

UTILITY COMMITTEE Meeting Notice

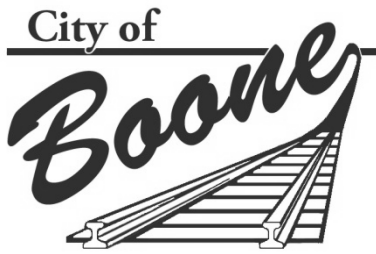
Governing Body: Utility Committee of Boone, Iowa

Date of Meeting: November 14, 2023

Time of Meeting: 4:30 P.M.

Place of Meeting: City Hall Council Chambers

1. Call Meeting to Order.
2. Approve Minutes from the October 10, 2023 Meeting.
3. Review Task Order Amendment #3 Wastewater UV Disinfection Improvements. – FOX Strand.
4. Update on Sewer Lining Project.
5. Review September and October 2023 US Water Monthly Report.
6. Meter Upgrade Report.
 - a. October
7. Stop Box Repair/Shut Off Report.
 - a. October
8. Other Business.
9. Adjourn.



UTILITY COMMITTEE Meeting Notice

Governing Body: Utility Committee of Boone, Iowa

Date of Meeting: October 10, 2023

Time of Meeting: 4:30 P.M.

Place of Meeting: City Hall Council Chambers

1. Call Meeting to Order.

Present: Moorman, Stines, Angstrom

Others present: Skare, Andrews, Majors, Vote, Turbes, Perry Gjersvik, Daniel Bina, Kevin Stoll, Aaron Voss, Chris Gutschow, JD Roberts, Dave Moore

2. Approve Minutes from the September 12, 2023 Meeting.

Angstrom moved; Stines seconded to approve the minutes of the September 12, 2023, Utility Meeting. Ayes: all those in attendance. Nays: none.

3. Review/Discuss SEH Memo Regarding TdVib Pretreatment Application.

Daniel Bina, President and CEO of Critical Materials Recycling, Inc. (CMR) (TdVib), presented to the Committee their Environmental Services Wastewater Contribution Permit Application regarding the anticipated volumes/loads of metals from their facility's rare earth removal system that would be discharged to the sewer system.

Perry Gjersvik, Project Manager, Short Elliott Hendrickson (SEH), stated that SEH has reviewed the application and based on the information provided, it appears the metals should be undetectable in the pilot scale discharge, but this may not be the case when the facility scales up to full production. Gjersvik recommended the City accept the pilot scale discharge with the proposed level of treatment and after some time of data collection, an updated application could be presented.

Stines moved; Angstrom seconded for staff to move forward with the next step by drafting a Treatment Agreement and monitoring plan with CMR to bring forward to the Committee. Ayes: all those in attendance. Nays: none.

4. Discuss Total Tri-Halo Methane (THM) at the Water Treatment Plant.

Aaron Voss, USW, Vice President of Operations, explained the rising levels of Total Trihalomethanes (TTHMs) and Disinfection Byproducts (DBPs) in direct correlation with rising water temperatures in the wells due to the drought over the past two (2) years. Voss stated that in response to the higher levels of TTHM the Water Treatment Plant needs to make changes in operations and suggested the following options:

- 1) *Lower the chlorine residual, leaving the Water Treatment Plant going into the clearwell and reservoir prior to pumping to distribution. This change requires the replacement of the outdated chemical dosing pump and chemical injection equipment at an estimated cost of \$4,000.00 - \$7,000.00 and can be implemented immediately.*

- 2) *Lower the pH of the water which will increase the calcium hardness along with changing the current phosphate to a sequestering phosphate. This could require Iowa Department of Natural Resources (IDNR) approval and a three (3) month timeframe. Voss proposes a three (3) month pilot study to determine the effectiveness. The cost to implement the pilot is estimated at \$5,000.00 for equipment plus chemicals.*
- 3) *Change the disinfection process to Chloramines by adding Liquid Ammonium Sulphate (LAS) at a certain proportion with Chlorine. This change would take place over a twelve (12) month timeframe and be subject to engineering, permitting, construction, public notice, and monitoring. This would be the most expensive option.*

Voss stated that it is USW's recommendation to do a combination of Option One (1) and Option Two (2).

Angstrom moved; Stines seconded to support moving forward with a combination of Option One (1) and Option Two (2) to reduce DBP formation prior to looking into changing the disinfection process. Ayes: all those in attendance. Nays: none.

5. Review August 2023 US Water Monthly Report.

The Committee reviewed the monthly US Water and Wastewater Operations and Maintenance Report for August 2023.

6. Meter Upgrade Report.

a. September

Andrews reported that in September staff finished thirty-four (34) meter upgrades, three (3) meters were installed for new service, and thirty-one (31) meters were changed out due to other reasons.

Andrews stated staff did two hundred thirty-three (233) locates.

7. Stop Box Repair/Shut Off Report.

a. September

Vote stated that due to a mishap with the disconnection notices in the new software, shut offs were not performed in September. Seven (7) delinquent bills totaling \$3,477.26 were certified on September 25, 2023, and no assessments were started.

Vote reported that there are one hundred twenty-two (122) stop boxes in need of repair, fifty-three (53) of which have lead service lines.

8. Other Business.

9. Adjourn.

5:10 p.m.



TRANSMITTAL

FOX Strand
414 South 17th Street, Suite 107
Ames, IA 50010
(P) 515.233.0000
www.strand.com

DATE: September 20, 2023

TO: Mr. William J. Skare, CPM
City Administrator
City of Boone
City Hall, 923 8th Street
Boone, IA-50036

RE: **Task Order 7021.006 Amendment No. 3 – Wastewater Disinfection Improvements**
Construction Phase Services
City of Boone, Iowa (City)
FOX Strand PN: 7021.002 (*Original FOX PN: 2065-19A.600*)

DELIVERY: Email: bskare@city.boone.ia.us

ITEMS: Task Order 7021.002 Amendment No. 3 – Electronic Signed Copy

COMMENTS:

Dear Mr. Skare:

As discussed during the Utility Board Meeting on September 12, 2023, our latest Task Order Amendment No. 2 with the city for extension of construction administration services expires September 19, 2023. Task Order Amendment No. 2 extended engineering services 4 months anticipating the Contractor to obtain Substantial Completion by June 15, 2023, and Final Completion by September 15, 2023. The Contractor has not obtained either Substantial Completion or Final Completion. We roughly estimate that the Contractor may obtain Substantial Completion in the next 30 to 60 days (October to November 2023) and may obtain Final Completion in the next 90 to 150 days (December 2023 to February 2024).

Based on our assumptions at this time, we are submitting Task Order Amendment No. 3 to extend engineering construction administration and resident project representative services another 5 months to February 17, 2024.

Additional engineering services include planning and participation in two additional progress meetings (including agenda and minutes); review of additional payment requests; additional site visits; time related to Contractor’s liquidated damages determinations; general project management; and additional part-time Resident Project Representative (RPR) services.

Enclosed is an electronic copy of Task Order 7021.002 Amendment No. 3 for Boone Wastewater Treatment Facility Disinfection construction services.

Once the City has authorized the Task Order Amendment, please return a copy for FOX Strand's records.

Feel free to contact me with any questions.

Sincerely,

FOX STRAND

A handwritten signature in blue ink, appearing to read "Laurie Twitchell". The signature is fluid and cursive, written in a professional style.

Laurie Twitchell, P.E., BCEE, Project Manager

Enclosures

This is **EXHIBIT K**, consisting of two (2) pages, plus attachments, referred to in and part of the **Master Agreement between Owner and Engineer for Professional Services** dated June 3, 2019.

AMENDMENT TO OWNER-ENGINEER AGREEMENT
Amendment No. 3

1. BACKGROUND DATA:

- a. Effective Date of Owner-Engineer Agreement: June 3, 2019 – Master Agreement
February 17, 2020 – Task Order 2065-19A-2
- b. Owner: City of Boone, Iowa
- c. Engineer: FOX Strand (previously FOX Engineering Associates, Inc.)
- d. Project: Wastewater Disinfection Improvements

2. DESCRIPTION OF MODIFICATIONS:

- a. The Scope of Services currently authorized to be performed by Engineer in accordance with the Agreement and previous amendments, if any, is modified as follows:
 - 1. Task Order 2065-19A-2 is amended to include additional services due to the Contractor’s final construction completion beyond the original completion date as summarized below:
 - a. Additional Services No. 2 - Amendment No. 2 to Construction Phase Services Beyond the Original Date for Final Completion: Provide additional services to accommodate completion of the Contractor’s Work beyond the original date for final completion. The original date for final completion in the Owner’s agreement with the Contractor was November 9, 2022, whereas it is estimated that the Contractor will complete the project approximately 15 months beyond this date. Additional services include Construction Phase services per Exhibit A.1.05 of the Master Agreement, but with the following additions or modifications:
 - A.1.05 Following A1.05.A.6.e. from Task Order 2065-19A-2 Amendment No. 2 insert the following:
 - f. Two additional progress meetings (Progress Meetings No. 14 - 15) are anticipated to be held approximately monthly to bi-monthly.
 - b. Additional Services No. 6 - Amendment No. 2 to Construction Phase Services Beyond the Original Date for Final Completion: Provide additional part-time RPR services to accommodate completion of the Contractor’s Work beyond the original date for final completion. The original date for final completion in the Owner’s agreement with the Contractor is November 9, 2022, whereas the Contractor estimates it will complete the project approximately 15 months beyond this date. Additional services are per A.1.05.2.a. of the Agreement.

