UTILITY COMMITTEE
Meeting Notice

Governing Body: Utility Committee of Boone, Iowa
Date of Meeting: December 15, 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/85909872655?pwd=xHxNlcDcobeMt7Nw074K0aaqJ7eMiJ.1
Meeting ID: 859 0987 2655
Passcode: 352005
Phone: 1-301-715-8592 or 1-253-215-8782

1. Call Meeting to Order.
2. Approve Minutes from the October 20, 2025, Meeting.
3. Water Treatment Plant Ground Storage Reservoir Rehabilitation Bids.
4. Discuss Water Tower Options.
5. Review the October and November 2025 US Water Monthly Report.
6. Meter Upgrade Report.
    a. October
    b. November
7. Stop Box Repair/Shut Off Report.
    a. October
    b. November
8. Other Business.
9. Adjourn.

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.

Present: Angstrom, Moorman. By Zoom: Byrd.
Absent: None.
Others present: Andrews, Elmquist, Montag, Majors, Katie Kinsey, Roy Martin. By Zoom: McKenzie Hunt, Perry Gjersvik.

2. Approve Minutes from the August 18, 2025, Meeting.

Moorman moved; Byrd seconded to approve the minutes from the August 18, 2025, meeting. Ayes: all those in attendance. Nays: none.

3. Discuss Water System Modeling and Water Projects. – SEH.

Katie Kinsey and McKenzie Hunt, Short Elliott Hendrickson Inc. (SEH), provided an update on the following City of Boone's Water System Expansion Projects:

1. The Jordan Aquifer was identified as a potential water source due to its lower nitrate concentrations. However, after consultation with a hydrogeologist and the Iowa DNR, it was determined that the Jordan Aquifer could not supply adequate yield for the City's needs. As a result, this portion of the project has been removed, and focus has shifted to the construction of Alluvial Well #30, which is located in a historically low-nitrate area and is more cost-effective to build. This well will play a critical role in maintaining water quality and meeting increased demand when Daisy becomes operational.

2. Treatment upgrades to Lime Softening was originally planned to support the use of the Jordan Aquifer as a new water source. However, since the Jordan Aquifer was later found to be unfeasible due to low water yield, this project has been removed, resulting in some cost savings.

3. Modifications to the Clearwell were originally recommended to prevent flooding during Ground Storage Reservoir repairs. These involved lowering the water level in the chlorine contact tank. However, a review of the plant plans revealed an existing bypass line that achieves the same goal. Therefore, the project has been removed, resulting in full cost savings.

4. An evaluation in October 2022 identified several repairs needed to improve the structure and function of the Ground Storage Reservoir. These repairs are critical to complete before the Daisy facility comes online in August 2028, as the reservoir will be essential to meet increased system demand. This project will go out for bid soon.

5. The Water Treatment Plant currently uses three (3) high service pumps, running two (2) and keeping one (1) as backup. This project will replace them with four (4) new pumps equipped with variable frequency drives (VFDs), allowing three (3) to run at once and one (1) to serve as backup. The upgrade is needed by 2030 to meet future system demand.

6. The Daisy facility will require up to 750,000 gallons of water at peak times, which could strain the system without added storage. To support this demand, a new 1,000,000-gallon elevated tank is proposed. The tank must be completed by August 2028 to ensure adequate capacity and avoid system disruptions.

7. The altitude valve at the Greene Street Tower has not been working properly, and hydraulic modeling shows the tower is now obsolete due to low usage and concerns about water age, which refers to how long water sits in the system before being used—potentially affecting water quality. As a result, this project has been removed, resulting in full cost savings.

8. Alluvial Well #30 project replaces the original Jordan Aquifer plan. A new well will be built to draw water from the alluvial aquifer, which is expected to have lower nitrate levels. This will help the City manage water quality when nitrate levels rise in other wells. The well must be completed before the Daisy facility begins operation in August 2028 to meet increased water demand.

9. The current Sodium Hypochlorite Feed System, which disinfects the City's water, is too small to meet future demand starting in 2028. In addition, the existing room lacks enough space for proper storage and operator safety. To address this, an addition to the high service pump building will be constructed to house a larger bulk storage tank, feed pumps, and necessary safety equipment.

10. The existing generator is too small to meet the power needs expected by 2029. To ensure reliable backup power for the Water Treatment Plant, wells, and high service pumps, it is recommended to upsize the existing generator with two (2) 600 kW generators.

11. Hydraulic modeling has identified several key water main upgrades needed before the Daisy facility begins operation in August 2028. One major project is the Boone & Scenic Valley Railroad Water Main, which will connect a large main across the Union Pacific Railroad to the Industrial Tower, improving system balance. Another project will redesign water mains

near W. 12th Street and Coal Road to reduce high pressure expected on the west side of the system once Daisy is online.

12. Hydraulic modeling also shows that the Daisy site needs its own pressure zone. To provide the required pressure, a booster station will be installed at the new tower site, and a check valve will be added on Eastgate Drive to prevent backflow into the main system. Both installations must be completed before the new tower becomes operational to ensure proper pressure and system performance.

After discussing the current projects, Katie Kinsey and McKenzie Hunt, went into future projects:

1.Hydraulic modeling for the distribution system identified a needed upgrade to the North Transmission Main to provide a redundant water main from the Water Treatment Plant to the east side of town, improving system reliability. This upgrade will also support future growth by allowing new water users to connect on the north and east sides of town. In addition, an altitude valve will be installed at the Industrial Tower to prevent potential overflow and ensure proper operation. Kinsey explained that the cost of the project is high due to the six (6)-mile length of pipe, and securing funding for it has proven to be difficult. She noted that if the Committee decides to proceed with this project, the Boone and Scenic Valley Railroad water main project would no longer be necessary.

2. A new alluvial well (Well #30) is proposed to help lower overall nitrate levels in the City's raw water supply. Elevated nitrate concentrations have been observed in all wells during the summer months. The project team evaluated reverse osmosis and ion exchange as potential treatment options; however, both technologies generate waste streams that are difficult to manage within the existing water treatment plant configuration. These waste streams, which would flow to the lime waste ponds and eventually to the Des Moines River, contain high levels of chloride and nitrate that exceed the limits of the City's NPDES permit. To avoid these challenges, biological nitrate treatment was explored as an alternative. This process can effectively reduce nitrate concentrations while integrating with the existing water treatment infrastructure. The EPA's Maximum Contaminant Level (MCL) for nitrate is 10 mg/L. With the expected increase in water demand following the Daisy facility's startup, raw water nitrate levels are projected to range between 7.0 and 10 mg/L during summer months. Since current levels remain below the EPA limit, the City of Boone is not currently required to implement additional nitrate treatment.

3. A new alluvial well (Well #31) may be added to draw additional water from the alluvial aquifer. The goal of this well is to provide a source with lower nitrate levels to improve the City's blending strategy when nitrate levels rise in existing wells. If nitrate concentrations exceed regulatory or operational limits, the City should compare the benefits of building this additional well versus installing a nitrate treatment system.

The total estimated cost for the updated list of active projects is $14,289,612, compared to the original PER recommendation total of $10,880,719. The combined estimated cost of the projects currently on hold is $22.1 million. After further discussion about funding and the need for the

North Transmission Main in the future, the Committee directed staff to pursue the North Transmission Main instead of the Boone & Scenic Valley Railroad Water Main Project, as it was deemed to make more sense. Additionally, Elmquist stated she would work with Maggie Burger from Speer Financial to explore what a bond might look like and continue searching for available grants.

1. Review the August and September 2025 US Water Monthly Report.

The Committee reviewed the August and September 2025 US Water Monthly Report.

2. Meter Upgrade Report.
    a. August

Andrews reported that in August, staff finished thirty-five (35) meter upgrades, six (6) meters were installed for a new service, and twenty-nine (29) meters were changed due to other reasons.

    b. September

Andrews reported that in September, staff finished forty-seven (47) meter upgrades, three (3) meters were installed for a new service, and forty-four (44) meters were changed due to other reasons.

3. Stop Box Repair/Shut Off Report.
    a. August

Vote submitted that in August, $4,501.01 was collected during shut-offs; twenty-five (25) accounts qualified to be on the shut off list. Eleven (11) delinquent bills totaling $3,550.03 were certified August 28, 2025, and if left unpaid, eleven (11) bills totaling $4,803.42 are scheduled to be certified on October 6, 2025. Vote also reported that there are one hundred seventy-eight (178) stop boxes in need of repair, seventy-six (76) of which have lead service lines.

    b. September

Vote submitted that in September, $5,961.67 was collected during shut-offs; twenty-four (24) accounts qualified to be on the shut off list. Five (5) delinquent bills totaling $1,942.67 were certified October 10, 2025, and if left unpaid, sixteen (16) bills totaling $5,241.64 are scheduled to be certified on October 28, 2025. Vote also reported that there are one hundred seventy-nine (179) stop boxes in need of repair, seventy-five (75) of which have lead service lines.

4. Other Business.

5. Adjourn.

With no further business coming before the Committee the meeting adjourned at 5:48 p.m.

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December 4, 2025

RE: Results of Bid Letting and Recommendation of Award
Water Treatment Plant Ground Storage Reservoir Rehabilitation
SEH No. BOONE 182296 14.00

Honorable Mayor and City Council Members
City of Boone
923 8th Street
Boone, IA 50036

Dear Mayor and Council Members:

The Bid Letting for the Water Treatment Plant Ground Storage Reservoir Rehabilitation project was held on December 3, 2025, at 2:00 p.m. Short Elliot Hendrickson, Inc. (SEH) is providing this cover letter for the attached Summary of Bids Received.

A total of three (3) bids were received. All three (3) proposals included the requisite 5% bid bond. There were no apparent bid irregularities. The apparent low bid was received from Minturn, Inc from Brooklyn, IA. A tabulation of the bids received is enclosed for your reference.

We have reviewed the low bid and bid attachments and everything appears to be in order. It is recommended that City of Boone award the contract for this work to Minturn, Inc from Brooklyn, IA in the amount of $1,178,600 for Base Bid plus Bid Alternate A. Appropriate contract documents will be prepared for signatures upon award of contract by the City.

Please let me know if you have any questions or need additional information.

Sincerely,

SHORT ELLIOTT HENDRICKSON INC.

