

FILED
August 31, 2023
Data Center
Missouri Public
Service Commission

Exhibit No. 120

Staff – Exhibit 120
Williams Rebuttal
File No. WR-2023-0006

Exhibit No.:
Issue(s): *Maintenance, Service Area
Maps and Legal
Descriptions*
Witness: *Daronn A. Williams*
Sponsoring Party: *MoPSC Staff*
Type of Exhibit: *Rebuttal Testimony*
Case No.: *WR-2023-0006*
Date Testimony Prepared: *June 29, 2023*

MISSOURI PUBLIC SERVICE COMMISSION

INDUSTRY ANALYSIS DIVISION

WATER, SEWER & STEAM DEPARTMENT

REBUTTAL TESTIMONY

OF

DARONN A. WILLIAMS

CONFLUENCE RIVERS UTILITY OPERATING COMPANY, INC.

CASE NO. WR-2023-0006

Jefferson City, Missouri
June 2023

1 **REBUTTAL TESTIMONY**

2 **OF**

3 **DARONN A. WILLIAMS**

4 **CONFLUENCE RIVERS UTILITY OPERATING COMPANY, INC.**

5 **CASE NO. WR-2022-0303**

6 Q. Please state your name and business address.

7 A. My name is Daronn A. Williams. My business address is 200 Madison Street,
8 Jefferson City, MO 65101.

9 Q. By whom are you employed and in what capacity?

10 A. I am employed by the Missouri Public Service Commission (“Commission”) as
11 an Associate Engineer with the Water, Sewer, & Steam Department. My credentials and a
12 listing of the cases in which I have previously filed testimony before this Commission are
13 attached to this rebuttal testimony as Schedule DAW-r1.

14 Q. What is the purpose of your rebuttal testimony?

15 A. The purpose of my rebuttal testimony is to respond to Confluence Rivers
16 Utility Operating Company, Inc. (“Confluence”) witness Todd Thomas’ Direct Testimony
17 regarding the claim that a software program is capable of ensuring that utility systems are
18 well-maintained.¹ Specifically I address Staff concerns at the Fox Run Wastewater Treatment
19 Facility (“Fox Run”), which is also discussed in Staff witness Curt B. Gateley’s Direct
20 Testimony.² Staff witness Andrew Harris also discusses this software program in his Rebuttal
21 Testimony. In addition, I discuss the need for Confluence to update the maps and legal
22 descriptions in its water and sewer tariffs.

¹ Todd Thomas Direct page 13, lines 2 through 7.

² Curt B. Gateley Direct beginning page 9, line 8.

Response to Todd Thomas' Direct Testimony; Lack of System Maintenance at Fox Run

Q. What part of Mr. Thomas' testimony will you address in your rebuttal testimony?

A. In his direct testimony, Mr. Thomas states:

Utility Cloud ensures that Confluence Rivers systems are well-maintained; property, plant, and equipment records are maintained; and customer service needs are systematically and expeditiously addressed with appropriate record keeping of customer service needs. Further, CSWR is able to monitor its Missouri O&M contractors to ensure that the contractors are doing work for which they were hired; are doing that work on a timely and competent basis; and are meeting the needs of the Company and its customers.³

Q. Do you agree with Mr. Thomas that Confluence's systems are well-maintained and that a software program can ensure that Confluence's systems are well-maintained?

A. No. I do not.

Q. Do you have an example of a Confluence system that is not well-maintained?

A. Yes. As mentioned by Staff witness Mr. Curt B. Gateley (beginning on page 9, line 7 of his Direct Testimony), on April 11, 2023, I conducted several inspections of wastewater systems owned by Confluence in the Kansas City area. One of those systems was the Fox Run wastewater treatment facility, a recirculating sand filter bed. Upon arrival, visual inspection revealed this facility's sand bed was overflowing with partially treated sewage. It was pooling on the surface of the sand bed and running onto the sides of the berms. The small field on the north side of the sand bed was completely saturated with wastewater. There were large pools of wastewater around the fencing that surrounded the facility and on the access road. Photographic evidence of the saturated fields and pooling of wastewater are located in

³ Todd Thomas Direct page 13, lines 2 through 7.