- b. For the modifications to engineering services set forth above, Owner shall pay Engineer the following additional compensation in accordance with Exhibit C of the Master Agreement:

Task No.	Description	Basis of Fee	Amount
7021.006 (Existing)	Additional Services No. 2 - Construction Phase Services Beyond the Original Date for Final Completion	Method B. Standard Hourly Rates + Reimbursable Expenses	Increase Hourly Estimate from \$45,618 to \$70,118 (Hourly Not to Exceed)
7021.011 (Existing)	Additional Services No. 6 - RPR Services Beyond the Original Date for Final Completion	Method B. Standard Hourly Rates + Reimbursable Expenses	Increase Hourly Estimate from \$18,489 to \$22,489 (Hourly Estimate)

The total increase of all estimated hourly fees for this Task Order Amendment is \$28,500.

- c. The time for rendering services is modified as follows:

All Additional Services under this Task Order are to be completed by February 17, 2024.

The responsibilities of Owner are modified as follows: *(no additional modifications noted)*.

Owner and Engineer hereby agree to modify the above-referenced Task Order as set forth in this Amendment. All provisions of the Task Order not modified by this or previous Amendments remain in effect. The Effective Date of this Amendment is September 20, 2023.

OWNER:

City of Boone, Iowa

By: _____

Title: _____

Date

Signed: _____

ENGINEER:

FOX Strand

By:  _____

Joseph M. Bunker

Title: _____

Corporate Secretary

Date

Signed: 9/20/23 _____

Task Order 2065-19A-2 Amendment No. 3 Estimated Breakdown of Additional Services

10/5/2023

Table 1. Additional 5 Months of Construction Phase Services Through February 17, 2024

Task (No. 7021.006)	Hours Estimate		Fee Estimate		Total Fee
	Principal	Sr. PM	Principal ⁽¹⁾	Sr. PM ⁽¹⁾	
Project Administration (5 mos.)	16.0	4.0	\$ 4,400	\$ 792	\$ 5,192
Construction Progress Meetings (Agenda, Minutes, Site Visit) (est. 2)	12.0	8.0	\$ 3,300	\$ 1,584	\$ 4,884
Contractor Pay Request (est. 2)	3.0	6.0	\$ 825	\$ 1,188	\$ 2,013
Additional site visits (est. 2)	6.0	6.0	\$ 1,650	\$ 1,188	\$ 2,838
Part-Time RPR Coordination (5 mos.)	4.0	4.0	\$ 1,100	\$ 792	\$ 1,892
Contract Amendment	3.0	1.0	\$ 825	\$ 198	\$ 1,023
Liquidated Damages & Late Completion-Related Tasks	16.0	10.9	\$ 4,400	\$ 2,158	\$ 6,558
	60.0	39.9	\$ 16,500	\$ 7,900	\$ 24,400

(1) Principal hourly rate = \$275/hr and Sr. PM = \$198/hr.

Total Fee for Labor =	\$ 24,400
Total Expenses (Mileage), Contingency =	\$ 100
Total Task Order Amendment No. 3 Fee =	\$ 24,500

Table 2. Additional 5 Months of RPR Services Through February 17, 2024

Task (No. 7021.011)	Hours Estimate	Fee Estimate	Total Fee
	RPR	RPR ⁽¹⁾	
Part-Time RPR (5 mos.)	30.4	\$ 3,800	\$ 3,800
	30.4	\$ 3,800	\$ 3,800

(1) RPR hourly rate = \$125/hr.

(2) Spent fee includes expenses.

Total Fee for Labor =	\$ 3,800
Total Expenses (Mileage), Contingency =	\$ 200
Total Task Order Amendment No. 3 Fee =	\$ 4,000

Total Task Order Amendment No. 2 = \$ 28,500

ACCUJET LLC
913 Evelyn St
Perry, IA 50220
+1 5153608582
kyle@accujetiowa.com
http://www.accujetiowa.com



ADDRESS
City of Boone
923 8th ST
Boone, IA 50036

Estimate 2440

DATE 09/22/2023

DATE	ACTIVITY	QTY	RATE	AMOUNT
09/22/2023	bid Estimate to line 8" sanitary on 7th Ave from Division to McPhearson	1	0.00	0.00
	8" x 4.5mm Liner Install 8" sanitary liner.	850	33.00	28,050.00

Scope of Work:

Accujet will provide the labor and materials necessary to perform the work outlined in this contract. No work shall be done, except as specified or subsequently agreed to in writing. The scope of work recommended is based upon observations during our inspection and/or information shared by the customer contact. Any problems or failures in, or from un-serviced areas are not covered by this contract or warranty. We reserve the right to make modifications as necessary in our work or materials used. Any methods, materials or procedures discussed by our specialists are for general use only and individual circumstances may require modification during the installation process. Standard cleaning & televising includes two passes of jetter cleaning with one full camera inspection. Any cleaning or repairs needed beyond the standard cleaning & televising will be at an additional cost.

TOTAL

\$28,050.00

Accepted By

Accepted Date

Disclaimer:

Although best inspection practices are used to address all potential issues, some unforeseen issues may be exposed. At this time work will not resume until a work/change order for additional costs is signed. Issues may include but are not limited to: Heavy root infiltration, collapsed pipe, misaligned pipe, massive defects, and protruding taps.

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 913 Evelyn St
 Perry, IA 50220
 +1 5153608582
 kyle@accujetiowa.com
 http://www.accujetiowa.com



ADDRESS

City of Boone
 923 8th ST
 Boone, IA 50036

Estimate 2438

DATE 09/22/2023

DATE	ACTIVITY	QTY	RATE	AMOUNT
09/22/2023	bid Estimate to line on Story St from Woodland to Union, includes liner prep and service reinstatement	1	0.00	0.00
	8" x 4.5mm Liner Install 8" sanitary liner	1,663	34.16	56,808.08
	Traffic Control Traffic Control estimate on cost, will be billed for actual.	3	1,000.00	3,000.00

Scope of Work:

Accujet will provide the labor and materials necessary to perform the work outlined in this contract. No work shall be done, except as specified or subsequently agreed to in writing. The scope of work recommended is based upon observations during our inspection and/or information shared by the customer contact. Any problems or failures in, or from un-serviced areas are not covered by this contract or warranty. We reserve the right to make modifications as necessary in our work or materials used. Any methods, materials or procedures discussed by our specialists are for general use only and individual circumstances may require modification during the installation process. Standard cleaning & televising includes two passes of jetter cleaning with one full camera inspection. Any cleaning or repairs needed beyond the standard cleaning & televising will be at an additional cost.

TOTAL \$59,808.08

Accepted By

Accepted Date

Disclaimer:

Although best inspection practices are used to address all potential issues, some unforeseen issues may be exposed. At this time work will not resume until a work/change order for additional costs is signed. Issues may include but are not limited to: Heavy root infiltration, collapsed pipe, misaligned pipe, massive defects, and protruding taps.

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ADDRESS
 City of Boone
 923 8th ST
 Boone, IA 50036

Estimate 2439

DATE 09/22/2023

DATE	ACTIVITY	QTY	RATE	AMOUNT
09/22/2023	bid Estimate to line 8" sanitary on Story St from 1st to Mamie Eisenhower	1	0.00	0.00
	8" x 4.5mm Liner Install 8" sanitary liner	1,120	33.00	36,960.00
	Traffic Control Traffic Control estimate on cost, will be billed for actual.	3	1,000.00	3,000.00

Scope of Work:

Accujet will provide the labor and materials necessary to perform the work outlined in this contract. No work shall be done, except as specified or subsequently agreed to in writing. The scope of work recommended is based upon observations during our inspection and/or information shared by the customer contact. Any problems or failures in, or from un-serviced areas are not covered by this contract or warranty. We reserve the right to make modifications as necessary in our work or materials used. Any methods, materials or procedures discussed by our specialists are for general use only and individual circumstances may require modification during the installation process. Standard cleaning & televising includes two passes of jetter cleaning with one full camera inspection. Any cleaning or repairs needed beyond the standard cleaning & televising will be at an additional cost.

TOTAL \$39,960.00

Accepted By

Accepted Date

Disclaimer:

Although best inspection practices are used to address all potential issues, some unforeseen issues may be exposed. At this time work will not resume until a work/change order for additional costs is signed. Issues may include but are not limited to: Heavy root infiltration, collapsed pipe, misaligned pipe, massive defects, and protruding taps.