Katrina L Kinsey

Katrina L. Kinsey, P.E.
Project Manager

Enclosures
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SUMMARY OF BIDS RECEIVED

CITY OF BOONE, IOWA
WATER TREATMENT PLANT GROUND STORAGE RESERVOIR REHABILITATION

BID DATE: December 3, 2025, 2:00 p.m. Local Time
SEH PROJECT NO. BOONE 182296

SEH
Building a Better World for All of Us®

CONTRACTOR (BIDDER)	BID BOND	ADDENDUM 1	BASE BID	BID ALTERNATE A	BID ALTERNATE B
Minturn, Inc. – Brooklyn, IA	5%	Yes	$1,034,000.00	$144,600.00	$24,750.00
Christiansen Construction Co. – Pender, NE	5%	Yes	$1,333,260.00	$168,273.00	$14,400.00
Woodruff Construction, Inc – Fort Dodge, IA	5%	Yes	$1,732,924.00	$173,641.00	$45,507,600.00 *
Engineer's Estimate			$1,125,000	$377,000	$54,000

* Corrected Amount

TABULATION OF BIDS - SUMMARY

Water Treatment Plant Ground Storage Reservoir Rehabilitation **City of Boone, Iowa** **SEH No. BOONE 182296** **Bid Date: 2:00 p.m., December 3, 2025**	Engineer's Estimate	Minturn, Inc. PO Box 369 Brooklyn, IA 52211	Christiansen Construction Co. 1138 Mill Road - PO Box 339 Pender, NE 68047	Woodruff Construction, Inc 1890 Kountry Lane Fort Dodge, IA 50501
Base Bid	$1,125,000.00	$1,034,000.00	$1,333,260.00	$1,732,924.00
Base Bid + Bid Alternate A	$1,502,000.00	$1,178,600.00	$1,501,533.00	$1,906,565.00
Base Bid + Bid Alternate B	$1,179,000.00	$1,058,750.00	$1,347,660.00	$47,240,524.00

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MEMORANDUM

TO: Perry Gjersvik, Boone City Engineer

FROM: Simon McCormack

DATE: November 5, 2025

RE: Water Tower Comparison Analysis
SEH No. BOONE 182275 14.00

Dear Mr. Gjersvik,

The purpose of this memo is to provide a comparison analysis between three different elevated water storage tank options for the City of Boone to make an informed decision for selecting their future 1.0 million gallon (MG) water tower. This memo will provide a cost comparison analysis, for both construction and future maintenance, as well as provide a comparison analysis between the different features of the three options.

BACKGROUND

A large water demand industrial customer (Daisy) is moving forward with construction of a state-of-the-art dairy process facility off of Eastgate Drive, south of the Boone Municipal Airport. Due to the large water demand, fire flow needs, and higher elevations at the site of the facility, a booster station and 1.0 MG water tower are planned to be constructed near the site south of the future Hancock Drive. Preliminary design of the water tower, through water modeling analysis and coordination with the Federal Aviation Administration (FAA), limits the overall height of the water tower at an elevation of 1,315 feet and found that the recommended overflow elevation (hydraulic grade line) to be 1,295 feet, which would provide a static pressure of approximately 65 psi when the tower is full.

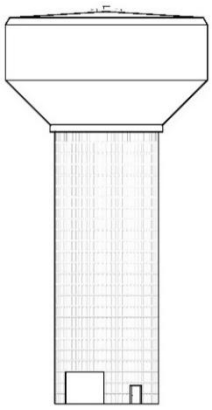
WATER TOWER STYLE CONSIDERATIONS

There are multiple water tower styles to consider. Each has advantages and disadvantages and varying construction and maintenance costs. Three (3) water tower style options are discussed further below.

Composite Elevated Water Storage Tank

A composite elevated water storage tank consists of a welded carbon-steel water storage tank resting on a steel-reinforced concrete support column. The concrete column is typically constructed with special horizontal and vertical rustication patterns formed into the exterior of the tower which provides for a pleasing aesthetic. This tank style has become the most constructed water tower for capacities of 1.0 MG and greater. Key design features include a large support column offering ample storage space, and because a water system's typical water level operating range falls within the cylindrical area of the tank, more consistent pressure changes are seen within the operating range.

Advantages:

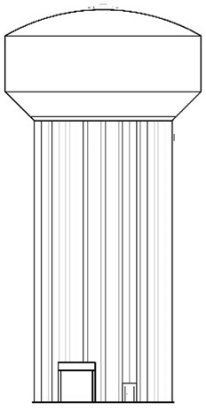


- Low maintenance, durable and efficient structure utilizing the most advantageous characteristics of each material; the tensile strength of steel for the water containment vessel and the compressive strength of concrete as the support column for the tank.
- No coatings system is needed for concrete shaft, which results in maintenance savings since this area will not require painting.
- Architectural Rustications allow for the concrete to be cast in such a manor to provide for an aesthetically pleasing water tower column.
- Now the most constructed water tower style & typically most economical style in capacities greater than 1,000,000 gallons.

Disadvantages:

- Initial construction requires specialized field erection of concrete column, increasing the probability of construction issues.
- Construction staging can be more heavily influenced by weather conditions.

Fluted Steel Column Elevated Water Storage Tank



A fluted steel column elevated water storage tank consists of a welded carbon-steel water storage tank resting on a steel support column. Like composite towers, key design features include a large support column offering ample storage space and consistent pressure changes within the operating range.

Advantages:

- Simple & clean design comprised of an all-steel construction.
- The larger diameter, all steel support column is fluted to provide structural rigidity with an aesthetically pleasing appearance with the column being well-proportioned to the tank diameter.
- All-steel construction permits cost-effective, year-round construction.
- Much of the structure can be “shop fabricated” reducing the chance for error.
- Possible longer life cycle due to all steel construction.

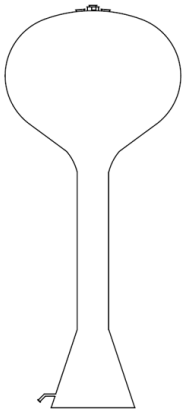
Disadvantages:

- More materials and labor required for initial and future painting due to larger surface area. Requires future maintenance painting of entire structure (steel).
- May require more long-term maintenance.
- Construction costs can be more variable due to fluctuations in steel prices

Single Pedestal Spheroid Elevated Water Storage Tank

A single pedestal spheroid elevated water storage tank has been the most built tank style in the past few decades. These tanks are especially popular for tanks up to 0.5 MG, though are commonly constructed for tanks up to 1.0 MG. This type of water tower is comprised of welded steel construction with a spherical water storage tank supported by a single cylindrical welded steel support pedestal and a flared conical base. A key design feature of a spheroid tank is that it requires a minimal footprint.

Advantages:



- Cost-efficient structure.
- Lower maintenance costs than fluted column tanks.
- Simple and attractive appearance.
- Possible longer life cycle due to all steel construction.

Disadvantages:

- Requires future maintenance painting of entire structure (steel).
- Construction costs can be more variable due to fluctuations in steel prices.

ECONOMIC ANALYSIS

One of the main objectives of this analysis is to compare the costs of the various water tower styles. SEH reached out to two different reputable water tower construction firms to provide construction cost estimates for all three tower options. Due to slight differences between the two in how costs were estimated, both estimates are provided below in Tables 1 and 2.

Table 1 – Water Tower Style Cost Comparison by CB&I

	Composite	Fluted	Spheroid
Capital Cost	$4,050,000	$4,220,000	$3,899,500

CB&I's assumptions include:

- Prices include a spread footing foundation, tank design, fabrication, shipment to site, tank erection, and paint.
- Prices assume a soil bearing allowable of at least 4,000 psf.
- Prices include an allowance for electrical and controls of $100,000.
- Prices include tax, bonds, and insurance costs.
- Prices are based on present day material and labor costs.
- Prices do not include prevailing wages, or material adders for AISA or BABAA.
- Prices do not include containment for painting operations.
- Prices include an overflow pipe and an inlet/outlet pipe to 5 feet beyond the foundation wall.
- Prices do not include any additional piping or sitework needed.
- Prices do not include cathodic protection.

Table 2 – Water Tower Style Cost Comparison by Caldwell

	Composite	Fluted	Spheroid
Capital Cost	$4,800,000	*N/A	$6,000,000
**Caldwell does not typically construct fluted tanks and without a good cost estimate, it was decided not to provide one. In SEH's experience, fluted tanks are approximately 15% more than composite tanks.*			

Caldwell's assumptions include:

- Prices include a shallow spread footing without rock excavation or dewatering.
- Prices do not include a mixing system, Hydroflon exterior paint, electrical, or controls.
- Prices do not include containment for painting operations.
- Prices do not include valve vaults, altitude valves, yard piping, site work, fencing, cathodic protection, or cellular antenna provisions.

In addition to construction costs, it's important to consider future maintenance costs associated with each tank option due to differences in steel surface areas. Steel surface areas between the different tank options and future maintenance costs are shown in Tables 3 and 4, respectively, below.

Table 3 – Water Tower Style Steel Surface Areas

	Composite	Fluted	Spheroid
Exterior (ft^2)	15,300	36,614	20,396
Interior Wet (ft^2)	17,900	19,770	15,200
Interior Dry (ft^2)	1,700	36,536	7,953
Total (ft^2)	**34,900**	**92,920**	**43,549**

Source: CB&I

Table 4 – Life Cycle Maintenance Costs

	Composite	Fluted	Spheroid
Year 25	$2,292,801	$6,103,202	$2,861,401
Year 50	$6,922,157	$18,443,798	$8,648,150
Total	**$9,214,958**	**$24,547,000**	**$11,509,551**

1) *Assumes a life cycle of 75 years.*
2) *Assumes full coatings rehabilitation every 25 years from 2026.*
3) *Assumes a 2026 value of $21.75 per square foot for coatings rehabilitation including containment, mobilization, etc.*
4) *Assumes an inflation rate of 4.5%.*

Please note that maintenance cycles are different for each water system due to differences in geography, water quality, and other factors. For another example of future maintenance costs and frequency, see the example provided by CB&I attached to this memo. Additionally, it is unlikely that interior dry coatings are needed to undergo a full rehabilitation. Due to this, future maintenance costs for a spheroid and composite tower may be more commensurate.

SUMMARY

Each tower style offers varying pros and cons and have varying construction and future maintenance costs. When selecting a new water tower, it is important for the City of Boone to consider all options. When looking at the construction and maintenance costs, the fluted column water tower would not be a great value for the City, but the composite and spheroid options are fairly close in price. In discussions with City staff and one of the water tower construction firms, SEH recommends bidding both options to allow actual pricing guide the City's decision.

SCM

Attachment

x:\ae\b\boone\182275\1-genl\14-corr\water tower comparison analysis\m boone 182275 daisy tower comparison analysis.docx

CB&I's Elevated Tank Lifecycle Cost Tool

Purpose and Use

This tool is an attempt to quantify the Net Present Value of maintenance costs of different elevated tank styles. The purpose of this analysis it to provide assistance to those who are responsible for recommending or selecting a type of elevated tank. The tool is a reference that may be used to help compare the life cycle costs for various types of elevated tanks. While it may provide assistance in the selection process, it is not intended to the the sole determinate. Other factors should be considered in the selection, including: aesthetics, safety, security, storage, and flexibility to raise or lower the tank in the future.

