October 28, 2024

U.S. Environmental Protection Agency – Region 7
Water, Wetlands and Pesticides Division
11201 Renner Boulevard
Lenexa, Kansas 66219

Re: Docket October 2024 Report

To Whom this May Concern,

This letter is intended to meet the requirements of Docket No. CWA-07-2017-0139 paragraph 36.

Work Related to SSO Elimination

Work Substantially Completed

1. *STEP 1 –April 2017*
2. *STEP 1.5 – April 2017*
3. *Equalization Basin Improvements – July 2018*
4. *Wastewater Treatment Plant (WWTP) Improvements – October 2021*
5. *STEP 2 – September 2022*

STEP 3A – Improvements to the Grease Lightning Lift Station (GLLS)

Bids were received on January 17, 2023 with Woodruff Construction being the low bidder at $6,557,300.00. The lift station is nearing completion. As of the last pay application dated September 30, 2024 the project was 90% complete. Due to delay in shipment of electrical components and the generator, a change order was completed to set the substantial completion date at November 29, 2024 and the final completion at May 8, 2025. The electrical components have since arrived and have been installed. The generator is expected to arrive November 1, 2024, for start-up and completion late November.

The STEP 3A work includes:

- Increasing the capacity of the lift station to approximately 14.0 MGD on the existing footprint.
- Four (4), new, 250 hp submersible pumps are required to meet flow/head requirements.
- A 500 kW generator
- A new lift station building including:
    - Overflow/diversion structure to separate normal flows (to existing GLLS) and high flows (to new pump station)

118 South Main Street
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www.cityoffairfieldiowa.com

- Coarse mechanical screening
- Dedicated electrical/control room

- Minor utility work including:
  - Flow metering and bypass structures on the existing 14" and proposed 24" force mains

STEP 3B – Grease Lightning Lift Station (GLLS) Forcemain Improvements
STEP 3B includes approximately 10,000 feet of new, wet-weather forcemain from GLLS to manhole SMH-16. Bids were received on January 17, 2023 with Boomerang Corporation being the low bidder at $2,947,984. Work began early February 2024, with testing of the pipe occurring the end of March 2024. The work is substantially complete, although final signoff by USDA and the City has not occurred.

Collection System Improvements
The City has continued with annual cleaning and televising to prevent system back-ups. Several high flow/high FOG areas receive annual cleaning, while the rest of the community is inspected once every four to five years. In the last six (6) months the City has cleaned 37,066 feet of sanitary sewer mains.

In addition to cleaning and televising, the City has completed the following system improvements over the last six (6) months:

- Replaced three (3) pumps at Walton Lake

In May 2021, the City changed the permitting process to have no fees associated with capping or replacement of existing sewer lines. Although it makes it difficult to track, with some feeling there is no need for a permit, the City has seen an increase in the number of inquires regarding information on replacing a sewer lateral. Staff estimates ten to twenty sewer laterals have been capped, replaced, or repaired in the last six (6) months. The sewer department has also not charged for televising the sanitary sewer main to determine the tap condition and location for a repair, or to assist with a good location to make a new tap.

<u>Changes to Appendix A</u>
With your previous approval of the revised completion date to STEP 3, there are no requested changes to Appendix A.

There are continued supply chain issues for the GLLS project. The generator is expected to arrive November 1. Substantial completion of GLLS has been delayed, but the Contractor does not believe it will impact Appendix A.

Scheduled Work

Work expected in the next six (6) months includes the following:

STEP 3A – Improvements to the Grease Lightning Lift Station (GLLS)

Over the next six (6) months the contractor will complete the work, including making the connection between the new lift station and existing collection system.

STEP 3B – Grease Lightning Lift Station (GLLS) Forcemain Improvements

Construction is complete. All that remains is retainage payment and close-out of the funding agreements.

Collection System Improvements

The City has no specific projects proposed for the next six (6) months. Crews will continue their cleaning and televising schedules.

The City will begin selection for an engineering firm for STEP 4. This was intended for the last six (6) months, but staffing issues delayed production of the request for qualifications.

The City intends to handle STEP 4 in two stages.