Visu-Sewer
Inspect. Maintain. Rehabilitate.
Proposal

To: Waylon Andrews
City of Boone
1410 8th Street
Boone, IA 50036
515-432-4221

From: Bob Moen
Visu-Sewer, Inc.
1065 15th Street SW
Mason City, IA 50401
(641) 424-8044

Date: 11/10/2023

Project: 2023 Sanitary Sewer CIPP Installation

Visu-Sewer is pleased to provide the following quotation for CIPP installation:

Install 3,878 linear feet of 8" National Liner @ \$37.15 per linear foot \$144,067.70

The above listed price is based on an above ground inspection and assumes the current pipe condition is suitable for CIPP installation utilizing air pressure for the inversion and hot air/ steam for curing. Pricing includes:

- Labor, material, and equipment.
- Mobilization and Traffic Control
- Two (2) pass jet cleaning and televising of sewers prior to installation.
- Bypass pumping of existing flow.
- Installation of National Liner per manufacturer's instructions, ASTM 1216.
- Reinstatement of all active service connections
- Televising of sewers after installation.

Note: If needed, grouting of active leaks heavy cleaning will be quoted separately. If needed, removal of obstructions (i.e., roots, deposits, and protruding taps), and more than two (2) pass cleaning will be completed at a T&M rate of \$325.00 per hour. If it is determined that current pipe conditions are not suitable for an air inversion and hot air/ steam cure, pricing may be adjusted to reflect alternate installation methods. Mobilization and/ or time on site will be billed at a T&M rate of \$305.00 per hour for pipe sections not suitable for CIPP installation. Due to volatility in material pricing and availability this proposal is valid for 30 days from the date of origination. If a signed proposal has not been received within 30 days price(s) may be adjusted upon mutual agreement, or the proposal may be withdrawn by either party.

The City of Boone will need to provide drivable equipment access to all manholes, water from nearby hydrants (without charge), a dump site for captured debris. Thank you for the opportunity to quote on this project. Please do not hesitate to call if you have any questions.

All material guaranteed to be as specified. All work to be completed in a substantial workmanlike manner according to standard practices or specifications submitted. Any alteration or deviation from above specifications involving extra costs will be executed only upon written orders and will become an extra charge over and above the estimate. All agreements contingent upon strikes, accidents, or delays beyond our control. Owner to carry fire, tornado, and other necessary insurance. If a collapse of the original pipe results during the lining process, Visu-Sewer will not be held liable for costs associated with excavation, repairs, or restoration. Our workers are fully covered by Workmen's Compensation Insurance. This proposal may be withdrawn if not accepted within 30 days of issue. Terms - Net 30 days.

Acceptance of Proposal

The above prices / conditions are satisfactory and are hereby accepted. Visu-Sewer is authorized to do the work as specified.

Date: _____ Signature: _____

www.visu-sewer.com

WISCONSIN - ILLINOIS - MINNESOTA - IOWA - MISSOURI - VIRGINIA



Central Iowa Televising LLC Phone +1 515-291-9310
 530 Dubois Avenue Email coltin@citsewer.com
 McCallsburg, IA 50154 Web citsewer.com

**Estimate
 #EST 1053**

CIT Sewer Solutions

Service Address

City of Boone
 1410 8th St
 Boone, IA 50036
 Phone: 515-298-2253

Summary FY 2024 Lining Quote

Item	Description	Price	Qty	Amount
Mobilization		\$434.20	3.00	\$1,302.60
Liner Prep	Clean/TV and Measure - All Projects - Estimated Footage	\$3.35	3,633.00	\$12,170.55
Traffic Control	Lump Sum	\$1,257.00	1.00	\$1,257.00
8" UV GRP CIPP	Material - Project 1 -Estimated	\$26.95	1,663.00	\$44,817.85
8" UV GRP CIPP	Installation - Project 1 - Estimated	\$35.17	1,663.00	\$58,487.71
Robotic Cutting - Per Cut	Reinstatements - Project 1 - Estimated	\$341.25	36.00	\$12,285.00
8" UV GRP CIPP	Material - Project 2 - Estimated	\$27.05	1,120.00	\$30,296.00
8" UV GRP CIPP	Installation - Project 2 - Estimated	\$35.38	1,120.00	\$39,625.60
Robotic Cutting - Per Cut	Reinstatements - Project 2 - Estimated	\$341.25	23.00	\$7,848.75
8" UV GRP CIPP	Material - Project 3 - Estimated	\$27.47	850.00	\$23,349.50
8" UV GRP CIPP	Installation - Project 3 - Estimated	\$35.71	850.00	\$30,353.50
Robotic Cutting - Per Cut	Reinstatements - Project 3 - Estimated	\$341.25	39.00	\$13,308.75

Subtotal	\$275,102.81
Tax	\$0.00
Total	\$275,102.81

Notes:

*Upon approval, CIT will mobilize liner prep crew to clean/tv and measure the segments included. If verified length and size is different from quote, the quote will be adjusted to reflect the actual measurements. Unforeseen issues may be exposed during the liner prep process that may include heavy root intrusion, broken or collapse pipe, intruding taps or other major defects that may require a change order for additional costs. Upon completion of prep, CIT will order materials from manufacturer. At this time, CIT will submit an invoice to the customer for the material cost to be paid up front.

* Footages will be adjusted accordingly

* Robotic cuts are estimated per the number of houses near these line segments and are subject to change after liner prep is completed.

I agree to pay the cost of services as specified above.

Customer Signature

Date

10/30/2023

September 2023

City of Boone, Iowa

Water & Wastewater Treatment Facilities, Storage, and Lift Stations
Monthly Operations & Maintenance Report

Prepared by:



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

Prepared For:



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

September 2023

City of Boone
William Skare, City Administrator
923 8th Street
Boone, IA 50036

September Monthly Water & Wastewater Operations Report

Dear Mr. Skare:

In accordance with contract requirements, we are pleased to provide the following monthly report for September 2023. Below is a list of the significant events that occurred during the month:

SUBMITTED TO: William J. Skare, City Administrator
Utility Committee, 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

Water Treatment Facility

Finished Water Monthly Flows and Hardness			
		September-2022	September-2023
Water	Units		
Average Daily Pumped	gallons	1,774,000	1,946,000
Maximum Daily Pumped	gallons	2,095,000	2,717,000
Minimum Daily Pumped	gallons	1,444,000	1,454,000
Hardness			
Hardness - Avg Raw	grains	18.7	18.2
Hardness - Avg Finish	grains	9.6	9.1
Iron mg/l			
Avg Raw	mg/L	.01	.01
Avg Finish	mg/L	.01	.01
Fluoride mg/l			
Avg Raw Fl.	mg/L	.57	.52
Avg Finish Fl.	mg/L	.68	.73

Water Storage

During the month of September, all three water towers were in operation as well as the 2 million gallon reservoir and 100,000 gallon contact basin for a total of 3,700,000 gallons of storage.

Maintenance Report

During the month of September, the Clinton Street Tower was inspected and cleaned, carbon dioxide storage tank was serviced, Dehumidifier #2 was repaired, well control relay was diagnosed and repaired, electric ventilation fan motor was rebuilt, rotated slakers, cleaned and serviced slakers #1 and #2, verified turbidity meters weekly, calibrated turbidity meters, cleaned and verified calibration on CL2 analyzers

weekly, and replaced rooftop dehumidifier filters. The staff mowed the grass at Water Plant, Water Towers, Pump Station, around lime ponds, and well field. Staff also repaired the brush mower attachment for John Deere diesel tractor, modified chlorine cylinder vent tubing, fumigated pump room for insects, and cleaned and serviced the laboratory water distiller.

Current & Planned Projects

During the month of October, the staff plans to replace the backflow preventer valves on claricones, clean inside of Claricone #1, modify slaker vent system, and misc. mowing and maintenance.

The roof needs immediate attention, as water is leaking into the electrical room and laboratory.

Health & Safety

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

Regulatory Reports

See attached documents.

WASTEWATER

Wastewater Treatment Facility

Wastewater Treatment Facility Flows			
	Plant Influent	Plant Effluent	Units
Total	40.40	•	MGD
Average per day	1.35	•	MGD
Minimum	1.20	•	MGD
Maximum	1.84	•	MGD

Parameter	Wastewater Influent & Effluent Quality							
	Influent		Effluent					
	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	277.33	3099	•	•	•	•	•	•
CBOD ₅	•	•	3	•	3	40	3	25
Suspended solids	176	1979	8	•	6	45	4.14	30
Nitrogen Ammonia	22.1	259	.1	17.6	.1	•	.1 MG/L	1.0 MG/L
Nitrate Nitrogen	•	•	81 LBS/Day	1075 LBS/Day	•	•	•	657 LBS/Day
Dissolved Oxygen	•	•	8.4	>5.0	8.50	•	8.37	>5.0
pH	7.36	•	8.00	6.5 to 9 STD Units	7.92	•	7.85	6.5 to 9 STD Units

ND= No Detection

• = No limit set

Solids Inventory

During the month of September, we pressed for 6 days (198,000 gallons) and hauled 99.64 tons of treated biosolids to the landfill.

Lift Stations

Lift Station on Airport Road had problems with Pump 1 not pumping for a while. It is unable to prime or keep a prime when the pump is off.

Update on the standby generator install at 14th and Division: Concrete pad is poured, generator is in place, and transfer switch is installed. The electrical components from the generator to the transfer switch, and to the equipment have not yet been installed. Awaiting contractor to finalize installation.