Inputs

This tool compares the maintenance costs of different elevated tank styles for standard capacity tanks adjusting paint areas for tank height.

Coating Systems and Cost Basis

The tool offers a selection of coating systems and levels of exterior containment. The practical life expectancy and estimated cost range of various coating systems have been derived from the "**Expected Service Life and Cost Considerations for Maintenance and Newer Construction Protective Coating Work**" as presented at AMPP's 2022 Conference and Exposition. Values from this presentation have been updated from 2022 by using current paint material costs and by factoring up the labor costs using the inflation factor input by the user. The NACE document provides the following background on coating systems maintenance considerations:

"This guide supplies system life for a 'Practical' maintenance approach. Practical life is considered to be the time until 5 to 10% coating breakdown occurs (SSPC-Vis 2 Rust Grade 4), and active rusting of the substrate is present. It should be noted, however, that the distribution of the breakdown must also be considered when making judgments regarding the feasibility and costs of maintenance painting. For example, 5% breakdown that occurs in well defined areas can be practically repaired through localized touch up, whereas 5% breakdown uniformly scattered across 100 % of the surface is beyond spot repair. This guide does not address these differences, but the user must take this into account when making painting decisions and determining the costs of painting....Often several cycles of touch-up and maintenance painting can be performed on a coating system prior to the need for full repainting. The determining factors involved with this type of extended maintenance painting sequence are the amount of corrosion present and the physical characteristics of the existing coatings. These factors should be investigated prior to the next scheduled painting operation. Decisions involving whether or not a full repaint is required, as opposed to a maintenance repaint or touch-up, should be based on the results of an investigation. Generally, touch-up procedures are used when the amount of corrosion is limited or found in discrete areas."

Calculation Assumptions

This of course, is an ideal. Most customers delay maintenance past the point at which touch up is practical. For this reason, the program calculates touch up costs, but uses only the costs of maintenance repainting and full recoating in computing the maintenance costs. Using these costs, general maintenance costs are generated and presented.

Paint areas come from tank paint areas for hundreds of tanks in CB&I's design file data base. For certain small tanks and leg tanks in particular where the data are thin (<5 tanks), more general calculations were used.

Job size update factors are used as described in the NACE document.

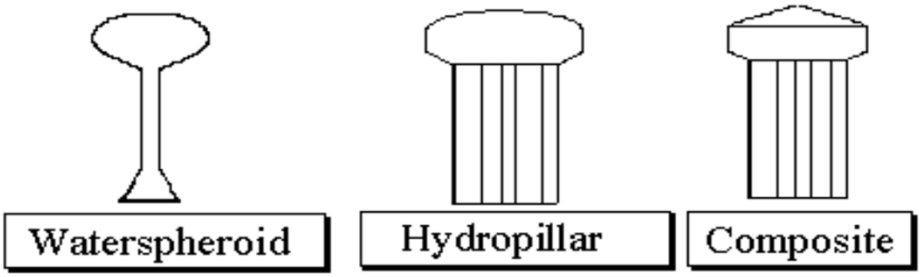
Current Costs for Touch-Up, Maintenance Repaint, and Full Recoat are products of the Paint Areas, Costs per Square Foot, and the Job Size Update Factors.

Repaint present values are computed in the second page of Comparative Elevated Tank Lifecycle Cost Analysis Sheet . Current costs are escalated by the inflation rate and discounted by the Cost of Capital. These tables assume that a repaint will occur at the end of each coating's Service Life. Often times when one tank surface (e.g. interior wet) has reached its service life and will be repainted, other surfaces that still have service life (e.g. exterior) may be repainted at the same time. When this occurs, the cost is a little more for the surfaces that are beyond their Service Life, and a little less if the coating has not yet reached its Service Life. As every owner is different , and there are no set ways of tank maintenance, the approach taken seems to us to be the most reasonable.

Maintenance Assumptions

As the note on the Comparative Elevated Tank Lifecycle Cost Analysis Tool states, it is assumed that maintenance of the exterior and interior dry surfaces alternate between maintenance repaint and full recoat for each cycle. Maintenance of the wet interior assumes full recoat every cycle.

Comparative Elevated Tank Lifecycle Cost Analysis



Location: Boone, IA

Tank Capacity (MG) :	1,000
Height to TCL (feet) :	158
Cost of Capital Rate (APR):	3%
Repaint Inflation Rate (APR) :	5%
Evaluation Period (Years):	75

Estimated Original Tank Cost				
	Waterspheroid	**Hydropillar**	**Composite**	
Capacity MG:	1,000	1,000	1,000	
Tank Cost, $:	$3,899,500	$4,220,000	$4,050,000	
Cost $/Gallon	3.90	4.22	4.05	

Coating Systems	**AWWA D102 Descriptions**	**Service Life**
Interior Wet Surfaces:	ICS-5: Zinc / Epoxy / Epoxy (10 mils)	**16**
Interior Dry Surfaces:	ICS-1: Epoxy / Epoxy (6 mils)	**40**
Exterior Surfaces:	OCS-4: Zinc / Epoxy / Fluorourethane (10 mils)	**34**
Exterior Containment:	None	

General Maintenance Costs	**Area Requiring Touch Up**	**Expected Touch Up Cost (today) $/SF**	**Maintenance Repaint Cost (today) $/SF**	**Full Recoat Cost (today) ($/SF)**
Interior Wet:	**7.5%**	**$ 15.71**	**N/A**	**$ 9.55**
Interior Dry:	**7.5%**	**$ 13.47**	**$ 5.25**	**$ 6.13**
Exterior:	**7.5%**	**$ 18.17**	**$ 9.95**	**$ 10.84**

Paint Areas				
	Waterspheroid	Hydropillar	Composite	
Exterior (ft2):	20,396	36,614	15,300	
Interior, Wet (ft2):	15,200	19,770	17,900	
Interior, Dry (ft2):	7,953	36,536	1,700	
Total (ft2):	43,549	92,920	34,900	

Job Size Update Factors				
	Waterspheroid	Hydropillar	Composite	
Exterior:	1.2	1.1	1.2	
Interior, Wet:	1.2	1.2	1.2	
Interior, Dry:	1.2	1.1	1.2	

Current Touch Up Costs				
	Waterspheroid	Hydropillar	Composite	
Exterior:	$31,964	$52,391	$23,978	
Interior, Wet:	$20,596	$26,788	$24,254	
Interior, Dry:	$9,236	$38,742	$1,974	

Current Maintenance Repaint Costs				
	Waterspheroid	Hydropillar	Composite	
Exterior:	$233,381	$382,525	$175,070	
Interior, Dry:	$47,971	$201,213	$10,254	
Note: Interior Wet Maintenance Recoats are not Recommended				

Current Full Recoat Costs				
	Waterspheroid	Hydropillar	Composite	
Exterior:	$254,139	$416,548	$190,642	
Interior, Wet:	$166,847	$217,010	$196,484	
Interior, Dry:	$56,065	$235,164	$11,984	

Total Cost of Ownership				
	Waterspheroid	Hydropillar	Composite	
Original Tank Cost	$ 3,899,500	$ 4,220,000	$ 4,050,000	
Exterior Repainting:	$ 1,388,534	$ 2,275,884	$ 1,041,605	
Interior, Wet Repainting:	$ 1,526,944	$ 1,986,032	$ 1,798,178	
Interior, Dry Repainting:	$ 103,528	$ 434,249	$ 22,130	
Total Cost of Ownership:	**$ 6,919,000**	**$ 8,916,000**	**$ 6,912,000**	

The Total Cost of Ownership equals Original Tank Cost plus the investment today needed to meet all future repainting costs over the evaluation period.

Comparative Elevated Tank Lifecycle Cost Analysis

The following tables show the Present Value of the future repainting costs for the exterior, interior wet, and interior dry paint areas for each repaint year. Costs for exterior and Interior, dry altenate between maintenance repaint and full recoat for each cycle. Cost for wet interior assumes full recoat every cycle.

EXTERIOR	Waterspheroid	Hydropillar	Composite	
Sum of Present Values:	$1,388,534	$2,275,884	$1,041,605	
34	$448,783	$735,580	$336,653	
68	$939,751	$1,540,304	$704,952	
-				
-				
-				
-				
-				
-				

Interior Wet	Waterspheroid	Hydropillar	Composite	
Sum of Present Values:	$1,526,944	$1,986,032	$1,798,178	
16	$226,961	$295,198	$267,276	
32	$308,733	$401,557	$363,574	
48	$419,969	$546,236	$494,568	
64	$571,281	$743,042	$672,759	
-				
-				
-				
-				

Interior Dry	Waterspheroid	Hydropillar	Composite	
Sum of Present Values:	$103,528	$434,249	$22,130	
40	$103,528	$434,249	$22,130	
-				
-				
-				
-				
-				
-				


HONDA


LAKE ELMO


3287


Woodbury
ANY TIME
1809
Minnesota
958852

OCTOBER 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

October 2025

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

October Monthly Water & Wastewater Operations Report

Dear Ms. Elmquist:

In accordance with contract requirements, we are pleased to provide the following monthly report for October 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			
		October-2024	October-2025
Water	**Units**		
Average Daily Pumped	gallons	1,974,000	1,653,000
Maximum Daily Pumped	gallons	2,337,000	2,969,000
Minimum Daily Pumped	gallons	1,458,000	1,255,000
Hardness			
Hardness - Avg Raw	grains	19.4	20.5
Hardness - Avg Finish	grains	9.0	9.1
Iron mg/l			
Avg Raw	mg/L	.02	.01
Avg Finish	mg/L	.01	.01
Fluoride mg/l			
Avg Raw Fl.	mg/L	.52	.46
Avg Finish Fl.	mg/L	.79	.69

Water Storage

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

- New outside LED light polls were installed
- Cleaned pump station doors and wall inside and out
- Cleaned and polished aluminum safety railing at pump station
- Repaired chlorine cylinder switch over valve
- Repaired chlorine injector plumbing at pump station
- Repaired lime slaker #2 vent line

- Cleaned and serviced claricone #2
- Located and marked well field electrical pull boxes
- Cleaned and serviced water heater
- Removed two rooftop vent fan motors for repair
- Collected Nitrate samples from all 14 wells
- Rotated lime slakers
- Rotated backwash pumps and blowers
- 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 misc yard work
- Clean Carbon Dioxide injection manifold
- Repair leaking plumbing

Health & Safety

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

The subjects of the weekly safety training were:

1. Vehicle Safety
2. Respirator Safety
3. Hearing Protection
4. Lockout/Tagout
5. Hazardous Substances

Regulatory Reports

See attached documents

WASTEWATER

Wastewater Treatment Facility

Wastewater Treatment Facility Flows			
	Plant Influent	**Plant Effluent**	**Units**
Total	42.50	•	MGD
Average per day	1.37	•	MGD
Minimum	1.154	•	MGD
Maximum	2.15	•	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	**226**	**2563**	•	•	•	•	•	•
$CBOD_5$	•	•	**3**	•	**3**	**40**	**3**	**25**
Suspended solids	**317**	**4040**	**5**	•	**3.5**	**45**	**3.33**	**30**
Nitrogen Ammonia	**22.6**	**262**	**.1**	**14.70**	**.1**	•	**.1 MG/L**	**2.4 MG/L**
Nitrate Nitrogen	•	•	**140 LBS/Day**	**1075 LBS/Day**	•	•	•	**657 LBS/Day**
Dissolved Oxygen	•	•	**9.2**	**>5.0**	**8.78**	•	**8.49**	**>5.0**
pH	**7.47**	•	**8.0**	**6.5 to 9 STD Units**	**7.94**	•	**7.85**	**6.5 to 9 STD Units**

ND= No Detection

- **= No limit set**

Solids Inventory

During the month of October, pressed 5 days (180,000gallons) and hauled 101.12 wet tons.