Rebuttal Testimony of
Daronn A. Williams

1 Schedules DAW-r2 through DAW-r6. This incident is considered a bypass and, based on the
2 condition of the facility at the time of inspection, it appears this bypass had been occurring for
3 at least several days to a few weeks. Mr. Jacob Freeman, Director of Engineering for Central
4 States Water Resources, LLC, (Confluence's parent company) accompanied me on the
5 inspections and it appeared that he was unaware of the situation at Fox Run prior to arriving on
6 site. Upon seeing the condition of the system, Mr. Freeman made one or more phone calls to
7 whom I believe were the contractor or another Confluence employee.

8 Q. Did this bypass violate a federal or state regulation?

9 A. It is Staff's understanding, based upon a review of the Fox Run operating permit
10 (Permit No. MO-0120006) issued by the Missouri Department of Natural Resource ("DNR"),
11 that this bypass is a violation of the permit conditions⁴ and the federal Clean Water Act.⁵

12 Q. Did Staff follow-up with DNR on this manner?

13 A. Yes, Staff contacted DNR on April 12, 2023, to verify that Confluence reported
14 the bypass.⁶ DNR stated they were aware of the bypass.

15 Q. Did Staff follow-up with the Company?

16 A. Yes. During the inspection, Mr. Freeman mentioned Confluence would do an
17 internal investigation on the cause of the bypass and summarize their findings in a Root Cause
18 Analysis ("RCA") Report. On April 17, 2023, I sent Mr. Freeman an e-mail asking for the
19 RCA Report. Confluence e-mailed a copy of this report to me on May 4, 2023.

20 In addition, on May 3, 2023 I submitted Data Request ("DR") No. 0268 to Confluence,
21 which states:

⁴ Section D Special Conditions 7 and Standard Conditions Part I, Section C.2.c.

⁵ 40 CFR 122.41(m)(4)(i).

⁶ Per 40 CFR 122.41(l)(6)(i), unanticipated bypasses must be reported within 24 hours of the permittee becoming aware of the event.

1 During Staff's field inspection of the Fox Run Wastewater Treatment
2 Facility (WWTF) on April 11, 2023, it was discovered that the WWTF
3 was overflowing sewage from the sand filter bed.

4 (1) Please submit copies of all documentation (reports, overflow notices,
5 etc.) that were submitted to the Missouri Department of Natural
6 Resources for this overflow incident.

7 (2) What corrective actions have been taken to rectify the overflow?
8 Please include a description of the associated clean-up efforts.

9 (3) Was emergency pumping and hauling implemented? If so, how much
10 was pumped and hauled, during what dates, and where was the sewage
11 hauled to?

12 (4) During the field inspection, Confluence personnel indicated a Root
13 Cause Analysis (RCA) for the bypass would be completed. Please
14 provide a copy of this RCA report.

15 (5) What steps are being taken to prevent this from happening again?

16 Q. What was Confluence's response to DR No. 0268?

17 A. Confluence responded to this DR on May 22, 2023 with the same RCA Report
18 as before, which is included as Schedule DAW-r9. Confluence indicated that no emergency
19 pumping and hauling had been implemented, but Staff believes this was stated in error because
20 the RCA Report states sludge was removed from pump stations. The DR response did not
21 indicate the amount of sludge pumped and hauled, or the final location of the sludge.

22 Q. Based on the RCA Report, what were the causes of the bypass?

23 A. The RCA Report list the following causes of bypass:

24 (1) The solids in the influent pump stations were not removed on a regular basis,
25 and

26 (2) The filter media in the bed was highly packed with solids, which then slowed
27 the filtration rate and caused the bed to overflow.

28 Q. Does Staff believe the bypass was associated with a failure with Utility Cloud?

29 A. Not necessarily. Staff believes reliance on this remote software, without regular
30 routine physical maintenance and checks, contributed to the bypass.