Generator Install at 220th Lift Station (no time frame)

9-27-23 Fence was installed around 14th and Division Lift station

9-21-23 Pulled Pump 2 at Linn St. Lift station and checked for debris in propeller and cleaned up the ball check valve.

Maintenance Report

9-11-23 Pumped down the North Clarifier and inspected the system.

UV System is working but the hydraulics to lift the bulbs in and out are not. We are unable to work the wipers or lift the banks out of the water. Trojan, Fox Engineering, and King Construction are aware of the issues and the Engineers have a meeting scheduled with King to address the outstanding items.

Forty Four (44) Preventive Maintenance Work orders Completed

9-11-23 Clean and fixed the air release valve on the Artic Glazier air compressor.

Current & Planned Projects

RAS pumps replacement-(currently in Engineering)

Sand Blasting on North Clarifier: Project will resume in summer 2024.

Roof Replacements-(currently in Engineering)

In-plant Lift Station-(currently in Engineering)

Preliminary Screen Install-(currently in Engineering)

Health & Safety

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

The subjects of the monthly safety training were, Don't Get In A Bind With A Backhoe, Keeping Chemical Deliveries Safe, Safe Fuel Handling Practices, Vehicle Safety- Check Inspect Drive and Fire Extinguisher Safety.

The subject of the monthly safety training was Fire Extinguisher Safety.

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: 2023

DAY	Pumpage		Operating Hours	Fluoride		Chlorine Residual								CT	Cl ₂ Used
	Raw in 1,000s Gallons Per Day	To System in 1,000s Gallons Per Day		Quantity Used in lbs.	Finished Water (mg/L)	Source/Entry Point (S/EP)			Distribution						
			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	2,510	2,100	22.75	34	0.70	"C"	(F)	1.96	0	1	0.83	0	0.83	17.2	64
2	2,529	2,113	22.75	32	0.71	"C"	(F)	1.93	0	1	0.83	0	0.83	15.9	70
3	2,645	2,246	23.75	36	0.71	"C"	(F)	1.91	0	1	0.83	0	0.83	14.8	71
4	2,726	2,264	24.00	34	0.71	"C"	(F)	1.92	0	1	0.81	0	0.81	14.8	71
5	2,844	2,415	23.50	44	0.66	"C"	(F)	1.92	0	6	0.68	0	1.52	14.9	65
6	2,525	1,937	21.00	36	0.63	"C"	(F)	1.83	0	1	0.75	0	0.75	15.8	71
7	2,828	2,717	23.50	40	0.68	"C"	(F)	1.95	0	1	0.74	0	0.74	14.8	75
8	2,583	1,780	21.75	38	0.71	"C"	(F)	2.01	0	1	0.77	0	0.77	17.4	68
9	2,489	2,083	20.75	40	0.70	"C"	(F)	1.97	0	1	0.76	0	0.76	17.9	68
10	2,527	2,005	21.00	38	0.78	"C"	(F)	2.03	0	1	0.72	0	0.72	18.2	78
11	2,129	1,890	20.25	32	0.66	"C"	(F)	2.03	0	6	0.54	0	1.20	21.3	58
12	2,456	1,997	24.00	36	0.72	"C"	(F)	1.89	0	1	1.60	0	1.60	17.3	61
13	2,301	1,925	22.75	32	0.78	"C"	(F)	1.88	0	1	1.43	0	1.43	19.0	65
14	2,275	1,874	22.25	31	0.72	"C"	(F)	1.89	0	1	1.47	0	1.47	19.1	62
15	2,531	1,986	22.50	42	0.76	"C"	(F)	1.87	0	1	1.40	0	1.40	17.1	66
16	2,307	1,904	22.75	30	0.64	"C"	(F)	2.01	0	1	0.85	0	0.85	18.9	60
17	2,309	1,933	21.00	32	0.67	"C"	(F)	1.95	0	1	0.86	0	0.86	18.1	60
18	2,354	1,949	21.25	32	0.71	"C"	(F)	2.01	0	6	0.77	0	1.03	19.1	72
19	1,870	1,578	18.75	28	0.74	"C"	(F)	1.97	0	1	0.87	0	0.87	23.4	49
20	2,250	1,888	21.75	33	0.76	"C"	(F)	1.92	0	1	0.87	0	0.87	18.8	60
21	2,129	1,758	21.00	28	0.70	"C"	(F)	1.85	0	1	0.88	0	0.88	19.8	56
22	1,981	1,571	19.00	30	0.74	"C"	(F)	1.89	0	1	0.84	0	0.84	21.9	54
23	1,905	1,671	20.00	30	0.76	"C"	(F)	1.88	0	1	0.78	0	0.78	23.1	56
24	2,301	2,583	23.75	36	0.79	"C"	(F)	1.74	0	1	0.74	0	0.74	18.4	67
25	2,564	1,454	23.00	40	0.76	"C"	(F)	1.79	0	1	0.74	0	0.74	17.0	76
26	2,201	1,788	19.75	32	0.79	"C"	(F)	1.52	0	1	0.70	0	0.70	16.7	66
27	1,878	1,595	18.50	31	0.79	"C"	(F)	1.61	0	1	0.68	0	0.68	19.1	65
28	2,009	1,611	19.75	33	0.80	"C"	(F)	2.11	0	1	0.65	0	0.65	23.1	56
29	2,248	1,868	22.75	34	0.75	"C"	(F)	2.14	0	1	0.64	0	0.64	20.5	64
30	2,299	1,903	22.50	34	0.75	"C"	(F)	2.07	0	1	0.71	0	0.71	19.2	68
Total	70,503	58,386	652.00	1,028						45		0			1,942
Avg	2,350	1,946	21.66	34	0.73										65
Max	2,844	2,717	24.00	44	0.80				0				1.60		78
Min	1,870	1,454	18.50	28	0.63			1.52			0.54			14.8	49

*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: 10/5/2023

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: 2023

DAY	Finished Water			Filter Effluent																Raw Water Turbidity (Highest Daily Reading NTU)
	Number of Readings Taken **	Number of Readings >0.3 NTU	Highest Daily Reading (NTU)	#1			#2			#3			#4							
				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	23	0	.02	.02	.02	.04	0	.02	.02	.03	0	.02	.02	.02	0	.01	.01	.02	0	0.06
2	23	0	.03	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.13	0	.01	.01	.05	0	0.06
3	23	0	.02	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	.02	.01	.07	0	0.06
4	24	0	.03	.02	.02	.04	0	.01	.01	.02	0	.01	.01	.01	0	.01	.01	.02	0	0.06
5	24	0	.02	.02	.02	.03	0	.02	.02	.02	0	.01	.01	.01	0	.01	.01	.01	0	0.07
6	24	0	.02	.02	.02	.02	0	.02	.02	.02	0	.01	.01	.02	0	.01	.01	.01	0	0.08
7	21	0	.02	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	.02	.02	.02	0	0.08
8	24	0	.02	.03	.02	.03	0	.01	.01	.01	0	.01	.01	.01	0	.01	.01	.09	0	0.06
9	21	0	.02	.02	.02	.04	0	.01	.01	.03	0	.01	.01	.02	0	.01	.01	.03	0	0.07
10	21	0	.02	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	0.08
11	22	0	.02	.01	.01	.03	0	.01	.01	.03	0	.01	.01	.02	0	.02	.02	.02	0	0.07
12	20	0	.02	.04	.04	.04	0	.01	.01	.03	0	.01	.01	.03	0	.02	.02	.04	0	0.07
13	24	0	.02	.03	.05	.05	0	.02	.02	.05	0	.01	.01	.02	0	.01	.01	.02	0	0.06
14	23	0	.02	.01	.01	.02	0	.02	.02	.04	0	.02	.02	.02	0	.01	.02	.02	0	0.06
15	23	0	.02	.01	.01	.02	0	.01	.01	.04	0	.01	.01	.03	0	.02	.02	.03	0	0.07
16	22	0	.02	.05	.04	.05	0	.01	.01	.03	0	.01	.01	.02	0	.01	.01	.02	0	0.08
17	21	0	.02	.06	.06	.06	0	.02	.02	.02	0	.01	.01	.03	0	.01	.01	.02	0	0.07
18	21	0	.02	.01	.01	.03	0	.01	.01	.05	0	.02	.02	.03	0	.01	.01	.03	0	0.07
19	21	0	.02	.01	.01	.02	0	.01	.01	.09	0	.01	.01	.03	0	.02	.02	.04	0	0.07
20	20	0	.03	.04	.05	.05	0	.02	.02	.07	0	.01	.01	.07	0	.02	.02	.06	0	0.07
21	22	0	.02	.06	.06	.06	0	.02	.02	.02	0	.02	.02	.03	0	.02	.01	.02	0	0.06
22	21	0	.02	.02	.02	.03	0	.02	.02	.05	0	.02	.02	.03	0	.02	.02	.06	0	0.07
23	20	0	.02	.02	.02	.04	0	.02	.01	.09	0	.02	.01	.08	0	.02	.02	.08	0	0.06
24	21	0	.02	.02	.02	.07	0	.02	.02	.03	0	.02	.02	.07	0	.02	.02	.06	0	0.06
25	24	0	.02	.02	.02	.05	0	.02	.02	.02	0	.02	.02	.02	0	.02	.01	.02	0	0.07
26	23	0	.02	.02	.02	.02	0	.02	.02	.03	0	.03	.02	.03	0	.02	.02	.06	0	0.07
27	20	0	.02	.01	.01	.04	0	.01	.01	.05	0	.02	.02	.04	0	.02	.02	.03	0	0.07
28	21	0	.02	.06	.07	.15	0	.01	.01	.05	0	.01	.01	.03	0	.01	.01	.03	0	0.07
29	20	0	.02	.09	.08	.09	0	.02	.02	1.04	0	.01	.01	.03	0	.01	.01	.02	0	0.07
30	22	0	.03	.01	.01	.02	0	.01	.01	.03	0	.01	.01	.03	0	.01	.01	.02	0	0.07
Total	659	0					0				0				0				0	
Avg																				0.07
Max			.03			.15				1.04				.13				.09		0.08
Min																				0.06