- **Solids Inventory:**

  Still improving slowly

  The Average Inventory for the month: 101,232 lbs, which is 2x the normal operating mass.

- **Volatile Solids (VS):**

  The average for the month: 58.2%, up 2.7% from September — 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

62 - (Sixty-Two) Preventive Maintenance Work orders Completed

- Changed filters in VLR Blowers
- With the help of Public Works Department, cleaned out 3 lift stations
- Fixed solenoid valve on the wash press
- Maintenance both walk behind snowblowers
- Put new carbonator on the Poulon Pro chainsaw
- Replaced Not In Place Sensor on UV Bank 2

Current & Planned Projects

- In-plant Lift Station-(Currently in Engineering)
- Preliminary Screen Install-(May 2026)
- Digester-(Currently in Engineering)
- Snedden Drive Lift Station-(Currently in Engineering)
- VertiCel System Secondary Treatment Process-(Currently in Engineering)

- Fournier Rotary Press-(Currently in Engineering)

Health, Safety and Cybersecurity

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

The subjects of the monthly safety training were:

- Lockout/Tagout/Tryout
- Hearing Protection
- Data Protection Part 1
- Respirator Safety
- Vehicle Safety
- Data Protection Part 2

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:** October **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	2,198	1,768	19.25	34	0.76	"C"	(F)	2.16	0	1	0.85	0	0.85	6.7	29
2	2,329	1,857	20.50	32	0.67	"C"	(F)	2.09	0	1	0.84	0	0.84	6.1	39
3	2,554	1,969	22.25	38	0.70	"C"	(F)	2.07	0	1	0.81	0	0.81	5.6	43
4	2,306	1,727	20.25	32	0.69	"C"	(F)	2.11	0	1	0.81	0	0.81	6.7	37
5	2,419	1,967	20.75	36	0.72	"C"	(F)	2.14	0	1	0.79	0	0.79	6.2	44
6	2,017	1,587	17.50	28	0.71	"C"	(F)	2.16	0	6	0.73	0	1.71	7.4	37
7	2,003	1,590	17.50	28	0.69	"C"	(F)	2.14	0	1	0.77	0	0.77	7.3	37
8	2,043	1,575	18.00	29	0.69	"C"	(F)	2.21	0	1	0.79	0	0.79	7.8	35
9	2,142	1,689	19.50	28	0.72	"C"	(F)	2.16	0	1	0.79	0	0.79	6.9	32
10	1,991	1,601	17.00	32	0.69	"C"	(F)	1.91	0	1	0.81	0	0.81	6.9	59
11	2,104	1,689	18.50	31	0.68	"C"	(F)	2.09	0	1	0.81	0	0.81	6.1	32
12	2,197	1,660	19.00	32	0.63	"C"	(F)	2.20	0	1	0.81	0	0.81	5.4	32
13	2,298	1,867	20.00	30	0.66	"C"	(F)	2.14	0	6	0.65	0	1.56	5.0	38
14	1,915	1,532	16.50	30	0.74	"C"	(F)	2.21	0	1	0.83	0	0.83	6.1	33
15	2,070	1,692	18.25	30	0.69	"C"	(F)	2.14	0	1	0.85	0	0.85	5.6	33
16	1,954	1,604	18.00	26	0.69	"C"	(F)	2.08	0	1	0.85	0	0.85	6.5	31
17	1,881	1,520	16.50	27	0.62	"C"	(F)	2.05	0	1	0.88	0	0.88	6.7	31
18	2,113	1,720	18.50	29	0.71	"C"	(F)	2.09	0	1	0.90	0	0.90	5.9	33
19	2,190	1,806	19.25	31	0.66	"C"	(F)	1.99	0	1	0.92	0	0.92	5.7	30
20	1,895	1,523	16.50	30	0.69	"C"	(F)	1.84	0	1	0.92	0	0.92	6.4	30
21	1,894	1,550	16.50	26	0.66	"C"	(F)	1.96	0	1	0.94	0	0.94	6.3	28
22	2,151	1,686	18.00	30	0.67	"C"	(F)	1.96	0	1	0.94	0	0.94	5.6	30
23	1,764	1,416	15.50	26	0.73	"C"	(F)	1.98	0	1	0.94	0	0.94	6.6	28
24	2,100	1,791	18.25	30	0.77	"C"	(F)	1.88	0	1	0.94	0	0.94	5.4	36
25	1,686	1,343	14.75	24	0.68	"C"	(F)	2.05	0	1	0.99	0	0.99	8.2	28
26	2,275	1,947	20.00	34	0.74	"C"	(F)	2.17	0	1	0.99	0	0.99	6.1	37
27	2,140	1,797	18.75	27	0.67	"C"	(F)	2.05	0	1	0.99	0	0.99	6.8	34
28	1,980	1,639	17.25	30	0.60	"C"	(F)	2.21	0	1	1.02	0	1.02	6.9	25
29	1,758	1,430	15.5	25	0.72	"C"	(F)	2.05	0	1	1.04	0	1.04	6.8	25
30	1,756	1,439	15.25	25	0.65	"C"	(F)	2.07	0	1	1.03	0	1.03	6.4	25
31	1,524	1,255	13.5	18	0.61	"C"	(F)	2.16	0	1	1.03	0	1.03	7.2	20
Total	63,647	51,236	556.75	908						41		0			1,031
Avg	2,053	1,653	17.83	29	0.69										33
Max	2,554	1,969	22.25	38	0.77				0				1.71		59
Min	1,524	1,255	13.50	18	0.60			1.84			0.65			5.0	20

*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: 11/4/2025

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:** October **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	.03	0	.01	.01	.02	0	.01	.01	.02	0	0.08
2	20	0	.02	.02	.02	.02	0	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	0.08
3	20	0	.02	.02	.02	.17	0	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	0.08
4	22	0	.02	.02	.02	.02	0	.01	.01	.02	0	.01	.01	.03	0	.01	.01	.02	0	0.08
5	20	0	.02	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	0.08
6	21	0	.02	.02	.02	.02	0	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.01	0	0.08
7	18	0	.02	.03	.03	.03	0	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.01	0	0.17
8	18	0	.02	.02	.02	.02	0	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	0.08
9	18	0	.02	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.01	0	.01	.01	.11	0	0.10
10	19	0	.02	.02	.02	.02	0	.01	.01	.02	0	.01	.01	.01	0	.01	.01	.01	0	0.10
11	18	0	.02	.02	.02	.03	0	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.01	0	0.10
12	18	0	.02	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	.02	.01	.02	0	0.11
13	18	0	.02	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.01	0	.01	.01	.02	0	0.09
14	20	0	.02	.02	.02	.02	0	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.01	0	0.10
15	17	0	.02	.02	.02	.03	0	.01	.01	.02	0	.02	.01	.02	0	.01	.01	.02	0	0.11
16	18	0	.02	.02	.01	.02	0	.02	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	0.10
17	18	0	.02	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	0.10
18	17	0	.02	.02	.03	.03	0	.01	.01	.03	0	.01	.01	.02	0	.01	.01	.04	0	0.09
19	19	0	.02	.03	.03	.03	0	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	0.09
20	19	0	.02	.02	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	0.12
21	17	0	.02	.02	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	0.10
22	17	0	.02	.02	.02	.02	0	.01	.01	.02	0	.02	.01	.02	0	.02	.02	.02	0	0.12
23	18	0	.02	.02	.02	.02	0	.02	.02	.02	0	.01	.01	.02	0	.01	.01	.02	0	0.13
24	16	0	.02	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	0.13
25	19	0	.02	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	.02	.02	.02	0	0.15
26	15	0	.02	.02	.02	.02	0	.01	.01	.03	0	.01	.01	.02	0	.02	.02	.02	0	0.08
27	20	0	.02	.02	.02	.03	0	.02	.02	.02	0	.01	.01	.02	0	.02	.02	.02	0	0.11
28	19	0	.02	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	.02	.02	.02	0	0.08
29	18	0	.02	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.01	0	.02	.02	.02	0	0.09
30	15	0	.02	.02	.02	.02	0	.01	.01	.02	0	.01	.01	.02	0	.02	.01	.02	0	0.08
31	14	0	.02	.02	.02	.02	0	.01	.01	.02	0	.01	.01	.02	0	.02	.02	.02	0	0.10
Total	566	0					0				0				0				0	
Avg																				0.10
Max			.02			.17				.03				.03				.11		0.15
Min																				0.08

