.7	5.2				
12					0.1	1.32189													70					6.5	7.7					
13																														
14																														
15			3	37.4049															70					6.6	7.6					
16					0.1	1.252668			0.005	0.0626334			10.85	135.914478			2.9	36.327372	72	0.001	0.01252668			7.2	7.8	3					
17	3	37.0296	2	24.6864	0.1	1.23432													68					6.8	7.2					
18	3	36.67932			0.1	1.222644													70					7.2	7.7					
19					0.1	1.160094													70					7.3	7.7					
20																														
21																														
22																			70					7.1	7.7					
23			2	21.7674	0.1	1.08837			0.0035	0.03809295	9.3	101.21841	10.49	114.170013			3.2	34.82784	70	0.001	0.0108837			7.3	7.7						
24	3	31.55022	3	31.55022	0.1	1.051674													70					7.7	7.7					
25					0.1	1.097544													70					7.6	7.7					
26	3	31.42512			0.1	1.047504													70					7	7.6					
27																														
28																														
29			3	31.30002															70					8.1	7.9					
30					0.1	0.98829													69					8.4	8					
31																														
Total	24	307.57086	28	367.96914	1.7	21.868314	150	2044.134	0.0155	0.20586873	23.3	292.00425	51.72	710.6364714	0.0224	0.305257344	10.1	130.67946	1529	0.004	0.05345106			142.6	169.8	22.7					
Monthly Avg.	3	38.4463575	3.111111111	40.88546	0.1	1.286371412	150	2044.134	0.003875	0.051467183	11.65	146.002125	12.93	177.6591179	0.0224	0.305257344	2.525	32.669865	69.5	0.001	0.013362765			7.13	7.718181818	4.446204989					
Daily Max.	3	46.63728	8	112.69008	0.1	1.703028	150	2044.134	0.005	0.0626334	14	190.78584	16.71	274.2632352	0.0224	0.305257344	3.2	36.327372	72	0.001	0.01641312			8.4	8	5.2					
Daily Min.	3	31.42512	1	17.3472	0.1	0.98829	150	2044.134	0.0035	0.03809295	9.3	101.21841	10.49	114.170013	0.0224	0.305257344	1.8	29.543616	67	0.001	0.0108837			6.3	7.2	3					
Max. 7/Avg.	3	45.33624	5.5	76.41108	0.1	1.591689	150	2044.134	0.005	0.0626334	14	190.78584	16.71	274.2632352	0.0224	0.305257344	3.2	36.327372	70	0.001	0.01641312			7.34	7.76	5.15					

1406 Central Avenue
Fort Dodge, Iowa 50501
515-269-2338

UPGRADE PROGRAM		August 2025				
DATE	ADDRESS	ORIG INSTALL	Note	Low	Med	High
8/5/2025	608 Carroll	New Service				
8/11/2025	1622 Tama	2/1/2000				
8/11/2025	532 Linden ln	2/1/1999				
8/12/2025	214 W Mamie	5/20/2004				
8/12/2025	1328 Nebraska	12/16/2013				
8/13/2025	734 High St	New Service				
8/13/2025	527 Lniden	1/28/1999				
8/13/2025	1722 Nebraska	12/30/2001				
8/13/2025	1825 Linn	2/20/2000				
8/13/2025	1912 SE Linn	7/3/2002				
8/14/2025	2011 Linn	7/20/2006				
8/14/2025	2026 Linn	7/24/2000				
8/14/2025	716 w 8th	pre 99				
8/14/2025	1423 Nebraska	11/1/1999				
8/14/2025	711 Wood	10/13/2005				
8/14/2025	223 Webster					
8/15/2025	611 Linn	3/18/2005				
8/18/2025	302 Sunrise H	5/30/2000				
8/18/2025	302 Sunrise L	5/30/2000				
8/18/2025	303 Morningside	4/15/2005				
8/18/2025	1622 Benton	3/27/2008				
8/21/2025	1416 S Linn	12/23/2003				
8/22/2025	1409 14th					
8/22/2025	315 Sunrise	10/27/2005				
8/22/2025	703 14th	10/06/99				
8/25/2025	1708 14th	pre 99				
8/25/2025	1541 14th	pre 99				
8/25/2025	1020 Ida Pl	New Service				
8/26/2025	1115 College	New Service				
8/27/2025	1627 14th	pre 99				
8/28/2025	901 W Mamie	New Service				
8/28/2025	1203 Parkway Dr	New Service				
8/28/2025	726 Marion	7/28/2004				
8/28/2025	1727 14th	1/23/2008				
8/28/2025	1616 14th	pre 99				
8/29/2025	1704 14th	3/3/2005				
8/29/2025	1529 14th	1/16/2004				