Rebuttal Testimony of
Daronn A. Williams

1 Q. How did Confluence rectify the situation at Fox Run?

2 A. The corrective actions undertaken by Confluence, according to RCA Report,
3 were:

4 (1) Sludge removal from pump stations,

5 (2) Filter media was broken up with an auger to break up any coagulated sludge
6 mats and existing solids, and

7 (3) The effluent drainage line was cleaned out using an air compressor.

8 Q. Would the Utility Cloud software that Mr. Thomas mentioned in his testimony
9 be expected to alert Confluence of a bypass of this nature?

10 A. No. Staff does not believe remote software can detect or prevent a bypass of this
11 nature. A bypass of this nature is prevented by routine physical maintenance and physical
12 evaluations of the system. Staff recommends Confluence be more diligent in conducting routine
13 physical maintenance and physical evaluations of their systems. Mr. Curt B. Gateley elaborates
14 in more detail on Staff's recommendations in his Direct Testimony.⁷

15 Q. Did Confluence's clean-up efforts to rectify the situation at Fox Run
16 satisfy Staff?

17 A. Staff was partially satisfied with Confluence's clean-up efforts at Fox Run. The
18 report does not mention the removal of the partially treated wastewater from the field and access
19 road and does not include a timeline to replace or investigate the replacement of the sand filter
20 media. Neither the DR response nor the RCA Report discuss any step Confluence is taking to
21 prevent this from happening again, such as regular sludge removal from pump stations and filter
22 media bed maintenance. Staff recommends Confluence be more diligent in conducting routine
23 physical maintenance and physical evaluations of their systems. In addition, Staff recommends

⁷ Curt B. Gateley Direct beginning page 13, line 8.

1 Confluence remediate the overflowed sewage at Fox Run, investigate if the sand filter media
2 needs replacing, and if the filter media requires replacing, to replace the filter media as soon as
3 possible. Lastly, Staff recommends Confluence look into its other sand filter WWTFs and see
4 if these facilities are in need of physical maintenance to prevent additional bypasses.

5 **Updates to Maps and Legal Descriptions**

6 Q. Has Staff reviewed Confluence's current tariffs?

7 A. Yes.

8 Q. What has Staff concluded?

9 A. Staff has concluded that:

10 (1) Many maps need to be updated because they are hard to read, due to
11 outdated information and/or poor visual acuity, and therefore, it is difficult to
12 determine if a customer is in a particular service area, and

13 (2) Many of the legal descriptions need to be updated because they contain
14 lot numbers, subdivision boundary lines and surveying language that the
15 general public may not understand. In addition, some of the items in the legal
16 description may be outdated and have changed over time, such as individual
17 landowners' names.

18 Q. Which maps and legal descriptions of Confluence's water and sewer systems
19 need updating?

20 A. Staff has prepared Schedule DAW-r7 and Schedule DAW-r8, which show the
21 systems that require map and/or legal description updates. Below are tables that summarize
22 which maps and legal descriptions of water and sewer systems Staff recommends Confluence
23 update:

1

2

Table 1: Summary of Sewer Tariff Recommended Changes

| <u>Current Tariff #</u> | <u>System Name</u> | <u>Service Area Map and/or Legal Description</u> |
|-------------------------|--------------------------------|--|
| PSC MO No. 13 | Roy-L | Service Area Map |
| | Villa Ridge | Legal Description |
| | Freeman Hills | Legal Description |
| | DeGuire | Legal Description |
| PSC MO No. 15 | Port Perry | Service Area Map |
| PSC MO No. 17 | Branson Cedars | Service Area Map and Legal Description |
| PSC MO No. 19 | Terre Du Lac | Service Area Map and Legal Description |
| PSC MO No. 21 | Missouri Utilities | Service Area Map |
| | State Park Village | Service Area Map |
| | Rainbow Acres | Service Area Map |
| | Twin Oaks/ Preserve | Service Area Map and Legal Description |
| | Berkshire Glen/Walnut Hills | Service Area Map |
| | Bar-B Acres | Service Area Map |
| | Countryside Meadows | Service Area Map and Legal Description |
| | Wil-mar Estates and Fox Run | Service Area Map |
| | Country Hill | Service Area Map |
| | Private Gardens/ Prairie Field | Service Area Map |
| PSC MO No. 23 | Hillcrest | Service Area Map and Legal Description |
| PSC MO No. 25 | Chelsea Rose | Service Area Map and Legal Description |
| | Cimarron Bay | Service Area Map and Legal Description |
| | Cedar Glen | Service Area Map |
| | State Route KK | Service Area Map and Legal Description |
| MO No. 27 | Village at Whiteman | Service Area Map and Legal Description |
| | Hunter's Ridge | Service Area Map |
| | South Walnut | Service Area Map |