**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: 11/4/2025

SURFACE WATER/INFLUENCED GROUNDWATER MONTHLY OPERATION REPORT

IOWA DNR WATER SUPPLY

Basic Information

S/EP: #1

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

Day	Operating Hours	Pumpage		Fluoride		Raw Turbidity	Clarifier Turbidity					
	Number of hours the plant operated per day.	Raw in 1000s Gallons Per Day	To System in 1000s 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)	Gallons Of Liquid Chlorine Used 15%	Wett Well Residual		
1	19.25	2198	1768	34.00	0.76	0.08		0.78	20.00	0.67		
2	20.50	2329	1857	32.00	0.67	0.08		1.00	21.70	0.66		
3	22.25	2554	1969	38.00	0.70	0.08		1.45	22.00	0.65		
4	20.25	2306	1727	32.00	0.69	0.08		1.73	19.90	0.70		
5	20.75	2419	1967	36.00	0.72	0.08		0.91	22.50	0.66		
6	17.50	2017	1587	28.00	0.71	0.08		1.34	18.00	0.68		
7	17.50	2003	1590	28.00	0.69	0.17		1.98	18.50	0.65		
8	18.00	2043	1575	29.00	0.69	0.08		0.72	18.20	0.70		
9	19.50	2142	1689	28.00	0.72	0.10		1.29	19.90	0.70		
10	17.00	1991	1601	32.00	0.69	0.10		1.30	18.90	0.61		
11	18.50	2104	1689	31.00	0.68	0.10		1.07	20.00	0.56		
12	19.00	2197	1660	32.00	0.63	0.11		1.85	19.40	0.52		
13	20.00	2298	1867	30.00	0.66	0.09		1.09	21.60	0.51		
14	16.50	1915	1532	30.00	0.74	0.10		1.10	18.00	0.52		
15	18.25	2070	1692	30.00	0.69	0.11		0.97	20.00	0.53		
16	18.00	1954	1604	26.00	0.69	0.10		2.56	18.00	0.57		
17	16.50	1881	1520	27.00	0.62	0.10		1.39	17.00	0.56		
18	18.50	2113	1720	29.00	0.71	0.09		0.99	19.00	0.57		
19	19.25	2190	1806	31.00	0.66	0.09		0.77	20.00	0.57		
20	16.50	1895	1523	30.00	0.69	0.12		1.84	17.00	0.55		
21	16.50	1894	1550	26.00	0.66	0.10		0.75	17.20	0.54		
22	18.00	2151	1686	30.00	0.67	0.12	0.49		20.00	0.54		
23	15.50	1764	1416	26.00	0.73	0.13	1.72		16.00	0.54		
24	18.25	2100	1791	30.00	0.77	0.13	1.11		20.10	0.53		
25	14.75	1686	1343	24.00	0.68	0.15	0.70		15.00	0.64		
26	20.00	2275	1947	34.00	0.74	0.08	0.80		21.50	0.65		
27	18.75	2140	1797	27.00	0.67	0.11	1.35		20.00	0.69		
28	17.25	1980	1639	30.00	0.60	0.08	1.00		18.00	0.68		
29	15.50	1758	1430	25.00	0.72	0.09	0.67		16.10	0.58		
30	15.25	1756	1439	25.00	0.65	0.08	1.79		16.50	0.56		
31	13.50	1524	1255	18.00	0.61	0.10	1.72		14.50	0.54		
Total	557	63,647	51,236	908					584.50	0.00	0	0
Avg	17.96	2,053	1,653	29.29	0.69	0.10	1.14	1.28	18.85	0.60	#DIV/0!	#DIV/0!
Max	22.25	2,554	1,969	38.00	0.77	0.17	1.79	2.6	22.50	0.70	0.00	0.00
Min	13.50	1,524	1,255	18.00	0.60	0.08	0.49	0.72	14.50	0.51	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 IV Date: 11/4/2025

	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		0.76	344	152	7.55	9.46	274	70	0.01	0.01			1.41	66	2.06	3.6	3.6	0.08
2		0.67	348	150	7.45	9.41	274	70	0.01	0.01			1.45	65	2.26	3.7	3.6	0.08
3		0.70	356	156	7.48	9.35	262	78	0.01	0.01			1.44	65	2.21	3.6	3.7	0.08
4		0.69	348	154	7.46	9.33	260	76	0.01	0.01			1.44	65	2.18	3.5	3.6	0.08
5		0.72	346	150	7.49	9.30	270	72	0.01	0.02			1.43	65	2.26	3.5	3.5	0.08
6		0.71	348	154	7.45	9.35	274	74	0.01	<0.01			1.46	65	2.32	3.4	3.5	0.08
7		0.69	348	152	7.36	9.31	268	66	0.02	0.01			1.43	65	2.10	5.8	3.8	0.17
8		0.69	350	156	7.47	9.26	264	74	0.01	0.01			1.45	65	2.24	3.3	3.6	0.08
9		0.72	354	156	7.38	9.26	266	64	<.01	<.01			1.43	63	2.11	5.3	3.8	0.10
10		0.69	356	156	7.44	9.31	264	72	<.01	<.01			1.21	65	2.01	3.1	4.6	0.10
11		0.68	348	154	7.46	9.28	270	72	0.01	0.01			1.22	65	1.99	3.1	4.1	0.10
12		0.63	342	154	7.44	9.30	258	68	0.01	0.01			1.34	65	2.18	3.2	3.8	0.11
13		0.66	342	154	7.48	9.33	254	76	0.01	0.01			1.42	65	2.22	3.4	3.4	0.09
14		0.74	346	152	7.58	9.36	268	74	<0.01	<0.01			1.38	65	2.14	3.2	3.2	0.10
15	0.46	0.69	346	144	7.58	9.44	268	70	<.01	0.01	.45	.01	1.52	65	2.14	3.2	3.4	0.11
16		0.69	348	158	7.55	9.34	268	66	<0.01	0.01			1.47	65	2.06	3.4	3.4	0.10
17		0.62	350	158	7.50	9.32	276	72	0.01	<.01			1.46	65	2.30	3.3	3.3	0.10
18		0.71	350	158	7.42	9.40	270	70	0.01	<0.01			1.47	65	2.28	3.3	3.4	0.09
19		0.66	348	158	7.48	9.41	272	70	0.01	0.01			1.57	65	2.12	3.2	3.3	0.09
20		0.69	356	160	7.59	9.38	268	72	0.02	0.01			1.42	65	2.20	3.3	3.3	0.12
21		0.66	350	160	7.57	9.38	258	70	0.01	<0.01			1.39	65	2.17	3.2	3.2	0.10
22		0.67	354	160	7.57	9.36	266	72	0.01	0.01			1.43	65	2.01	3.2	3.3	0.12
23		0.73	356	170	7.55	9.36	270	76	<0.01	<0.01			1.47	64	2.11	3.2	3.3	0.13
24		0.77	354	162	7.51	9.37	276	78	<0.01	0.01			1.40	64	2.13	3.2	3.2	0.13
25		0.68	354	156	7.50	9.34	272	78	0.01	0.01			1.44	64	2.19	3.2	3.1	0.15
26		0.74	358	160	7.39	9.35	266	74	<0.01	<0.01			1.42	64	2.19	3.2	3.2	0.08
27		0.67	356	158	7.50	9.36	268	70	<0.01	<0.01			1.42	64	2.21	3.2	3.1	0.11
28		0.60	362	160	7.50	9.40	266	76	0.01	0.01			1.41	63	2.21	3.2	3.2	0.08
29		0.72	358	158	7.53	9.39	258	74	<0.01	0.01			1.40	63	2.18	3.1	3.1	0.09
30		0.65	354	160	7.45	9.45	262	70	0.01	0.01			1.44	63	1.87	3.3	3.5	0.08
31		0.61	348	160	7.47	9.44	252	72	<.01	0.01			1.39	63	1.98	3.2	3.3	0.10
AVG		**0.69**	**351**	**156**	**7.5**	**9.4**	**267**	**72**	**0.01**	**0.01**	**0.45**	**0.01**	**1.42**	**65**	**2.15**	**3.4**	**3.5**	**0.10**
MAX		**0.77**	**362**	**170**	**7.6**	**9.5**	**276**	**78**	**0.02**	**0.02**	**0.45**	**0.01**	**1.57**	**66**	**2.32**	**5.8**	**4.6**	**0.17**
MIN		**0.60**	**342**	**144**	**7.4**	**9.3**	**252**	**64**	**0.01**	**0.01**	**0.45**	**0.01**	**1.21**	**63**	**1.87**	**3.1**	**3.1**	**0.08**

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: 10 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: 10-2025

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	1.171	191	1865.33274	250	2441.535							68	7.4
2	1.171	220	2148.5508									70	7.5
3	1.193											70	7.4
4	1.191												
5	2.144												
6	1.636			548	7477.04352							64	7.5
7	1.421					26.1	309.314754	25	296.2785	3.8	45.034332	66	7.5
8	1.364	166	1888.37616	200	2275.152							66	7.5
9	1.381	251	2890.90254									65	7.6
10	1.301											68	7.5
11	1.286												
12	1.382												
13	1.246											66	7.4
14	1.285			213	2282.6997	31.25	334.903125	31	332.2239	6.1	65.37309	63	7.5
15	1.376	260	2983.7184									64	7.3
16	1.373	252	2885.60664	403	4614.68046							68	7.4
17	1.368											68	7.3
18	1.308												
19	1.292												
20	1.222	202	2058.67896	226	2303.27448							65	7.5
21	1.203					33.25	333.597915	33	331.08966	7	70.23114	65	7.6
22	1.186			221	2185.96404							64	7.6
23	1.154	270	2598.5772									64	7.3
24	1.221											66	7.4
25	1.154												
26	1.256												
27	1.188											66	7.4
28	2.154			298	5353.37928	33.25	597.31497	33	592.82388	6.3	113.175468	64	7.4
29	1.801	210	3154.2714	494	7420.04796							63	7.6
30	1.576	240	3154.5216									63	8
31	1.479											63	7.4
Total	42.483	2262	25628.53644	2853	36353.77644	123.85	1575.130764	122	1552.41594	23.2	293.81403	1509	172
Monthly Avg.	1.370419355	226.2	2562.853644	317	4039.308493	30.9625	393.782691	30.5	388.103985	5.8	73.4535075	65.60869565	7.47826087
Daily Max.	2.154	270	3154.5216	548	7477.04352	33.25	597.31497	33	592.82388	7	113.175468	70	8
Daily Min.	1.154	166	1865.33274	200	2185.96404	26.1	309.314754	25	296.2785	3.8	45.034332	63	7.3
Max. 7/Avg.	1.418142857	270	2642.668	399	4959.28926	33.25	597.31497	33	592.82388	7	113.175468	67.6	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: 10-2025