**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: 10/5/2023

**SURFACE WATER/INFLUENCED GROUNDWATER MONTHLY OPERATION REPORT
IOWA DNR WATER SUPPLY**

Basic Information

S/EP: #1

System Name: _____ PWSID #: 819033 Month: September Year: 2023

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)				
1	22.75	2510.00	2100.00	34.00	0.70	0.06			0.45					
2	22.75	2529.00	2113.00	32.00	0.71	0.06			0.41					
3	23.75	2645.00	2246.00	36.00	0.71	0.06			0.54					
4	24.00	2726.00	2264.00	34.00	0.71	0.06			0.67					
5	23.50	2844.00	2415.00	44.00	0.66	0.07			1.44					
6	21.00	2525.00	1937.00	36.00	0.63	0.08			0.90					
7	23.50	2828.00	2717.00	40.00	0.68	0.08			0.89					
8	21.75	2583.00	1780.00	38.00	0.71	0.06			0.80					
9	20.75	2489.00	2083.00	40.00	0.70	0.07			0.93					
10	21.00	2527.00	2005.00	38.00	0.78	0.08			0.66					
11	20.25	2129.00	1890.00	32.00	0.66	0.07			0.55					
12	24.00	2456.00	1997.00	36.00	0.72	0.07			1.21					
13	22.75	2301.00	1925.00	32.00	0.78	0.06			0.56					
14	22.25	2275.00	1874.00	31.00	0.72	0.06			0.74					
15	22.50	2531.00	1986.00	42.00	0.76	0.07			0.62					
16	22.75	2307.00	1904.00	30.00	0.64	0.08			0.53					
17	21.00	2309.00	1933.00	32.00	0.67	0.07			0.37					
18	21.25	2354.00	1949.00	32.00	0.71	0.07			0.46					
19	18.75	1870.00	1578.00	28.00	0.74	0.07			0.30					
20	21.75	2250.00	1888.00	33.00	0.76	0.07			0.32					
21	21.00	2129.00	1758.00	28.00	0.70	0.06			0.37					
22	19.00	1981.00	1571.00	30.00	0.74	0.07			0.97					
23	20.00	1905.00	1671.00	30.00	0.76	0.06			0.61					
24	23.75	2301.00	2583.00	36.00	0.79	0.06			0.67					
25	23.00	2564.00	1454.00	40.00	0.76	0.07			0.98					
26	19.75	2201.00	1788.00	32.00	0.79	0.07			0.53					
27	18.50	1878.00	1595.00	31.00	0.79	0.07			0.70					
28	19.75	2009.00	1611.00	33.00	0.80	0.07			0.53					
29	22.75	2248.00	1868.00	34.00	0.75	0.07			0.53					
30	22.50	2299.00	1903.00	34.00	0.75	0.07			0.31					
Total	652	70,503	58,386	1,028							0	0	0	0
Avg	21.03	2,274	1,883	33.16	0.70	0.07	#DIV/0!	0.65	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Max	24.00	2,844	2,717	44.00	0.80	0.08	0.00	1.4	0.0	0.00	0.00	0.00	0.00	0.00
Min	0.00	0	0	0.00	0.00	0.00	0.00	0.30	0.00	0.00	0.00	0.00	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: 10/5/2023

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

This form is valid 2/1/2023 to 7/31/2024

Facility Name: BOONE CITY OF STP

Permit #: 0819001

Month/Year:

9	2023
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Outfall #(s): 001 - DISCHARGE FROM AN ACTIVATED SLUDGE WASTEWATER TREATMENT FACILITY.

Operator Name:

John Roberts

Certification #:

10924

Phone #:

7122590808

Lab Cert. #:

156

Comments:

--

**Include Comments longer than 1000 characters in email*

Signature:

John Roberts

<p>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 possibility of fine and imprisonment for known violations.</p>
--

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: 9-2023

Mon. Point	RAW WASTE												
	FLOW	BOD5		TSS		TOT-N		TKN		PHOS		TEMP	PH
Parameter	MGD	MG/L	LBS/DAY	MG/L	LBS/DAY	MG/L	LBS/DAY	MG/L	LBS/DAY	MG/L	LBS/DAY	FAHRENHEIT	STD UNITS
Units	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
Frequency													
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	1.452	281	3402.82008									68	7.2
2	1.407												
3	1.384												
4	1.475			166	2042.049							72	7.3
5	1.428					30.1	358.476552	30	357.2856	6.6	78.602832	70	7.4
6	1.315	352	3860.4192	208	2281.1568							68	7.4
7	1.398	410	4780.3212									66	7.3
8	1.343											69	7.2
9	1.322												
10	1.521												
11	1.381			197	2268.95538							66	7.3
12	1.271					33.41	354.1506774	33	349.80462	6	63.60084	66	7.4
13	1.266	198	2090.57112									66	7.6
14	1.199											66	7.4
15	1.247	199	2069.59602									66	7.4
16	1.24												
17	1.258												
18	1.218			155	1574.5086							66	7.4
19	1.839					36.16	554.5953216	36	552.14136	5.6	85.888656	64	7.3
20	1.42	170	2013.276	230	2723.844							66	7.4
21	1.356											67	7.4
22	1.385	360	4158.324									66	7.4
23	1.341												
24	1.374												
25	1.281			163	1741.41702							66	7.4
26	1.277					34.14	363.5971452	34	362.10612	5.1	54.315918	66	7.3
27	1.276	255	2713.6692	115	1223.8116							68	7.4
28	1.24											68	7.4
29	1.241	271	2804.83374									69	7.3
30	1.201												
31													
Total	40.356	2496	27893.83056	1234	13855.7424	133.81	1630.819696	133	1621.3377	23.3	282.408246	1409	154.6
Monthly Avg.	1.3452	277.3333333	3099.314507	176.2857143	1979.391771	33.4525	407.7049241	33.25	405.334425	5.825	70.6020615	67.0952381	7.361904762
Daily Max.	1.839	410	4780.3212	230	2723.844	36.16	554.5953216	36	552.14136	6.6	85.888656	72	7.6
Daily Min.	1.199	170	2013.276	115	1223.8116	30.1	354.1506774	30	349.80462	5.1	54.315918	64	7.2
Max. 7/Avg.	1.408428571	347.6666667	4014.52016	197	2268.95538	36.16	554.5953216	36	552.14136	6.6	85.888656	68.8	7.38

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: 9-2023

Mon. Point Parameter	EFFLUENT PRIOR TO DISINFECTION												EFFLUENT AFTER DISINFECTION						
	CBOD5		TSS		NH3-N		NO3-N		TOT-N		PHOS		TOX CER		TOX PIM		TEMP	DO	PH
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	NO TOXICITY	NO TOXICITY	FAHRENHEIT	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 TIME PER WEEK	1 TIME PER WEEK	1 TIME PER WEEK	1 TIME PER WEEK	1 TIME PER WEEK	1 EVERY 12 MONTHS	1 EVERY 12 MONTHS	2 TIMES PER WEEK	2 TIMES PER WEEK	5 TIMES PER WEEK	GEO MEAN 12 MONTHS	
Start Date																			8/1/2023
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		7/31/2024
No Discharge													06 - NOT REQ / MP	06 - NOT REQ / MP					
LOG																			
Day: 1	3	36.32904				0.1	1.210968								70	8.7		8	
2																			
3																			
4					7	86.1108									72	8	7.8		
5							0.1	1.190952		9.8	116.713296		1.6	19.055232	72	8.4	7.9		33
6	3	32.9013		5	54.8356		0.1	1.09671							70	7.8	7.9		
7	3	34.87796					0.1	1.165932							68	8	8		30
8							0.1	1.120952							69	8.2	7.8		
9																			
10																			
11				6	92.14032		0.1	1.065014		81	8.98	95.1892572		1.9	20.140266	68	8.3	7.8	
12																68	8.6	7.8	120
13	3	31.67532		3	31.67532		0.1	1.055844							68	8.5	7.8		
14							0.1	0.999956							68	8.0	7.9		1
15	3	31.19994					0.1	1.039998							68	8.9	7.9		
16																			
17																			
18				2	20.31624		0.1	1.533728		11.1	170.243586		3.5	53.68041	68	8.6	7.9		
19															66	7.8	7.6		8
20	3	35.5284		3	35.5284		0.1	1.18428							38	8.4	7.7		
21							0.1	1.130904							68	8.4	7.8		
22							0.1	1.15509							68	7.9	7.8		
23																			
24																			
25				1	10.68354										70	8.9	7.9		
26							0.1	1.065018		8.77	93.4020786		2	21.30036	68	8.4	7.9		
27	3	31.92552					0.1	1.064184							68	8.5	7.8		
28							0.1	1.03416							69	8.6	7.9		
29	3	31.04982					0.1	1.034954							69	8	7.9		
30																			
31																			
Total	24	265.5873		29	331.28880		1.7	19.142802		81	38.65	475.5482178		9	114.176268	1413	175.8	164.8	187
Monthly Avg.	3	33.1984125		4.142857143	47.32711714		0.1	1.126041716		81	9.6625	118.8870545		2.25	28.544067	67.28571429	8.371428571	7.847619048	12.89399624
Daily Max.	3	36.32904		6	92.14032		0.1	1.533728		11.1	170.243586		3.5	53.68041	72	8.9	8		120
Daily Min.	3	31.04982		1	10.68354		0.1	0.999956		8.77	93.4020786		1.6	19.055232	38	7.8	7.6		1
Max. 7/Avg.	3	34.7361		6	70.473		0.1	1.222227		81	11.1	170.243586		3.5	53.68041	70.4	8.5	7.92	60.5