3

1

2

Table 2: Summary of Water Tariff Recommended Changes

| <u>Current Tariff #</u> | <u>System Name</u> | <u>Service Area Map and/or Legal Description</u> |
|-------------------------|--------------------|--|
| PSC MO No. 12 | Auburn Lakes | Service Area Map |
| | Majestic Lakes | Service Area Map |
| | Roy-L | Service Area Map and Legal Description |
| | Fawn Lake | Service Area Map |
| | Spring Branch | Service Area Map |
| | Evergreen Lake | Service Area Legal Description |
| | | |
| PSC MO No. 14 | Port Perry | Service Area Map and Legal Description |
| | | |
| PSC MO No. 16 | Branson Cedars | Service Area Map and Legal Description |
| | | |
| PSC MO No. 18 | Terre Du Lac | Service Area Map and Legal Description |
| | | |
| PSC MO No. 20 | Missouri Utilities | Service Area Map |
| | | |
| PSC MO No. 22 | Hillcrest Manor | Service Area Map and Legal Description |
| | | |
| PSC MO No. 24 | Chelsea Rose | Service Area Map and Legal Description |
| | Cimarron Bay | Service Area Map and Legal Description |
| | Cedar Glen | Service Area Map |
| | State Route KK | Service Area Map |
| | | |
| PSC MO No. 26 | Indian Hills | Service Area Map and Legal Description |

3

4

Q. What is Staff's recommendation regarding these changes?

5

A. Staff recommends that the Commission order Confluence to file updated maps and legal descriptions with its compliance tariffs ordered by the Commission at the conclusion of this rate case.

6

7

Q. Does this conclude your rebuttal testimony?

8

A. Yes it does.

9

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Confluence Rivers Utility)
Operating Company, Inc.'s Request for)
Authority to Implement a General Rate)
Increase for Water Service and Sewer)
Service Provided in Missouri Service Areas)

Case No. WR-2023-0006

AFFIDAVIT OF DARONN A. WILLIAMS

STATE OF MISSOURI)
)
COUNTY OF COLE) ss.

COMES NOW DARONN A. WILLIAMS and on his oath declares that he is of sound mind and lawful age; that he contributed to the foregoing *Rebuttal Testimony of Daronn A. Williams*; and that the same is true and correct according to his best knowledge and belief.

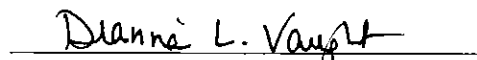
Further the Affiant sayeth not.


DARONN A. WILLIAMS

JURAT

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this 27th day of June 2023.

DIANNA L VAUGHT
Notary Public - Notary Seal
STATE OF MISSOURI
Cole County
My Commission Expires: July 18, 2023
Commission #: 15207377


Notary Public

Daronn A. Williams

As an Associate Engineer with the Water, Sewer and Steam Department of the Commission Staff, my core duties revolve around being the lead engineer for a variety of cases such as Application for Certificate, Merger, Sale, Transfer, Rate Case, Territorial Agreement, and more filed with the Commission from water and sewer utilities. I also hold a Drinking Water Distribution Level – 1, Drinking Water Treatment Level – D, and Wastewater Treatment Level – D Operations Certification from the Missouri Department of Natural Resources.

Educational Background and Work Experience

I hold a Bachelor of Science Degree in Environmental Engineering from Missouri University of Science & Technology. Prior to starting at the Commission, in December 2018, I worked as an Environmental Engineer at the Missouri Department of Natural Resources for the Air Pollution Control Program, from January 2009 to November 2018.