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	29.29842	3	29.29842	0.1	0.976614													70					8.5	8	
2	3	29.29842			0.1	0.976614													70					8.3	7.9	
3					0.1	0.994962													70					8.3	8	
4																										
5																										
6			4	54.57696															68					8.3	7.9	
7					0.1	1.185114	140	1659.1596	0.0035	0.04147899	7	82.95798	7.77	92.0833578	0.02	0.2370228	2	23.70228	68	0.001	0.0118511 4			8.6	7.9	
8	3	34.12728	3	34.12728	0.1	1.137576													68					8.9	7.9	
9	3	34.55262			0.1	1.151754													67					8.8	7.9	
10					0.1	1.085034													66					8.6	8	
11																										
12																										
13																			66					8.9	7.8	
14			4	42.8676	0.1	1.07169			0.0035	0.03750915			14.1	151.10829			3.5	37.50915	64	0.001	0.0107169			8.7	7.9	
15	3	34.42752			0.1	1.147584													66					8.6	7.8	
16	3	34.35246	3	34.35246	0.1	1.145082													68					8.7	7.9	
17					0.1	1.140912													68					8.5	8	
18																										
19																										
20	3	30.57444	3	30.57444															65					8.9	7.9	
21					0.1	1.003302			0.0035	0.03511557			12.97	130.1282694			3.5	35.11557	63	0.001	0.01003302			8.9	7.9	
22			3	29.67372	0.1	0.989124													62					9.1	8	
23	3	28.87308			0.1	0.962436													62					9	7.9	
24					0.1	1.018314													63					9.2	7.8	
25																										
26																										
27																			62					6.6	7.4	
28			2	35.92872	0.1	1.796436			0.0035	0.06287526			14.79	265.6928844			3.6	64.671696	64					5.9	7.4	
29	3	45.06102	5	75.1017	0.1	1.502034													63					8.7	7.8	
30	3	39.43152			0.1	1.314384													63					8.6	7.9	
31					0.1	1.233486													63					8.8	7.7	
Total	30	339.99678	30	366.5013	1.9	21.832452	140	1659.1596	0.014	0.17697897	7	82.95798	49.63	639.0128016	0.02	0.2370228	12.6	160.998696	1509	0.003	0.03260106			195.4	180.6	
Monthly Avg.	3	33.999678	3.333333333	40.72236667	0.1	1.149076421	140	1659.1596	0.0035	0.04424743	7	82.95798	12.4075	159.7532004	0.02	0.2370228	3.15	40.249674	65.60869565	0.001	0.01086702			8.495652174	7.852173913	
Daily Max.	3	45.06102	5	75.1017	0.1	1.796436	140	1659.1596	0.0035	0.06287526	7	82.95798	14.79	265.6928844	0.02	0.2370228	3.6	64.671696	70	0.001	0.0118511 4			9.2	8	
Daily Min.	3	28.87308	2	29.29842	0.1	0.962436	140	1659.1596	0.0035	0.03511557	7	82.95798	7.77	92.0833578	0.02	0.2370228	2	23.70228	62	0.001	0.01003302			5.9	7.4	
Max. 7/Avg.	3	34.33995	3.5	41.93769	0.1	1.1915775	140	1659.1596	0.0035	0.06287526	7	82.95798	14.79	265.6928844	0.02	0.2370228	3.6	64.671696	69.2	0.001	0.0118511 4			8.78	7.94	

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

NOVEMBER 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

November 2025

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

November Monthly Water & Wastewater Operations Report

Dear Ms. Elmquist:

In accordance with contract requirements, we are pleased to provide the following monthly report for November 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			
		November-2024	November-2025
Water	**Units**		
Average Daily Pumped	gallons	1,531,000	1,498,000
Maximum Daily Pumped	gallons	1,957,000	1,844,000
Minimum Daily Pumped	gallons	1,246,000	1,121,000
Hardness			
Hardness - Avg Raw	grains	20.0	21.3
Hardness - Avg Finish	grains	9.6	9.6
Iron mg/l			
Avg Raw	mg/L	.01	.01
Avg Finish	mg/L	.01	.01
Fluoride mg/l			
Avg Raw Fl.	mg/L	.49	.50
Avg Finish Fl.	mg/L	.70	.67

Water Storage

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

- Cleaned Carbon Dioxide Injection Manifold
- Repaired chlorine injector at High Service Pump Station
- Repaired overhead PVC water line at main water plant
- Repaired/rebuilt gas chlorine regulator head
- Replaced faulty lime slaker feeder sensors
- Serviced chlorine analyzer at Greene Street Water Tower

- Built shelving at Greene Street tower shed
- Rotated lime slakers
- Rotated backwash pumps and blowers
- Washed trucks and tractor
- 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
- Miscellaneous cleaning around water plant

Current & Planned Projects

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

- Rebuild High Service Pump #2 Electric Check Valve
- Change oils in High Service Pumps

Health & Safety

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

The subjects of the weekly safety training were:

1. Hypothermia
2. CPR Review
3. Electrical Box Safety
4. Safe Driving Awareness
5. Distracted Driving
6. Ladder Safety

Regulatory Reports

See attached documents

WASTEWATER

Wastewater Treatment Facility

Wastewater Treatment Facility Flows			
	Plant Influent	**Plant Effluent**	**Units**
Total	41.16	•	MGD
Average per day	1.37	•	MGD
Minimum	1.182	•	MGD
Maximum	1.60	•	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	**204**	**2225**	•	•	•	•	•	•
$CBOD_5$	•	•	**3**	•	**3**	**40**	**3**	**25**
Suspended solids	**264**	**3033**	**4**	•	**4**	**45**	**3.25**	**30**
Nitrogen Ammonia	**21.1**	**237**	**.1**	**14.70**	**.1**	•	**.1 MG/L**	**2.4 MG/L**
Nitrate Nitrogen	•	•	**156 LBS/Day**	**1075 LBS/Day**	•	•	•	**657 LBS/Day**
Dissolved Oxygen	•	•	**9.6**	**>5.0**	**9.02**	•	**8.90**	**>5.0**
pH	**7.60**	•	**8.0**	**6.5 to 9 STD Units**	**7.84**	•	**7.80**	**6.5 to 9 STD Units**

ND= No Detection

- **= No limit set**

Solids Inventory

During the month of November, we pressed 2 days (83,000 gallons) and hauled 43.81 wet tons.

Our VLR and overall treatment process continue to show improvement. In October, volatile solids were 58.2%, and in November it increased to 60.5%. We expect this positive trend to continue through the winter months, although the rate of improvement may slow as water temperatures and biological activity decrease. As volatile solids percentage continues to improve, we will gradually reduce our solids inventory back to normal operating levels.

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.

- Installed new pump at Linn Street
- Replaced hour meter for new pump and Linn St Lift Station
- Cleared branches at 14th and Division Lift Station

Maintenance Report

69 - (Sixty-Nine) Preventive Maintenance Work orders Completed

- Serviced John Deere Tractor
- Winterized the UV System
- NAI Electric fixed our Power Line going into the Screen and Grit Building that Michaels hit.

Current & Planned Projects

- In-plant Lift Station-(Currently in Engineering)
- Preliminary Screen Install-(May 2026)
- Digester-(Currently in Engineering)
- Snedden Drive Lift Station-(Currently in Engineering)
- VertiCel System Secondary Treatment Process-(Currently in Engineering)
- Fournier Rotary Press-(Currently in Engineering)

Health, Safety and Cybersecurity

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

The subjects of the monthly safety training were:

- Distracted Driving
- Ladder Safety for General Industry
- Travel Safety
- Electrical Box Safety
- CPR Review
- Cloud Sharing

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:** November **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	1,937	1,585	17.00	30	0.64	"C"	(F)	2.24	0	1	1.02	0	1.02	5.7	32
2	1,912	1,571	16.75	28	0.65	"C"	(F)	2.23	0	1	1.02	0	1.02	6.1	23
3	1,907	1,582	17.25	28	0.71	"C"	(F)	1.87	0	6	0.83	0	1.93	6.3	31
4	2,110	1,718	19.25	30	0.67	"C"	(F)	1.83	0	1	1.08	0	1.08	5.9	34
5	1,338	1,121	11.75	18	0.69	"C"	(F)	1.94	0	1	1.69	0	1.69	9.5	21
6	1,713	1,433	15.00	26	0.69	"C"	(F)	2.01	0	1	1.03	0	1.03	7.3	25
7	1,576	1,303	14.00	22	0.65	"C"	(F)	2.10	0	1	1.03	0	1.03	7.9	25
8	1,699	1,434	15.00	27	0.64	"C"	(F)	2.09	0	1	1.03	0	1.03	6.9	25
9	1,916	1,625	16.75	25	0.67	"C"	(F)	2.25	0	1	1.05	0	1.05	6.3	25
10	1,731	1,448	15.25	24	0.64	"C"	(F)	2.24	0	1	1.07	0	1.07	6.6	22
11	1,751	1,467	15.50	26	0.69	"C"	(F)	2.20	0	6	0.95	0	1.27	6.5	24
12	1,654	1,391	14.50	24	0.71	"C"	(F)	2.14	0	1	1.10	0	1.10	6.8	22
13	1,722	1,443	15.25	26	0.68	"C"	(F)	2.08	0	1	1.11	0	1.11	6.5	23
14	1,910	1,471	16.75	23	0.71	"C"	(F)	2.04	0	1	1.12	0	1.12	5.5	24
15	2,155	1,591	19.00	30	0.60	"C"	(F)	2.03	0	1	1.11	0	1.11	5.0	32
16	1,936	1,445	17.00	28	0.69	"C"	(F)	2.25	0	1	1.10	0	1.10	5.3	28
17	2,233	1,680	20.00	34	0.65	"C"	(F)	1.91	0	1	1.10	0	1.10	4.8	24
18	1,752	1,391	15.50	24	0.67	"C"	(F)	1.78	0	1	1.16	0	1.16	3.6	26
19	1,772	1,488	15.50	25	0.67	"C"	(F)	2.11	0	1	1.16	0	1.16	4.8	26
20	1,929	1,613	17.00	29	0.71	"C"	(F)	2.17	0	1	1.12	0	1.12	5.9	28
21	1,875	1,583	16.50	27	0.73	"C"	(F)	2.21	0	1	1.12	0	1.12	6.6	27
22	1,741	1,429	15.50	25	0.67	"C"	(F)	2.29	0	1	1.14	0	1.14	6.5	24
23	2,140	1,844	18.75	30	0.64	"C"	(F)	2.25	0	1	1.16	0	1.16	5.0	34
24	1,639	1,342	15.50	22	0.70	"C"	(F)	2.30	0	1	1.19	0	1.19	6.7	23
25	1,853	1,583	16.25	25	0.73	"C"	(F)	2.24	0	1	1.18	0	1.18	6.0	26
26	1,722	1,433	15.25	22	0.70	"C"	(F)	2.29	0	1	1.21	0	1.21	6.4	23
27	1,793	1,522	15.75	21	0.68	"C"	(F)	2.38	0	1	1.23	0	1.23	6.1	24
28	1,498	1,225	12.75	17	0.61	"C"	(F)	2.28	0	1	1.24	0	1.24	7.1	21
29	1,847	1,580	15.25	24	0.65	"C"	(F)	2.30	0	1	1.24	0	1.24	5.8	25
30	1,903	1,602	16.75	20	0.65	"C"	(F)	2.29	0	1	1.25	0	1.25	5.5	24
Total	54,664	44,943	482.25	760						40		0			771
Avg	1,822	1,498	16.02	25	0.67										26
Max	2,233	1,844	20.00	34	0.73				0				1.93		34
Min	1,338	1,121	11.75	17	0.60			1.78			0.83			3.6	21