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

www.USWUtilityGroup.com

October 2023

City of Boone, Iowa

Water & Wastewater Treatment Facilities , Storage, and Lift Stations
Monthly Operations & Maintenance Report

Prepared by:



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

Prepared For:



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

October 2023

City of Boone
William Skare, City Administrator
923 8th Street
Boone, IA 50036

October Monthly Water & Wastewater Operations Report

Dear Mr. Skare:

In accordance with contract requirements, we are pleased to provide the following monthly report for October 2023. Below is a list of the significant events that occurred during the month:

SUBMITTED TO: William Skare, 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

Water Treatment Facility

Finished Water Monthly Flows and Hardness			
		October - 2022	October – 2023
Water	Units		
Average Daily Pumped	gallons	1,600,000	1,680,000
Maximum Daily Pumped	gallons	1,767,000	2,063,000
Minimum Daily Pumped	gallons	1,383,000	1,486,000
Hardness			
Hardness - Avg Raw	grains	18.9	19.4
Hardness - Avg Finish	grains	9.7	9.1
Iron mg/l			
Avg Raw	mg/L	.01	.01
Avg Finish	mg/L	.01	.01
Fluoride mg/l			
Avg Raw Fl.	mg/L	.66	.48
Avg Finish Fl.	mg/L	.79	.84

Water Storage

During the month of October, all three water towers were in operation as well as the 2-million-gallon reservoir and 100,000-gallon contact basin for a total of 3,700,000 gallons of storage.

Maintenance Report

During the month of October, we rotated slakers, cleaned and verified calibration of all three CL17 chlorine analyzers, and cleaned calibrated and verified five turbidity meters. Installed new shutoff valves on all five turbidity meters, replaced rear bearing and seals on slaker #2, cleaned and serviced slaker #1, repaired two clear well security hatches and replaced locks, and repaired slaker room drain system. We also repaired lab water distiller, rebuilt two-way emergency solenoid valve on high service

pump #3, and started repairs on pump station chlorine room vent fan. We repaired phosphate pumps, replaced dehumidifier filters, and helped with the security upgrade project.

Current & Planned Projects

During the month of November, the staff plans to clean claricone #2, clean and calibrate slakers, auger out slurry troughs, change dehumidifier filters, replace cone #1 backflow valve, finalize the installation of the chlorine injection at the High Service Pump Station and any other repairs that might be needed.

Health & Safety

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

The subjects of the monthly safety training were: Forklift Safety, Eyes On Safety, Holding On to Hands Safety, Setting up A Safe Traffic Control Zone, Office Ergonomics Overview, and PPE Hand Protection.

Regulatory Reports

See attached documents

WASTEWATER

Wastewater Treatment Facility

Wastewater Treatment Facility Flows			
	Plant Influent	Plant Effluent	Units
Total	37.6	•	MGD
Average per day	1.22	•	MGD
Minimum	1.09	•	MGD
Maximum	1.56	•	MGD

Parameter	Wastewater Influent & Effluent Quality							
	Influent		Effluent					
	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	253	2637	•	•	•	•	•	•
CBOD ₅	•	•	3	•	3	40	3	25
Suspended solids	168	1671	4	•	3	45	3	30
Nitrogen Ammonia	23	236	.1	17.7	.1	•	.1 MG/L	1.0 MG/L
Nitrate Nitrogen	•	•	116 LBS/Day	1075 LBS/Day	•	•	•	657 LBS/Day
Dissolved Oxygen	•	•	9.3	>5.0	8.5	•	8.2	>5.0
pH	7.4	•	8.0	6.5 to 9 STD Units	7.86	•	7.65	6.5 to 9 STD Units

ND= No Detection

• = No limit set

Solids Inventory

During the month of October, we pressed for 11 days (350,000 gallons) and hauled 149.16 tons.

Lift Stations

Lift Station on Air Port Road has had problems with Pump 1 not pumping for a while. It is unable to prime or keep a prime when the pump is off.

Generator Install at 14th and Division: Equipment is in place but the electrical is not connected.

Generator Install at 220th Lift Station (still no time frame from contractor)

Maintenance Report

10-5-23 Inspected and cleaned the North Sludge Holding Tank.

10-10-23: Inspected and cleaned the East Digester.

10-18-23: Cleaned the Effluent channel, UV channel, and the Post Aeration Basin.

10-23-23: Tightened belts on VLR Blowers 4 & 5

10-24-23: Alliant Energy had to do work on one of their transformers requiring us to run the plant generator for 5 hours.

UV System is working partially. The system is still alarming throughout the day because of the gate malfunctioning. Trojan, Fox Engineering, and King Construction are aware of the issues.

Fifty-two (52) Preventive Maintenance Work orders Completed

Current & Planned Projects

RAS pumps replacement-(currently in Engineering)

Sand Blasting on North Clarifier: Project will resume in summer 2024.

Roof Replacements-(currently in Engineering)

In-plant Lift Station-(currently in Engineering)

Preliminary Screen Install-(currently in Engineering)

Health & Safety

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

The subjects of the monthly safety training were Office Ergonomics and Hand Protection.

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: 2023

DAY	Pumpage		Operating Hours	Fluoride		Chlorine Residual								CT	Cl ₂ Used
	Raw in 1,000s Gallons Per Day	To System in 1,000s Gallons Per Day		Quantity Used in lbs.	Finished Water (mg/L)	Source/Entry Point (S/EP)			Distribution						
			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	2,414	2,063	23.75	36	0.75	"C"	(F)	2.04	0	1	0.73	0	0.73	18.8	60
2	2,439	2,010	24.00	39	0.80	"C"	(F)	2.05	0	6	0.45	0	1.18	17.2	68
3	2,423	1,961	24.00	36	0.68	"C"	(F)	2.00	0	1	0.76	0	0.76	17.5	67
4	2,051	1,710	20.50	34	0.60	"C"	(F)	1.99	0	1	0.79	0	0.79	21.0	57
5	2,146	1,790	20.75	32	0.76	"C"	(F)	1.94	0	1	0.77	0	0.77	19.6	57
6	2,040	1,640	20.25	33	0.80	"C"	(F)	1.94	0	1	0.78	0	0.78	21.0	58
7	1,958	1,666	19.50	42	0.63	"C"	(F)	1.94	0	1	0.77	0	0.77	22.1	53
8	2,098	1,709	19.00	43	0.73	"C"	(F)	1.95	0	1	0.78	0	0.78	20.8	57
9	2,331	1,922	23.00	52	0.77	"C"	(F)	1.96	0	6	0.80	0	1.38	19.1	65
10	2,124	1,791	21.00	46	0.82	"C"	(F)	1.97	0	1	0.82	0	0.82	21.3	59
11	2,016	1,684	20.00	46	0.83	"C"	(F)	1.83	0	1	0.84	0	0.84	21.4	56
12	1,870	1,529	18.50	46	0.78	"C"	(F)	1.94	0	1	0.84	0	0.84	23.3	56
13	1,848	1,511	18.25	44	0.93	"C"	(F)	1.83	0	1	0.82	0	0.82	23.4	50
14	1,934	1,651	19.00	43	0.88	"C"	(F)	1.84	0	1	0.83	0	0.83	23.1	50
15	2,287	1,871	22.50	30	0.97	"C"	(F)	1.87	0	1	0.83	0	0.83	19.4	66
16	1,829	1,486	18.00	41	0.90	"C"	(F)	2.00	0	1	0.85	0	0.85	25.9	50
17	1,945	1,568	19.25	42	0.80	"C"	(F)	2.05	0	6	0.62	0	0.98	24.5	58
18	2,052	1,687	20.25	46	0.84	"C"	(F)	2.01	0	1	0.86	0	0.86	21.9	58
19	1,919	1,622	19.00	42	0.90	"C"	(F)	1.92	0	1	0.88	0	0.88	23.2	53
20	1,896	1,550	17.50	43	0.92	"C"	(F)	1.97	0	1	0.88	0	0.88	22.2	54
21	1,977	1,662	19.50	45	0.98	"C"	(F)	1.95	0	1	0.87	0	0.87	22.7	54
22	2,143	1,722	21.00	49	0.99	"C"	(F)	1.97	0	1	0.88	0	0.88	20.9	59
23	1,854	1,558	18.25	41	0.95	"C"	(F)	2.00	0	1	0.89	0	0.89	23.7	49
24	2,044	1,697	20.25	45	0.92	"C"	(F)	1.95	0	1	0.89	0	0.89	20.9	55
25	1,941	1,628	19.25	41	0.81	"C"	(F)	1.97	0	1	0.89	0	0.89	22.5	58
26	1,780	1,510	17.75	38	0.89	"C"	(F)	1.96	0	1	0.87	0	0.87	23.9	50
27	1,876	1,565	18.50	34	0.92	"C"	(F)	1.91	0	1	0.85	0	0.85	22.8	54
28	1,789	1,508	17.75	33	0.85	"C"	(F)	2.00	0	1	0.85	0	0.85	24.9	50
29	2,056	1,725	20.25	35	0.91	"C"	(F)	1.98	0	1	0.85	0	0.85	21.5	60
30	1,767	1,487	17.50	31	0.84	"C"	(F)	2.05	0	1	0.90	0	0.90	25.3	48
31	1,923	1,603	19.00	35	0.8	"C"	(F)	2.03	0	1	0.90	0	0.90	23.5	53
Total	62,770	52,086	617.00	1,243						46		0			1,742
Avg	2,025	1,680	19.65	40	0.84										56
Max	2,439	2,063	24.00	52	0.99				0				1.38		68
Min	1,767	1,486	17.50	30	0.60			1.83			0.45			17.2	48