Previous Testimony Before the Public Service Commission

| Case Number | Company | Type of Filing | Issue |
|--------------------|--|------------------------------|-----------------------------------|
| SA-2021-0017 | Missouri American Water Company (MAWC) | Surrebuttal & Live Testimony | General Info & Misc. |
| WR-2022-0303 | MAWC | Rebuttal | Class Cost of Service/Rate Design |



WARNING
Wastewater
Treatment Facility
Do Not Enter

04/11/2023 12:24

Schedule DAW-r2



04/11/2023 12:27

Schedule DAW-r3



04/11/2023 12:27

Schedule DAW-r4



04/11/2023 12:27

Schedule DAW-r5



04/11/2023 12:31

| Current Tariff # | System Name | Service Area Map and/or Legal Description | Notes |
|------------------|--------------------------------|---|---|
| PSC MO No. 13 | Roy-L | Service Area Map | Not a clearly defined boundary of the service area; streets and highways not clear |
| | Villa Ridge | Legal Description | Includes lot numbers, surveyor's record page numbers, subdivision lines, arcs, curves and chords |
| | Freeman Hills | Legal Description | Includes lot numbers |
| | DeGuire | Legal Description | Includes lot numbers |
| PSC MO No. 15 | Port Perry | Service Area Map | Not a clearly defined boundary of the service area; streets and highways not clear |
| PSC MO No. 17 | Branson Cedars | Service Area Map and Legal Description | Street names not clear on map; legal description uses arc lengths and chords |
| PSC MO No. 19 | Terre Du Lac | Service Area Map and Legal Description | Not a clearly defined boundary of the service area, streets and highways not clear, service area not one defined boundary on map; legal description in "sections;" need to be one section |
| PSC MO No. 21 | Missouri Utilities | Service Area Map | Map out of focus; can't read highway names |
| | State Park Village | Service Area Map | Map needs to be zoomed in; street names within subdivision would be nice |
| | Rainbow Acres | Service Area Map | Needs street/highway names |
| | Twin Oaks/ Preserve | Service Area Map and Legal Description | Map needs street/highway names and zoomed in some; legal description contains curves, arc lengths and chords |
| | Berkshire Glen/Walnut Hills | Service Area Map | Aerial imagine preferred |
| | Bar-B Acres | Service Area Map | Not a clearly defined boundary of the service area; streets and highways not clear |
| | Countryside Meadows | Service Area Map and Legal Description | Highway names not clear on map; legal description too vague |
| | Wil-mar Estates and Fox Run | Service Area Map | Aerial imagine preferred; county unclear |
| | Country Hill | Service Area Map | Aerial imagine preferred; county unclear; zoomed too far out |
| | Private Gardens/ Prairie Field | Service Area Map | Aerial imagine preferred; needs to be zoomed in |
| PSC MO No. 23 | Hillcrest | Service Area Map and Legal Description | Map is hard to read, no roads/highways, aerial imagine preferred; legal description uses land owner's names |
| PSC MO No. 25 | Chelsea Rose | Service Area Map and Legal Description | Map is hard to read, aerial imagine preferred; legal description is too vague |
| | Cimarron Bay | Service Area Map and Legal Description | Map is hard to read, aerial imagine preferred; legal description uses lot numbers and is too vague |
| | Cedar Glen | Service Area Map | Map is hard to read, aerial imagine preferred |
| | State Route KK | Service Area Map and Legal Description | Map is hard to read, aerial imagine preferred; legal description uses plat book/page numbers |
| MO No. 27 | Village at Whiteman | Service Area Map and Legal Description | Map is hard to read, aerial imagine preferred, more street names preferred; legal description needs to match map (without Tract 1 & Tract 2) |
| | Hunter's Ridge | Service Area Map | Aerial imagine preferred |
| | South Walnut | Service Area Map | Map is hard to read, aerial imagine preferred |