*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: 12/2/2025

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:** November **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	15	0	.02	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	.02	.02	.04	0	0.08
2	18	0	.02	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	.02	.02	.02	0	0.09
3	17	0	.02	.02	.02	.02	0	.01	.01	.02	0	.01	.01	.02	0	.02	.02	.02	0	0.09
4	17	0	.02	.02	.02	.03	0	.01	.02	.02	0	.01	.01	.02	0	.02	.02	.02	0	0.11
5	14	0	.02	.02	.02	.02	0	.02	.02	.03	0	.02	.02	.02	0	.02	.02	.02	0	0.08
6	17	0	.02	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	.02	.02	.02	0	0.10
7	15	0	.02	.02	.02	.02	0	.01	.01	.02	0	.01	.01	.02	0	.01	.02	.02	0	0.19
8	15	0	.02	.01	.01	.03	0	.01	.01	.03	0	.01	.01	.02	0	.01	.01	.02	0	0.09
9	16	0	.02	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.03	0	.01	.01	.02	0	0.09
10	17	0	.02	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	.02	.02	.02	0	0.14
11	16	0	.02	.02	.02	.02	0	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	0.10
12	16	0	.02	.01	.02	.02	0	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.01	0	0.11
13	15	0	.02	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	0.13
14	16	0	.02	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	.02	.02	.02	0	0.08
15	17	0	.02	.02	.02	.02	0	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	0.10
16	19	0	.02	.02	.03	.03	0	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	0.08
17	17	0	.02	.02	.02	.02	0	.02	.02	.02	0	.02	.01	.02	0	.01	.01	.02	0	0.10
18	21	0	.02	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	.02	.02	.02	0	0.10
19	16	0	.03	.02	.02	.02	0	.01	.01	.02	0	.01	.01	.02	0	.02	.01	.02	0	0.09
20	16	0	.02	.02	.02	.02	0	.02	.02	.02	0	.01	.01	.02	0	.01	.01	.02	0	0.07
21	17	0	.02	.01	.02	.02	0	.02	.02	.02	0	.01	.01	.02	0	.01	.01	.02	0	0.08
22	17	0	.02	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	.02	.02	.02	0	0.08
23	15	0	.02	.02	.02	.03	0	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	0.08
24	20	0	.02	.02	.02	.02	0	.02	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	0.08
25	15	0	.02	.02	.01	.02	0	.01	.01	.02	0	.02	.01	.03	0	.01	.01	.02	0	0.07
26	17	0	.02	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	.02	.01	.02	0	0.10
27	16	0	.02	.02	.02	.03	0	.01	.01	.02	0	.01	.01	.02	0	.02	.02	.02	0	0.10
28	16	0	.02	.02	.02	.02	0	.02	.01	.02	0	.01	.01	.02	0	.01	.01	.01	0	0.10
29	15	0	.02	.02	.01	.02	0	.01	.01	.02	0	.01	.01	.04	0	.01	.01	.02	0	0.10
30	17	0	.02	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	.02	.02	.02	0	0.09
Total	495	0					0				0				0				0	
Avg																				0.10
Max			.03			.03				.03				.04				.04		0.13
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: 12/2/2025

SURFACE WATER/INFLUENCED GROUNDWATER MONTHLY OPERATION REPORT

IOWA DNR WATER SUPPLY

Basic Information

S/EP: #1

System Name: **PWSID #:** 819033 **Month:** November **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	17.00	1937	1585	30.00	0.64	0.08	0.90				18.00	0.54		
2	16.75	1912	1571	28.00	0.65	0.09	0.88				17.80	0.56		
3	17.25	1907	1582	28.00	0.71	0.09	0.89				15.10	0.58		
4	19.25	2110	1718	30.00	0.67	0.11	2.10				17.70	0.61		
5	11.75	1338	1121	18.00	0.69	0.08	2.26				11.00	0.63		
6	15.00	1713	1433	26.00	0.69	0.10	1.23				14.10	0.63		
7	14.00	1576	1303	22.00	0.65	0.19	0.99				13.00	0.63		
8	15.00	1699	1434	27.00	0.64	0.09	0.87				15.00	0.60		
9	16.75	1916	1625	25.00	0.67	0.09	1.01				16.90	0.63		
10	15.25	1731	1448	24.00	0.64	0.14	1.72				16.10	0.59		
11	15.50	1751	1467	26.00	0.69	0.10	0.69				16.80	0.58		
12	14.50	1654	1391	24.00	0.71	0.11	0.67				15.50	0.57		
13	15.25	1722	1443	26.00	0.68	0.13	1.22				16.10	0.58		
14	16.75	1910	1471	23.00	0.71	0.08	2.93				16.60	0.54		
15	19.00	2155	1591	30.00	0.60	0.10	2.25				18.00	0.55		
16	17.00	1936	1445	28.00	0.69	0.08	3.34				16.20	0.54		
17	20.00	2233	1680	34.00	0.65	0.10	0.94				19.00	0.58		
18	15.50	1752	1391	24.00	0.67	0.10	1.20				15.90	0.33		
19	15.50	1772	1488	25.00	0.67	0.09	2.17				17.40	0.45		
20	17.00	1929	1613	29.00	0.71	0.07	0.60				18.20	0.61		
21	16.50	1875	1583	27.00	0.73	0.08	1.49				17.20	0.70		
22	15.50	1741	1429	25.00	0.67	0.08	1.25				16.00	0.65		
23	18.75	2140	1844	30.00	0.64	0.08	0.81				21.00	0.60		
24	15.50	1639	1342	22.00	0.70	0.08	1.04				15.00	0.63		
25	16.25	1853	1583	25.00	0.73	0.07	3.89				17.50	0.63		
26	15.25	1722	1433	22.00	0.70	0.10	1.79				15.20	0.64		
27	15.75	1793	1522	21.00	0.68	0.10	0.99				16.50	0.63		
28	12.75	1498	1225	17.00	0.61	0.10	0.76				13.80	0.61		
29	15.25	1847	1580	24.00	0.65	0.10	1.69				16.50	0.63		
30	16.75	1903	1602	20.00	0.65	0.09	1.01				17.50	0.62		
Total	482	54,664	44,943	760							490.60	17.67	0	0
Avg	15.56	1,763	1,450	24.52	0.65	0.09	1.45	#DIV/0!	#DIV/0!	#DIV/0!	16.35	0.59	#DIV/0!	#DIV/0!
Max	20.00	2,233	1,844	34.00	0.73	0.19	3.89	0.0	0.0	0.00	21.00	0.70	0.00	0.00
Min	11.75	1,338	1,121	17.00	0.60	0.07	0.60	0.00	0.00	0.00	11.00	0.33	0.00	0.00

	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		0.64	350	168	7.5	9.4	256	76	0.01	<0.01			1.39	63	1.88	3.2	3.4	0.08
2		0.65	346	164	7.4	9.4	248	72	<0.01	<0.01			1.35	63	2.18	3.2	3.4	0.09
3		0.71	358	164	7.4	9.3	272	76	<0.01	<0.01			1.38	63	2.24	3.0	3.0	0.09
4		0.67	352	168	7.4	9.4	264	84	<0.01	<0.01			1.36	63	2.11	3.1	3.1	0.11
5		0.69	348	164	7.4	9.3	270	76	<0.01	0.02			1.38	62	2.21	3.0	3.0	0.08
6		0.69	356	176	7.4	9.4	258	74	0.02	0.02			1.42	62	2.10	3.2	3.2	0.10
7		0.65	352	164	7.4	9.4	256	68	0.02	0.01			1.35	62	2.07	3.2	3.3	0.19
8		0.64	356	164	7.5	9.3	256	70	0.02	<0.01			1.37	61	2.14	3.1	3.2	0.09
9		0.67	352	168	7.5	9.3	252	70	0.02	<0.01			1.41	61	2.38	3.2	3.3	0.09
10		0.64	356	164	7.5	9.4	268	74	0.02	0.01			1.35	61	2.27	3.4	3.3	0.14
11		0.69	354	164	7.5	9.3	256	70	0.01	0.01			1.35	61	2.17	3.3	3.3	0.10
12		0.71	360	160	7.5	9.3	276	76	0.02	0.01			1.39	61	2.16	3.4	3.3	0.11
13		0.68	356	164	7.4	9.3	252	76	0.01	0.01			1.34	61	2.26	3.4	3.4	0.13
14	0.5	0.71	360	164	7.5	9.4	270	76	0.01	<.01	.40	.01	1.38	61	2.14	3.4	3.4	0.08
15	-	0.60	358	164	7.5	9.3	268	76	0.01	<.01	-	-	1.34	61	2.11	3.4	3.4	0.10
16		0.69	364	164	7.4	9.3	266	74	0.01	<.01			1.35	60	2.20	3.5	3.4	0.08
17		0.65	364	166	7.5	9.4	278	78	0.01	<.01			1.38	60	2.20	3.4	3.4	0.10
18		0.67	366	164	7.4	9.3	260	62	0.01	<.01			1.32	60	7.96	3.8	3.7	0.10
19		0.67	360	162	7.4	9.3	260	64	0.01	<.01			1.31	60	2.09	3.6	3.8	0.09
20		0.71	360	164	7.5	9.3	276	72	<0.01	<0.01			1.35	60	2.21	3.5	3.5	0.07
21		0.73	364	166	7.5	9.4	256	66	0.01	<.01			1.34	59	2.17	3.6	3.8	0.08
22		0.67	356	168	7.5	9.4	256	72	0.01	<.01			1.36	59	2.03	3.7	3.9	0.08
23		0.64	356	164	7.5	9.4	254	72	<.01	<.01			1.36	59	2.31	3.7	3.8	0.08
24		0.70	356	166	7.5	9.4	274	72	<.01	<.01			1.34	59	2.37	3.6	3.6	0.08
25		0.73	360	166	7.5	9.4	276	72	<.01	<.01			1.40	59	2.22	3.6	3.6	0.07
26		0.70	352	164	7.5	9.5	258	66	<.01	0.01			1.41	59	2.35	4.1	3.6	0.10
27		0.68	352	164	7.5	9.4	256	66	<.01	<.01			1.42	59	2.21	3.7	3.6	0.10
28		0.61	350	164	7.5	9.4	256	66	<.01	0.01			1.38	59	2.35	3.7	3.7	0.10
29		0.65	350	164	7.5	9.4	254	66	<.01	<.01			1.34	58	2.29	3.8	3.7	0.10
30		0.65	352	166	7.5	9.4	254	66	<.01	0.01			1.37	58	2.20	3.7	3.8	0.09
AVG		**0.67**	**356**	**165**	**7.5**	**9.4**	**262**	**72**	**0.01**	**0.01**	**0.40**	**0.01**	**1.37**	**60**	**2.39**	**3.45**	**3.46**	**0.10**
MAX		**0.73**	**366**	**176**	**7.5**	**9.5**	**278**	**84**	**0.02**	**0.02**	**0.40**	**0.01**	**1.42**	**63**	**7.96**	**4.10**	**3.90**	**0.19**
MIN		**0.60**	**346**	**160**	**7.4**	**9.3**	**248**	**62**	**0.01**	**0.01**	**0.40**	**0.01**	**1.31**	**58**	**1.88**	**3.00**	**3.00**	**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: 11 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: 11-2025