*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: 11/1/2023

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: 2023

DAY	Finished Water			Filter Effluent																Raw Water Turbidity (Highest Daily Reading NTU)
	Number of Readings Taken **	Number of Readings >0.3 NTU	Highest Daily Reading (NTU)	#1			#2			#3			#4							
				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	23	0	.02	.01	.01	.02	0	.01	.01	.03	0	.01	.01	.02	0	.01	.01	.02	0	0.07
2	24	0	.03	.07	.06	.08	0	.01	.01	.01	0	.01	.01	.02	0	.01	.01	.02	0	0.07
3	24	0	.03	.09	.09	.09	0	.01	.01	.03	0	.01	.01	.01	0	.01	.01	.01	0	0.07
4	24	0	.03	.02	.02	.02	0	.01	.01	.01	0	.01	.01	.02	0	.01	.01	.02	0	0.07
5	20	0	.04	.02	.01	.02	0	.01	.01	.05	0	.01	.01	.03	0	.02	.01	.06	0	0.07
6	20	0	.04	.07	.07	.07	0	.01	.01	.03	0	.01	.01	.02	0	.01	.01	.02	0	0.07
7	20	0	.03	.06	.07	.07	0	.02	.01	.03	0	.01	.01	.02	0	.01	.01	.02	0	0.09
8	20	0	.02	.02	.02	.02	0	.01	.01	.07	0	.02	.02	.03	0	.01	.01	.02	0	0.09
9	22	0	.04	.02	.02	.02	0	.01	.01	.03	0	.01	.01	.02	0	.02	.02	.03	0	0.07
10	23	0	.02	.04	.05	.05	0	.01	.01	.02	0	.01	.01	.01	0	.01	.01	.02	0	0.08
11	22	0	.05	.04	.05	.05	0	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	0.08
12	20	0	.03	.02	.02	.02	0	.02	.02	.02	0	.02	.02	.03	0	.01	.01	.02	0	0.08
13	19	0	.05	.02	.02	.03	0	.01	.01	.05	0	.01	.01	.02	0	.02	.02	.13	0	0.07
14	19	0	.03	.05	.04	.06	0	.01	.01	.04	0	.01	.01	.02	0	.01	.01	.02	0	0.07
15	19	0	.02	.04	.04	.05	0	.02	.02	.08	0	.01	.01	.03	0	.01	.01	.02	0	0.07
16	20	0	.04	.02	.02	.03	0	.02	.01	.05	0	.02	.02	.04	0	.01	.01	.02	0	0.07
17	22	0	.04	.02	.02	.03	0	.01	.01	.04	0	.01	.01	.02	0	.02	.02	.04	0	0.07
18	20	0	.03	.05	.05	.05	0	.01	.01	.04	0	.01	.01	.02	0	.01	.01	.02	0	0.07
19	21	0	.03	.05	.05	.05	0	.02	.02	.03	0	.02	.01	.02	0	.01	.01	.02	0	0.08
20	19	0	.03	.01	.01	.02	0	.02	.02	.03	0	.02	.02	.03	0	.01	.01	.02	0	0.07
21	19	0	.03	.01	.02	.03	0	.01	.01	.04	0	.01	.01	.02	0	.02	.02	.03	0	0.07
22	19	0	.03	.04	.06	.06	0	.01	.01	.05	0	.01	.01	.02	0	.02	.01	.02	0	0.08
23	21	0	.03	.07	.05	.07	0	.05	.01	.05	0	.01	.01	.03	0	.01	.01	.03	0	0.07
24	20	0	.03	.02	.02	.02	0	.02	.02	.03	0	.02	.02	.03	0	.01	.01	.02	0	0.08
25	22	0	.04	.02	.02	.03	0	.02	.02	.05	0	.01	.01	.02	0	.02	.02	.04	0	0.09
26	21	0	.03	.05	.04	.07	0	.02	.02	.04	0	.01	.01	.02	0	.01	.01	.02	0	0.08
27	17	0	.03	.05	.05	.05	0	.02	.02	.03	0	.01	.01	.02	0	.01	.01	.02	0	0.07
28	20	0	.02	.02	.02	.02	0	.02	.02	.03	0	.02	.02	.02	0	.01	.01	.02	0	0.07
29	18	0	.03	.02	.02	.03	0	.02	.02	.04	0	.01	.01	.02	0	.02	.02	.02	0	0.07
30	21	0	.03	.04	.06	.06	0	.02	.02	.04	0	.01	.01	.02	0	.01	.01	.02	0	0.06
31	18	0	.04	.06	.04	.06	0	.02	.02	.04	0	.01	.01	.03	0	.01	.01	.02	0	0.07
Total	637	0					0				0				0				0	
Avg																				0.07
Max			.05			.09				.08				.04				.13		0.09
Min																				0.06

**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: 11/1/2023

**SURFACE WATER/INFLUENCED GROUNDWATER MONTHLY OPERATION REPORT
IOWA DNR WATER SUPPLY**

Basic Information

S/EP: #1

System Name: _____ PWSID #: 819033 Month: October Year: 2023

Day	Operating Hours	Pumpage		Fluoride		Raw Turbidity Highest Daily Reading (NTU)	Settled Turbidity (individual sedimentation basin)							
		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 Sed 1 (NTU)	Highest Daily Reading Sed 2 (NTU)	Highest Daily Reading Sed 3 (NTU)	Highest Daily Reading Sed 4 (NTU)				
1	23.75	2414.00	2063.00	36.00	0.75	0.07		0.34						
2	24.00	2439.00	2010.00	39.00	0.80	0.07		1.15						
3	24.00	2423.00	1961.00	36.00	0.68	0.07		0.49						
4	20.50	2051.00	1710.00	34.00	0.60	0.07		0.54						
5	20.75	2146.00	1790.00	32.00	0.76	0.07		0.61						
6	20.25	2040.00	1640.00	33.00	0.80	0.07		0.51						
7	19.50	1958.00	1666.00	42.00	0.63	0.09		0.54						
8	19.00	2098.00	1709.00	43.00	0.73	0.09		0.69						
9	23.00	2331.00	1922.00	52.00	0.77	0.07		0.70						
10	21.00	2124.00	1791.00	46.00	0.82	0.08		0.49						
11	20.00	2016.00	1684.00	46.00	0.83	0.08		0.36						
12	18.50	1870.00	1529.00	46.00	0.78	0.08		0.52						
13	18.25	1848.00	1511.00	44.00	0.93	0.07		0.27						
14	19.00	1934.00	1651.00	43.00	0.88	0.07		0.53						
15	22.50	2287.00	1871.00	30.00	0.97	0.07		0.21						
16	18.00	1829.00	1486.00	41.00	0.90	0.07		0.49						
17	19.25	1945.00	1568.00	42.00	0.80	0.07		0.40						
18	20.25	2052.00	1687.00	46.00	0.84	0.07		0.66						
19	19.00	1919.00	1622.00	42.00	0.90	0.08		0.94						
20	17.50	1896.00	1550.00	43.00	0.92	0.07		0.52						
21	19.50	1977.00	1662.00	45.00	0.98	0.07		0.38						
22	21.00	2143.00	1722.00	49.00	0.99	0.08		0.55						
23	18.25	1854.00	1558.00	41.00	0.95	0.07		0.55						
24	20.25	2044.00	1697.00	45.00	0.92	0.08		0.28						
25	19.25	1941.00	1628.00	41.00	0.81	0.09		0.23						
26	17.75	1780.00	1510.00	38.00	0.89	0.08		0.36						
27	18.50	1876.00	1565.00	34.00	0.92	0.07		0.43						
28	17.75	1789.00	1508.00	33.00	0.85	0.07		0.22						
29	20.25	2056.00	1725.00	35.00	0.91	0.07		0.32						
30	17.50	1767.00	1487.00	31.00	0.84	0.06		1.24						
31	19.00	1923.00	1603.00	35.00	0.80	0.07		0.44						
Total	617	62,770	52,086	1,243							0	0	0	0
Avg	19.90	2,025	1,680	40.10	0.84	0.07	#DIV/0!	0.51	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Max	24.00	2,439	2,063	52.00	0.99	0.09	0.00	1.2	0.0	0.00	0.00	0.00	0.00	0.00
Min	17.50	1,767	1,486	30.00	0.60	0.06	0.00	0.21	0.00	0.00	0.00	0.00	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: 11/1/2023