| Current Tariff # | System Name | Service Area Map and/or Legal Description | Notes |
|-------------------------|--------------------|--|---|
| PSC MO No. 12 | Auburn Lakes | Service Area Map | Please add street/ highways names (esp. withing service area) and remove shading inside service area |
| | Majestic Lakes | Service Area Map | Please add street/ highways names (esp. withing service area) and remove shading inside service area |
| | Roy-L | Service Area Map and Legal Description | Map is hard to read, aerial imagine preferred; legal description is too vague |
| | Fawn Lake | Service Area Map | Please add street/ highways names (esp. withing service area) |
| | Spring Branch | Service Area Map | Please add street/ highways names (esp. withing service area) |
| | Evergreen Lake | Legal Description | Legal Description discusses an "exception area" that's not shown on map; updated language suggested to match map |
| PSC MO No. 14 | Port Perry | Service Area Map and Legal Description | Map is hard to read, aerial imagine preferred; legal description is too vague by using "County Rd" and "Public Rd" |
| PSC MO No. 16 | Branson Cedars | Service Area Map and Legal Description | Street names not clear and red line for hwy might be confusing on map; legal description doesn't have county name, uses surveying language (arcs, curves & chords), "T" for township and directions (N and W) not capitalized |
| PSC MO No. 18 | Terre Du Lac | Service Area Map and Legal Description | Map is hard to read, aerial imagine preferred, map should be one contiguous boundary; legal description needs to describe one contiguous area |
| PSC MO No. 20 | Missouri Utilities | Service Area Map | Can't read street and highway names, more street names preferred |
| PSC MO No. 22 | Hillcrest Manor | Service Area Map and Legal Description | Map is hard to read, aerial imagine with street names preferred; legal description uses land owner names |
| PSC MO No. 24 | Chelsea Rose | Service Area Map and Legal Description | Map is hard to read, aerial imagine preferred; legal description is too vague |
| | Cimarron Bay | Service Area Map and Legal Description | Map is hard to read, aerial imagine preferred, title spells "Cimmarron" with one "R" and it should be two "Rs"; legal description uses lot numbers and is too vague |
| | Cedar Glen | Service Area Map | Map is hard to read, aerial imagine preferred |
| | State Route KK | Service Area Map | Map is hard to read, aerial imagine preferred |
| PSC MO No. 26 | Indian Hills | Service Area Map and Legal Description | Street names on map preferred; point to point description is preferred for the legal description |



Environmental Incident Investigation and Root Cause Analysis

| The person completing the Form: | Brady Graves | Incident Location: | Kearney, MO |
|---|--------------------------|-----------------------------|---|
| Project: | Fox Run | Incident Date: | 04/11/23 |
| Root Cause Category | Factor? X = Yes | Rank 1 = Low 5 = High | Description |
| 1. Equipment / Material – Why was equipment or material a cause? | | | |
| A. Defective or failed part of the equipment | <input type="checkbox"/> | | |
| B. Error by manufacturer | <input type="checkbox"/> | | |
| C. Did not perform preventative maintenance task or did not perform the task in a timely manner | X | 4 | Influent pump stations need regular solids removal. This has not been done in a timely manner. |
| D. Was equipment operated improperly | <input type="checkbox"/> | | |
| E. Chemical specification problem | <input type="checkbox"/> | | |
| F. Other | X | 5 | Filter media in bed is highly packed with solids and is slowing down the rate of filtration, causing the bed to fill up and overflow. |
| 2. Procedure – Why was the procedure a cause? | | | |
| A. Inadequate procedure | <input type="checkbox"/> | | |
| B. Lack of procedure | <input type="checkbox"/> | | |
| C. Procedure not followed | <input type="checkbox"/> | | |
| 3. Human Error – Why was human error a cause? | | | |
| A. Aware of poor judgment / bad decision | <input type="checkbox"/> | | |
| B. Inattention to detail | <input type="checkbox"/> | | |
| C. Violation of requirement/procedure | <input type="checkbox"/> | | |
| D. Communication problem | <input type="checkbox"/> | | |
| E. Other human error (lack of awareness, stress, tiredness, hurried, lapse, etc.) | <input type="checkbox"/> | | |
| 4. Training Deficiency – Why was training deficiency a cause? | | | |
| A. No training provided | <input type="checkbox"/> | | |
| B. Insufficient practice or OJT | <input type="checkbox"/> | | |
| C. Inadequate content | <input type="checkbox"/> | | |
| D. Inadequate refresher training | <input type="checkbox"/> | | |
| E. Inadequate presentation of materials | <input type="checkbox"/> | | |
| 5. Management Problem – Why was management problem a cause? | | | |
| A. Work organization/planning deficiency | <input type="checkbox"/> | | |
| B. Inadequate supervision | <input type="checkbox"/> | | |
| C. Improper resource allocation | <input type="checkbox"/> | | |
| D. Procedure not adequately defined, disseminated or enforced | <input type="checkbox"/> | | |
| E. Other management problem | <input type="checkbox"/> | | |
| 6. Facility Factors – Why was facility a cause? | | | |
| A. Raw water out of spec or influent characteristics above design | <input type="checkbox"/> | | |
| B. Flow too high or excessive water demand | <input type="checkbox"/> | | |
| C. Solids handling issue | X | 4 | Influent pump stations need regular solids removal. This has not been done in a timely manner. |
| D. Man-machine interface problem | <input type="checkbox"/> | | |
| E. Instrumentation problem | <input type="checkbox"/> | | |