1) STEP 4a – From GLLS to manhole 15-14 or slightly beyond. This will allow the City to relieve the bottle neck at 15-14. This stage will include preliminary design of all of STEP 4 and development of a hydraulic profile.
2) STEP 4b – From 15-14 to 9-1A. If increasing the pipe downstream of 15-14 and changing the pipe angle at 15-14 does not elevate the overflows at 9-1A, this stage will be constructed. The hydraulic profile in the first stage will be important to determine the extent of pipe replacement needed to keep sanitary sewer out of residential basements.

Summary of SSOs

There were eight (8) sanitary sewer overflows, in five (5) locations in the previous six (6) months. One was related to pump failure (Stone Street) while the rest were a result of rain events. Of the remaining locations, two (15-17 and 15-14) are directly affected by STEP 3 and the work at GLLS. Once STEP 3 is complete, these should no longer occur. The last two location (Hwy 34 LS and 14-62) are new SSO locations. Although not considered pump failures or blocked mains, each of these overflows are due to foreign objects in the pipes and pump impellers. The items likely coming from the aging population upstream of manhole 14-62. The City will need to educate users, as well as increase cleaning in this area to prevent future SSOs.

Attached is a copy of the press-release sent to the media and the Iowa Department of Natural Resources. The location, gallons, and time of the SSO is listed below:

Manhole	Tributary	Start Date	Start Time	End Date	End Time	Gallons
15-17	Indian Creek	4/2/2024	7:15 AM	4/2/2024	7:30 PM	238,842
15-14	Indian Creek	4/2/2024	10:30 AM	4/2/2024	7:45 PM	97,125
14-62	Mitchell Creek	4/2/2024	10:30 AM	4/2/2024	7:00 PM	25,500
15-17	Indian Creek	4/27/2024	6:30 PM	4/28/2024	11:15 AM	885,990
15-14	Indian Creek	4/27/2024	8:00 PM	4/28/2024	11:30 AM	203,334
14-62	Mitchell Creek	4/27/2024	11:00 AM	Unknown	Unknown	Unknown
Stone Street LS	Mitchell Creek	Unknown	Unknown	7/31/2024	10:25 AM	110,00
Hwy 34 LS	Mitchell Creek	7/31/2024	8:15 AM	7/31/2024	10:25 AM	1,100

Sincerely,
CITY OF FAIRFIELD

Melanie A. Carlson, PE & LEED AP
City Engineer

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 knowing violations.

Enclosures
cc: via Email
Shawn Worley (City of Fairfield)
Shane McCoin
Terry Jones (Iowa DNR Region 6)

S:\City Engineer\City Projects\Sanitary Sewer\EPA\October 2024\Report October 2024.docx

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Appendix A

ATTACHMENT A

APPENDIX A
SANITARY TRANSPORTATION AND ELIMINATION PROGRAM (STEP)
FAIRFIELD, IOWA

MILESTONE	**COMPLETION DATE**
STEP 1 – Trunk Sewer Improvements (Main Interceptor)	
1. Design and Bidding	August 2013 - April 2016
2. Land Acquisition/Easement Negotiations	September 2013 – April 2015
3. Construction	June 2016 – October 2017
4. Substantial Completion	April 2017
5. Final Completion	October 2017
STEP 1 – Wastewater Treatment Plant Improvements	
1. Design	2013 – December 2013
2. Land Acquisition/Easement Negotiations	September 2013 – December 2014
3. Bidding	February 2017
4. Contract Award	February 2017 – August 2017
5. Construction	July 2017 – October 2019
STEP 2A – Trunk Sewer Improvement (Golf Course)	
1. Preliminary Design/Environmental	August 2013 – July 2016
2. Final Design and Bidding	August 2016 – December 2016
3. Land Acquisition/Easement Negotiations	September 2016 – December 2016
4. Construction	January 2017 – October 2017
STEP 2B – Trunk Sewer Improvements (Lamson Woods)	
1. Preliminary Design	August 2013 – July 2016
2. Environmental	January 2016 – June 2018
3. Land Acquisition/Easement Negotiations	Jan 18 - April 19 ~~September 2017 – June 2018~~
4. Final Design and Bidding	Aug 16 - June 2019 ~~August 2016 – July 2018~~
5. Construction	Feb 2020 - December 2021 ~~August 2018 – December 2019~~
STEP 3 – Greased Lightning Lift Station and Force Main Improvements	January 2020 - August 2020
1. Pre-Design Secondary Flow Monitoring Study	~~January 2019 – September 2019~~
2. Design	January 2021 – December 2021
3. Bidding	January 2023 ~~January 2022~~
4. Construction	~~March 2022 – December 2023~~ March 2023 - December 2024