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

This form is valid 2/1/2023 to 7/31/2024

Facility Name: BOONE CITY OF STP

Permit #: 0819001

Month/Year:

10	2023
----	------

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

Operator Name:

John Roberts

Certification #:

10924

Phone #:

7122590808

Lab Cert. #:

156

Comments:

--

**Include Comments longer than 1000 characters in email*

Signature:

John Roberts

<p>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 possibility of fine and imprisonment for known violations.</p>
--

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: 10-2023

Mon. Point	RAW WASTE												
	FLOW	BOD5		TSS		TOT-N		TKN		PHOS		TEMP	PH
Parameter	MGD	MG/L	LBS/DAY	MG/L	LBS/DAY	MG/L	LBS/DAY	MG/L	LBS/DAY	MG/L	LBS/DAY	FAHRENHEIT	STD UNITS
Units	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
Frequency													
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	1.237												
2	1.239			202	2087.31852							68	7.2
3	1.216					31.1	315.398784	31	314.38464	7.5	76.0608	68	7.4
4	1.225	332	3391.878	160	1634.64							66	7.4
5	1.154											66	7.4
6	1.104	254	2338.66944									62	7.5
7	1.084												
8	1.198												
9	1.131			195	1839.3453							62	7.5
10	1.158					36.1	348.643692	36	347.67792	7.1	68.569812	64	7.3
11	1.159	218	2107.20108	199	1923.54594							64	7.1
12	1.299											66	7.4
13	1.559	331	4303.68186									67	7.2
14	1.301												
15	1.274											64	7.4
16	1.275											66	7.5
17	1.212			146	1475.77968	34.39	347.6168712	34	343.67472	6	60.64848	64	7.4
18	1.196	258	2573.45712	100	997.464							64	7.4
19	1.157	224	2161.46112									64	7.5
20	1.198											66	7.4
21	1.146												
22	1.224												
23	1.175			194	1901.103							66	7.4
24	1.172					38.11	372.5054328	38	371.43024	7.3	71.353704	66	7.5
25	1.229	191	1957.72326	147	1506.72942							64	7.3
26	1.35											64	7.3
27	1.25	217	2262.225									64	7.4
28	1.236												
29	1.247												
30	1.202			167	1674.12156							62	7.4
31	1.183											62	7.5
Total	37.8	2025	21096.29688	1510	15040.04742	139.7	1384.16478	139	1377.16752	27.9	276.632796	1425	162.4
Monthly Avg.	1.219354839	253.125	2637.03711	167.7777778	1671.11638	34.925	346.041195	34.75	344.29188	6.975	69.158199	64.77272727	7.381818182
Daily Max.	1.559	332	4303.68186	202	2087.31852	38.11	372.5054328	38	371.43024	7.5	76.0608	68	7.5
Daily Min.	1.094	191	1957.72326	100	997.464	31.1	315.398784	31	314.38464	6	60.64848	62	7.1
Max. 7/Avg.	1.257857143	293	3205.44147	197	1881.44562	38.11	372.5054328	38	371.43024	7.5	76.0608	66	7.44

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: 10-2023

Mon. Point Parameter	EFFLUENT PRIOR TO DISINFECTION												EFFLUENT AFTER DISINFECTION								
	CBOD5		TSS		NH3-N		NO3-N		TOT-N		PHOS		TOX CER		TOX PIM		TEMP	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	NO TOXICITY	NO TOXICITY	NO TOXICITY	NO TOXICITY	FAHRENHEIT	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 TIME PER WEEK	1 TIME PER WEEK	1 TIME PER WEEK	1 TIME PER WEEK	1 TIME PER WEEK	1 EVERY 12 MONTHS	1 EVERY 12 MONTHS	1 EVERY 12 MONTHS	1 EVERY 12 MONTHS	2 TIMES PER WEEK	2 TIMES PER WEEK	5 TIMES PER WEEK	GEO. MEAN 12 MONTHS	
Start Date													Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	8/1/2023	
End Date													06 - NOT REQ / MP	06 - NOT REQ / MP	06 - NOT REQ / MP	06 - NOT REQ / MP	Permit Duration	Permit Duration	Permit Duration	7/31/2024	
No Discharge																				06 - NOT REQ / MP	
LOC																					
Day: 1																					
2				4	41.33304												70	8.7	7.9		
3						0.1	1.014144			9.2	93.301248		1.1	11.155584			70	8.7	8		
4	3	30.6495		3	30.6495		0.1	1.02165									68	8.1	7.8		
5							0.1	0.962436										68	8.9	7.9	
6	3	27.62208					0.1	0.920736										66	8.1	7.7	
7																					
8																					
9				3	28.29762												64	9.1	7.9		
10						0.1	0.965772		116	13.76	132.8902272		1.9	18.349668			64	9	7.8		
11	3	28.99818		2	19.33212		0.1	0.966906									62	8.2	7.6		
12							0.1	1.083366										64	8.1	7.7	
13	3	39.00618					0.1	1.300206										64	7.9	7.7	
14																					
15																					
16																					
17				4	40.43232		0.1	1.010808		12.2	123.318576		1.8	18.194544			64	8.3	7.7		
18	3	29.92392		2	19.94928		0.1	0.997464									64	8.7	7.8		
19	3	28.94814					0.1	0.954936									62	7.9	7.5		
20							0.1	0.999132									64	8.3	7.7		
21																					
22																					
23				2	19.599												64	7.4	7.4		
24						0.1	0.977448			15.1	147.594648		3.1	30.300888			66	7.8	7.5		
25	3	30.74958		2	20.49972		0.1	1.024986									66	7.2	7.3		
26							0.1	1.1259										66	7.7	7.4	
27	3	31.275					0.1	1.0425										64	7.8	7.4	
28																					
29																					
30				3	30.07404													60	7.9	7.4	
31						0.1	0.98622											58	9.3	7.8	
Total	24	247.17258		25	250.16664		1.7	17.384714		116	50.26	497.1046992		7.9	78.000884			1424	180.7	165.5	
Monthly Avg.	3	30.8965725		2.777777778	27.79629333		0.1	1.021453765		116	12.565	124.2761748		1.975	19.500171			64.72727273	8.213636364	7.659090909	
Daily Max.	3	39.00618		4	41.33304		0.1	1.300206		116	15.1	147.594648		3.1	30.300888			70	9.3	8	
Daily Min.	3	27.62208		2	19.33212		0.1	0.920736		116	9.2	93.301248		1.1	11.155584			58	7.2	7.3	
Max. 7/Avg.	3	34.00218		3.5	35.99127		0.1	1.0789875		116	15.1	147.594648		3.1	30.300888			68.4	8.5	7.86	



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

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UPGRADE PROGRAM		October 2023				
DATE	ADDRESS	ORIG INSTALL	Note	Low	Med	High
10/5/2023	719 1/2 B Story	New Service				
10/2/2023	715 Keeler	New Service				
10/5/2023	Xenia Race Track	4/9/2012				
10/12/2023	1330 Southview Ct	remove for winter				
10/13/2023	415 Boone	12/10/1998				
10/13/2023	2128 Linn	5/8/2000				
10/16/2023	318 Clinton	08/23/06				
10/16/2023	703 w 6th	03/06/12				
10/17/2023	212 Benton	5/9/2000				
10/17/2023	1103 Garst	Frozen				
10/27/2023	1309 W Park	New Service				
10/30/2023	1218 w 3rd	Out for winter				
Locates						
9/1 to 10/1		161				

Curb Box Repair Update for 11/14/2023 – as of 11/08/2023

\$7728.06 was collected during shut offs. 36 accounts qualified to be on the list.

125 stop boxes need repaired, 54 of which have lead service lines.

No delinquent bills certified in October. If left unpaid, 18 delinquent bills totaling \$6870.27 are scheduled to certify on November 27th.

Lesli Vote
Utility Billing Supervisor