| | | | |
|---|--|--|--|
| F. Inadequate backup or stand-by equipment | <input type="checkbox"/> | | |
| G. Other | <input type="checkbox"/> | | |
| 7. Process Control – Why was process control a cause? | | | |
| A. Inadequate control process | <input type="checkbox"/> | | |
| B. Inadequate PCMP implementation | <input type="checkbox"/> | | |
| C. Nutrient imbalance | <input type="checkbox"/> | | |
| D. Disinfection problem | <input type="checkbox"/> | | |
| E. Inadequate mass balance | <input type="checkbox"/> | | |
| F. Coagulation problem | <input type="checkbox"/> | | |
| 8. External Factors – Why were external factors a cause? | | | |
| A. Weather / environmental | <input type="checkbox"/> | | |
| B. Fire or explosion | <input type="checkbox"/> | | |
| C. Security (assault, tampering, sabotage) | <input type="checkbox"/> | | |
| D. Contractor | <input type="checkbox"/> | | |
| E. Other | <input type="checkbox"/> | | |
| Category Summary | | | |
| Category | Description | | |
| 1. Equipment / Material | Solids need to be removed from tanks, and filter media is packed with solids. | | |
| 2. Procedure | | | |
| 3. Human Error | | | |
| 4. Training Deficiency | | | |
| 5. Management Problem | | | |
| 6. Facility Factors | Influent pump stations need solids removed to prevent pumping more solids to filter media. | | |
| 7. Process Control | | | |
| 8. External Factors | | | |

Comments:

Filter media may still need to be replaced. Once operations auger the media and conduct additional filtration testing, we will better understand whether the media will require replacement.

Samples were collected in the bypass stream entering the creek for BOD, TSS, NH3, and e-Coli and sent to a third-party laboratory for analysis.

MODNR was notified via MOGEM on 4.11.23

Given the above contributive factors, what corrective action(s) will be taken to prevent a repeat of this type of incident? Provide action(s) and planned completion date(s).

| Root Cause | Corrective Action | Responsible Person | Planned Completion Date |
|--|--|---------------------|-------------------------|
| Filter media is packed with solids. | Sand filter media replacement. | TBD if applicable | TBD if applicable |
| Pump stations have a high level of solids. | Sludge removal from pump stations. | H&H Septic | 4.21.23 |
| Filter media age. | Auger filter media to break up any coagulated sludge mats and existing solids. | David Duncan CWS | 4.17.23 |

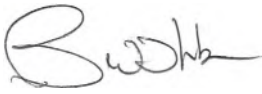
| | | | |
|--|---|---------------------|---------|
| Excessive sludge in filter media is slowing drainage to the 80/20 valve. | Clean out the effluent drainage line using an air compressor. | David Duncan CWS | 4.19.23 |
|--|---|---------------------|---------|

Reviewed and approved by:



 O&M RM

4.19.23
 Date


 CSWR RM

4.18.23
 Date