Red - Previously Requested

APPENDIX A
SANITARY TRANSPORTATION AND ELIMINATION PROGRAM (STEP)
FAIRFIELD, IOWA

MILESTONE	**COMPLETION DATE**
STEP 4 – Trunk Sewer Improvements (West Interceptor)	
1. Land Acquisition/Easement Negotiations	January 2024 – July 2025
2. Design	January 2025 – December 2025
3. Bidding	January 2026
4. Construction	March 2026 – December 2027
STEP 5 – Sanitary Sewer Rehabilitation	
1. Design	January 2029 – December 2030
2. Bidding	January 2030 January 2031
3. Construction	March 2030 – December 2031 March 2031 – December 2032

Appendix B

Fairfield wastewater sso 4-2-2024

The city of Fairfield experienced 3 ssos on April 2nd due to a significant amount of rain totaling about 4 inches.

The sites are listed below

Manhole 14-62

Start: 10:30 am 4/2/2024

End: 7:00 pm 4/2/2024

Gallons: 25,500

Mitigation: lime applied to effected area

Manhole 15-14

Start: 10:30 am 4/2/2024

End: 7:45 pm 4/2/2024

Gallons 97,125

Mitigation: lime applied to effected area

Manhole 15-17

Start: 7:15 am 4/2/2024

End: 7:30 pm 4/2/2024

Gallons: 238842

Mitigation: lime applied to effected area

Total: gallons of sso 361467

James Simmons reported to the Fo6 at 10:55 am on 4/2/2024 to Brian Lee

City of Fairfield wastewater sso's 4-27-2024

The city of Fairfield experienced 3 sso's on 4/27/2024 to 4/28/2024.

During this time frame a widespread storm system dumped approx. 3.5" of rain in the area on top of already saturated soil. The total gallons is estimated at 1,089,324

15-17

Start 630 pm 4/27/24

End 1115 am 4/28/24

Gallons 885,990

15-14

Start 800 pm 4/27/24

End 1130am 4/28/24

Gallons 203,334

14-62

Start 11am

End ?

Amount is undetermined low manhole no flow meter

The city has limed the area effected and cleaned up any debris.

The new grease lightning lift station is nearing completion and should help drastically reduce or eliminate these overflows in the near future.

From: Shawn Worley
Sent: Wednesday, October 23, 2024 1:17 PM
To: Melanie Carlson
Subject: Fw: city of Fairfield sso 07/31/2024

Sent from my U.S.Cellular© Smartphone
Get Outlook for Android

From: Jones, Terry <terry.jones@dnr.iowa.gov>
Sent: Tuesday, August 6, 2024 3:39:43 PM
To: Shawn Worley <sworley@fairfieldiowa.gov>
Subject: Re: city of Fairfield sso 07/31/2024

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click links, open attachments, or comply with requests unless you recognize the sender and know the content is safe.

Got it, Thanks

On Tue, Aug 6, 2024 at 3:05 PM Shawn Worley <sworley@fairfieldiowa.gov> wrote:

> On July 31st 2024 The city of Fairfield wwtp found a lift station located at Stone street was overflowing due to the dry well flooding as the sump pump malfunctioned. The sso was reported at 8:38 am. The quantity was estimated at 100gpm. The sso was ceased at 10:25 am with a total of 11000 gallons estimated. The area around the sso was cleaned and limed.
>
> On July 31st 2024 the Hwy 34 lift station overflowed due to large amounts of rainfall. Start time was 8:15am and finished at 10:25 total amount of sso estimated at 1100 gallons. The area was cleaned and limed
>
> Thank You
>
> Shawn Worley
>
> Sent from Mail for Windows

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Terry Jones
Environmental Specialist Senior
Environmental Service Division
Iowa Department of Natural Resources

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