UPGRADE PROGRAM		September 2025				
DATE	ADDRESS	ORIG INSTALL	Note	Low	Med	High
9/8/2025	1120 Coal Rd	Warranty				
9/11/2025	1928 Crawford	6/9/1999				
9/11/2025	368 S Marion	12/14/2006				
9/11/2025	1228 Linn	7/19/2000				
9/12/2025	1105 3rd	9/25/2014				
9/12/2025	1016 14th	10/24/2007				
9/12/2025	1531 14th	3/7/2005				
9/12/2025	1617 14th	3/3/2005				
9/12/2025	903 Crawford	3/28/2005				
9/12/2025	1027 Crawford	7/31/2000				
9/15/2025	2004 Crawford	11/16/1999				
9/15/2025	1710 Crawford	8/9/2000				
9/15/2025	1013 12th	2/25/2004				
9/15/2025	1519 14th	11/18/1999				
9/16/2025	501 Webster	4/22/2004				
9/16/2025	813 W Mamie	9/16/2025				
9/16/2025	1221 Crawford	Pre 1999				
9/16/2025	224 S Marion	05/22/00				
9/17/2025	303 S Main	8/11/2014				
9/17/2025	1227 Crawford	9/18/2003				
9/17/2025	1610 5th	Reinstall				
9/18/2025	2116 Crawford	9/17/1999				
9/18/2025	1211 8th St	New Service				
9/18/2025	1720 Crawford	1/14/2002				
9/19/2025	128 S Montana	6/19/2000				
9/19/2025	816 14th	11/1/1999				
9/19/2025	822 Carroll	11/28/2006				
9/19/2025	1418 Carroll	9/28/2007				
9/19/2025	1910 Crawford	5/10/2000				
9/22/2025	316 S Montana	9/9/1999				
9/22/2025	116 Carroll	3/21/2015				
9/22/2025	1615 Carroll	7/31/2000				
9/24/2025	220 S Main	6/21/2007				
9/24/2025	1403 Crawford	10/5/1999				
9/24/2025	102 Mc Pherson	New Service				
9/25/2025	1510 Carroll	8/7/2000				
9/25/2025	208 S Montana	6/9/2000				
9/26/2025	210 Carroll	3/15/2005				
9/26/2025	230 Story	7/19/1999				
9/26/2025	1922 Carroll	8/14/2000				
9/26/2025	303 W 2nd	6/6/2000				
9/26/2025	2419 Industrial Park Rd	11/25/2013				
9/29/2025	117 W 9th	New Service				
9/29/2025	134 Underhill	12/1/2008				
9/29/2025	1127 Carroll	10/4/1999				
9/29/2025	1527 Carroll	7/25/2000				
9/30/2025	800 Snedden Dr.	6/28/2013				

Curb Box Repair Update for 9/15/2025 – as of 9/9/2025

$4,501.01 was collected during shut offs. 25 accounts qualified to be on the list.

178 stop boxes need repaired, 76 of which have lead service lines.

11 delinquent bills totaling $3,550.03 certified on August 28th and if left unpaid, 11 delinquent water bills totaling $4,803.42 are scheduled to certify on October 6th.

Lesli Vote
Utility Billing Supervisor

Curb Box Repair Update for 10/20/2025 – as of 10/10/2025

$5,961.67 was collected during shut offs. 24 accounts qualified to be on the list.

179 stop boxes need repaired, 75 of which have lead service lines.

5 delinquent bills totaling $1,942.67 certified on October 10th and if left unpaid, 16 delinquent water bills totaling $5,241.64 are scheduled to certify on October 28th.

Lesli Vote
Utility Billing Supervisor