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	1.517												
2	1.518												
3	1.406			216	2532.82464							64	7.5
4	1.34					31.44	351.360864	31	346.4436	5	55.878	63	7.6
5	1.332	176	1955.16288	191	2121.79608							64	7.6
6	1.334	301	3348.79356									63	7.4
7	1.33											64	7.4
8	1.607												
9	1.463												
10	1.382			273	3146.56524							63	7.5
11	1.429					33.42	398.2948812	33	393.28938	6.4	76.274304	63	7.6
12	1.353	222	2505.05244									63	7.6
13	1.333	178	1978.86516	259	2879.35998							63	7.6
14	1.371											65	7.6
15	1.36												
16	1.405												
17	1.397											63	7.5
18	1.381			325	3743.2005	35.31	406.6843374	35	403.1139	6	69.10524	63	7.5
19	1.293	182	1962.61884	243	2620.41966							61	7.5
20	1.36											63	7.8
21	1.287	193	2071.58094									62	7.7
22	1.287												
23	1.353												
24	1.555			284	3683.1108							61	7.7
25	1.47					30.71	376.498458	30	367.794	6.6	80.91468	61	7.6
26	1.305	218	2372.6466	325	3537.2025							61	7.8
27	1.195											60	7.5
28	1.182	163	1606.83444									60	7.7
29	1.257												
30	1.357												
31													
Total	41.159	1633	17801.55486	2116	24264.4794	130.88	1532.838541	129	1510.64088	24	282.172224	1250	151.7
Monthly Avg.	1.371966667	204.125	2225.194358	264.5	3033.059925	32.72	383.2096352	32.25	377.66022	6	70.543056	62.5	7.585
Daily Max.	1.607	301	3348.79356	325	3743.2005	35.31	406.6843374	35	403.1139	6.6	80.91468	65	7.8
Daily Min.	1.182	163	1606.83444	191	2121.79608	30.71	351.360864	30	346.4436	5	55.878	60	7.4
Max. 7/Avg.	1.419714286	238.5	2651.97822	304.5	3610.15665	35.31	406.6843374	35	403.1139	6.6	80.91468	63.6	7.66

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: 11-2025

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																										
2																										
3			4	46.90416															63					9	7.8	
4					0.1	1.11756	160	1788.096	0.0035	0.0391146	14	156.4584	15.88	177.468528	0.02	0.223512	3.5	39.1146	63	0.001	0.0111756			8.9	7.8	
5	3	33.32664	4	44.43552	0.1	1.110888													64					8.6	7.9	
6	3	33.37668			0.1	1.112556													61					9	7.8	
7					0.1	1.10922													62					8.7	7.8	
8																										
9																										
10			4	46.10352															59					9.2	7.7	
11					0.1	1.191786			0.0035	0.04171251			16.99	202.4844414			3.6	42.904296	58	0.001	0.01191786			8.5	7.6	
12	3	33.85206			0.1	1.129402													60					9	7.7	
13	3	33.35166	2	22.23444	0.1	1.111722													60					9	7.8	
14					0.1	1.143414													61					8.9	7.9	
15																										
16																										
17																			61					8.9	7.8	
18			3	34.55262	0.1	1.151754			0.0035	0.04031139			17	195.79818			3.4	39.159636	60	0.001	0.01151754			8.8	7.9	
19	3	32.35086	4	43.13448	0.1	1.078362													60					8.8	7.7	
20					0.1	1.13424													61					8.9	7.9	
21	3	32.20074			0.1	1.073358													60					9	7.9	
22																										
23																										
24			2	25.9374															60					8.6	7.8	
25					0.1	1.22598			0.0035	0.0429093			18.91	231.832818			3.8	46.58724	60	0.001	0.0122598			8.6	7.7	
26	3	32.6511	3	32.6511	0.1	1.08837													59					9.1	7.8	
27					0.1	0.99663													57					9.2	8	
28	3	29.57364			0.1	0.985788													56					9.6	7.8	
29																										
30																										
31																										
Total	24	260.68338	26	295.95324	1.6	17.76003	160	1788.096	0.014	0.1640478	14	156.4584	68.78	807.5839674	0.02	0.223512	14.3	167.765772	1205	0.004	0.0468708			178.3	156.1	
Monthly Avg.	3	32.5854225	3.25	36.994155	0.1	1.110001875	160	1788.096	0.0035	0.04101195	14	156.4584	17.195	201.8959919	0.02	0.223512	3.575	41.941443	60.25	0.001	0.0117177			8.915	7.805	
Daily Max.	3	33.85206	4	46.90416	0.1	1.22598	160	1788.096	0.0035	0.0429093	14	156.4584	18.91	231.832818	0.02	0.223512	3.8	46.58724	64	0.001	0.0122598			9.6	8	
Daily Min.	3	29.57364	2	22.23444	0.1	0.985788	160	1788.096	0.0035	0.0391146	14	156.4584	15.88	177.468528	0.02	0.223512	3.4	39.1146	56	0.001	0.0111756			8.5	7.8	
Max. 7/Avg.	3	33.60186	4	45.66984	0.1	1.143831	160	1788.096	0.0035	0.0429093	14	156.4584	18.91	231.832818	0.02	0.223512	3.8	46.58724	62.6	0.001	0.0122598			9.02	7.94	

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

UPGRADE PROGRAM		October 2025				
DATE	ADDRESS	ORIG INSTALL	Note	Low	Med	High
10/1/2025	518 W 2nd	new service				
10/1/2025	1810 Crawford	1/24/2005				
10/3/2025	1521 7th	1/10/2014				
10/13/2025	702 22nd	new service				
10/13/2025	222 Carroll	7/20/1999				
10/13/2025	1727 Boone	11/26/2013				
10/13/2025	310 Morningside	12/12/2013				
10/13/2025	1505 Carroll	Pre 1999				
10/14/2025	1110 17th	12/5/2013				
10/14/2025	219 S State	1/9/2014				
10/14/2025	418 S Main	6/8/2005				
10/14/2025	901 College	12/2/2013				
10/14/2025	1221 W 4th	10/31/2005				
10/15/2025	1909 Linn	6/26/2015				
10/15/2025	913 W Mamie	1/17/2007				
10/15/2025	1809 Carroll	6/4/1999				
10/16/2025	1316 W Mamie	3/22/2005				
10/16/2025	616 Harrison	new service				
10/17/2025	303 S Marion	10/27/2014				
10/17/2025	1703 Crawford	12/11/2001				
10/20/2025	428 2nd	12/27/2013				
10/20/2025	628 W 5th	1/10/2008				
10/20/2025	1212 Linn	02/25/05				
10/21/2025	1122 W Mamie	6/8/2000				
10/22/2025	1214 Southview CT	12/22/2005				
10/24/2025	1828 Carroll	5/14/2004				
10/24/2025	1520 Linn	8/9/2000				
10/27/2025	336 W 7th	9/11/2003				
10/28/2025	1110 Ida Pl	new service				
10/28/2025	709 W 5th	5/16/2011				
10/29/2025	1127 Linn	1/25/2000				
10/29/2025	1203 W Mamie	1/6/2014				
10/29/2025	1554 SE Linn	4/6/1999				

UPGRADE PROGRAM		November 2025				
DATE	ADDRESS	ORIG INSTALL	Note	Low	Med	High
11/1/2025	Daisy site Meter	New Service				
11/4/2025	1030 Ida Pl	New Service				
11/4/2025	734 High St	New Service				
11/4/2025	736 High St	New Service				
11/4/2025	737 High St	New Service				
11/4/2025	739 High St	New Service				
11/4/2025	Xenia Boone East	Warranty				
11/5/2025	1916 S Story	4/2/2014				
11/10/2025	1103 11th	3/14/2005				
11/12/2025	1310 Linn	2/22/2000				
11/12/2025	1528 Division	New Service				
11/12/2025	709 W 10th	11/21/2005				
11/12/2025	125 Williams	5/30/2000				
11/12/2025	1324 16th H	6/28/2010				
11/12/2025	1324 16th L	6/28/2010				
11/13/2025	1703 Carroll	1/27/2005				
11/13/2025	1216 14th	8/8/2000				
11/13/2025	725 High St	New Service				
11/13/2025	726 High St	New Service				
11/13/2025	727 High St	New Service				
11/13/2025	728 High St	New Service				
11/13/2025	729 High St	New Service				
11/13/2025	730 High St	New Service				
11/13/2025	731 High St	New Service				
11/13/2025	732 High St	New Service				
11/13/2025	733 High St	New Service				
11/13/2025	735 High St	New Service				
11/13/2025	120 w 6TH	1/11/2007				
11/14/2025	303 6th	4/14/1999				
11/14/2025	2110 Mamie	New Service				
11/14/2025	215 6th	3/24/2005				
11/17/2025	1109 11th	5/31/2000				
11/17/2025	105 S Marion	1/25/2005				
11/18/2025	310 Carroll	10/11/2005				
11/18/2025	1610 Crawford	3/30/2006				
11/18/2025	1327 Crawford	12/18/2001				
11/19/2025	718 W Mamie	9/1/2005				
11/19/2025	623 Elaine Cr	4/19/2007				
11/19/2025	504 10th	4/29/2005				
11/19/2025	303 Snedden	11/19/2025				
11/20/2025	521 Marion	11/4/2005				
11/20/2025	228 Carroll	11/20/2025				
11/21/2025	1528 Crawford	8/24/1999				
11/21/2025	138 S Ringold	11/16/2006				
11/21/2025	1617 Tama	12/16/1999				
11/24/2025	504 Carroll	3/22/2005				
11/24/2025	250 SW Ringold	11/14/2006				
11/25/2025	1409 Carroll	8/16/1999				
11/25/2025	1104 14th	11/29/2004				
11/25/2025	303 11th	7/26/2000				
11/25/2025	1822 Crawford	8/8/2000				
11/25/2025	1102 Ida Pl	Out for Winter				
11/26/2025	223 Marion	1/23/2004				

Curb Box Repair Update for 11/17/2025 – as of 10/30/2025

$5,066.47 was collected during shut offs. 20 accounts qualified to be on the list.

181 stop boxes need repaired, 78 of which have lead service lines.

7 delinquent bills totaling $2,409.65 certified on October 28th and if left unpaid, 21 delinquent water bills totaling $5,655.03 are scheduled to certify on December 1st.

Lesli Vote
Utility Billing Supervisor

Curb Box Repair Update for 12/15/2025 – as of 12/05/2025

We do not shut off in November due to the holiday, however 30 accounts would have qualified to be on the list if we did.

181 stop boxes need repaired, 77 of which have lead service lines.

13 delinquent bills totaling $7,742.98 certified on December 2nd and if left unpaid, 17 delinquent water bills totaling $4,720.61 are scheduled to certify on January 30th.

Lesli Vote
Utility Billing Supervisor