

Kayla L. Grabinski

From: Tim Verner P.E. <tverner@fisherarnold.com>
Sent: Sunday, September 15, 2024 11:19 AM
To: EE Water Enforcement Report
Cc: Bob Atkins
Subject: West Memphis - NPDES Permit No. AR0022039, AFIN 18-00879, Amended CAO LIS 20-134-001
Attachments: West Memphis CAP Activities Quarterly Report.pdf; July 2024 CAP Meeting Minutes (Jul2424).pdf; March 2024 CAP Meeting.pdf; May CAP Minutes 2024.pdf; August 2024 CAP Meeting Minutes.pdf; February 2024 CAP Meeting Minutes.pdf; January 2024 CAP Meeting Minutes.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

As required under the above referenced Amended CAO, please find attached West Memphis' September 15, 2024 Quarterly Report along with enclosures.

V/R,

Tim Verner, PE
Senior Vice President

FISHER ARNOLD

9180 Crestwyn Hills Drive | Memphis, TN 38125
901.748.1811 Office | 888.583.9724 Toll Free | 901.634.1827 Cell
tverner@fisherarnold.com | www.fisherarnold.com



FISHER ARNOLD

ENGINEERS | ARCHITECTS | CONSULTANTS | PLANNERS

September 15, 2024

Mr. Richard C. Healey
Enforcement Branch Manager
Division of Environmental Quality
Office of Water Quality
5301 Northshore Drive
North Little Rock, Arkansas 72118-5317

**RE: UPDATE ON ACTIVITIES FOR CORRECTIVE ACTION PLAN
AMENDED CAO LIS 20-134-001
WEST MEMPHIS UTILITIES
NPDES PERMIT NUMBER AR0022039, AFIN 18-00879,**

Dear Mr. Healey:

On behalf of West Memphis Utilities (WMU), please accept the following as an update of activities undertaken since our last update in December, 2023, and since the Amended CAO listed above was finalized and our Revised Corrective Action Plan was submitted to your department last month. As outlined in WMU's R-CAP, WMU outlined a plan of action through December 31, 2026. Listed below is a capsule summary of those activities either completed or underway since the original CAP was implemented.

1. WMU continues to meet regularly with their CAP Working Group. Members of this group include Bob Atkins, General Manager, Brett Simms, Assistant General Manager, WMU; Katerina Webb, WMU; Denise Bosnick, Director of Environmental Quality, WMU; and Paul Holloway, WWTP Manager, WMU. Also included in these monthly meetings as necessary are Tim Verner, P.E., Layne Harris, and Chase Carpenter, Fisher & Arnold, and Mac Compton, P.E., RJN Group. This group directs and tracks on-going efforts by WMU staff and all outside consultants and contractors relative to efforts towards the elimination of systemwide SSOs.
2. Argo Construction has completed the replacement of Pump Station 3 and Pump Station 4, along with a new common force main that receives and directs flow from each of these stations to Pump Station 9. This redirection has significantly reduced the flow that has to be

9180 Crestwyn Hills Drive
Memphis, TN 38125

901.748.1811

Fax: 901.748.3115

Toll Free: 1.888.583.9724

www.fisherarnold.com

handled by existing Pump Stations 6 and 7. This reduction of flow on these existing pump stations provides more conveyance capacity in their upstream gravity collection system which will have a positive influence on previously reported SSOs in those basins.

3. Since our last semiannual report in December 2023, WWTF staff reported a total of four (4) SSOs, and no plant bypasses. It is notable that three of the reported SSOs occurred on Thursday, September 12, 2024, during an extended rain event where over 5 inches of rain fell in less than 18 hours.
4. Construction for the required expansion of the WWTF commenced on October 1, 2023. To date, the contractor, Max Foote Construction Company, has completed construction of the three new 110-foot diameter secondary clarifiers, has constructed the new grit removal structure, is constructing the new oxidation ditch flow splitter structure, and has begun the construction of new rotor support structures in the first of the three existing ditches. Other work of note includes the construction of a new equalization basin pump station, as well as the commencement of interconnecting process piping and electrical work. All work is scheduled to be completed by January 26, 2026.
5. Between the period of December 18, 2023 and September 1, 2024, WMU has invested approximately \$13,428,175.00 in the planning, engineering, replacement, and/or repair of their sewer collection and treatment systems. Of this total, \$13,368,175.00 has been for actual rehabilitation, replacement, or upgrades to the existing WWTF and PS3/PS4 replacements. The remainder has been for advance planning studies and/or design of sewer infrastructure repairs, rehabilitation, or replacement.
6. WMU is preparing to move forward with the bidding of the CIPP work identified in previously completed SSES efforts. This will encompass the lining of approximately 20,000 LF of 8, 10, 12, 15, 18, and 24-inch gravity sewer mains throughout their collection system. This work is estimated to cost approximately \$6.5 million and take approximately 20 months to complete.
7. WMU is planning to commence 60 to 75 days of post-rehabilitation flow monitoring this fall in those areas influenced by the work recently completed by the new Pump Station 3 and Pump Station 4 redirection to better gauge its impact on previously recorded SSOs.

Mr. Richard C. Healey
September 15, 2024
Page 3

8. WMU is currently working with a local industrial discharger in revising their current industrial discharge permit to add more stringent daily average and maximum BOD limits.

Hopefully, this summary of activities is useful to you and your staff and demonstrates the commitment of WMU to eliminate SSOs in their collection system and WWTP bypasses. If you require any additional information, please do not hesitate to contact me at this office.

Sincerely,

FISHER & ARNOLD, INC.



Tim Verner, P.E.
Senior Vice-President

TV/tv

Enclosures

Cc: Bob Atkins, General Manager, WMU



WEST MEMPHIS UTILITY COMMISSION

604 East Cooper

Phone: 870-735-3355

West Memphis, AR 72301

MONTHLY CAP MEETING MINUTES

January 9, 2024

Attending this meeting was Ward Wimbish, GM, Brett Sims, Asst. GM, Katerina Webb, EI, WMU, Paul Holloway, WW Supt., and Tim Verner, FA.

1. Review December Meeting Minutes

Minutes were reviewed and approved.

2. PS 3/PS4 and Common Force Main Extension

- a. The contractor has received clarification from WMU about adding disconnect and CT cabinet ahead of PS 3. Per Maria Adams, WMU is looking at a 13–15-week lead time to secure the necessary CT cabinet (See attached email correspondence). Tim Verner has separately requested the contractor to ask his electrical subcontractor about whether they can source a cabinet any quicker.
- b. TV recommended that once delivery dates were known that a time extension change order be developed.

3. WWTF Modifications

- a. Electrical VE Redesign is 90% complete with plans to be distributed to contractor for review/comment from electrical sub prior to finalizing. The primary change centers around moving Aeration Basin drive and control gear to an area immediately east of the basins thus reducing greatly the number of conductors and VFD filters originally required.
- b. The contractor has completed excavation for Clarifier 3, completed its base slab, and has placed 50% of the walls on this unit.
- c. The contractor has cast one half of the base slab for Clarifier 2 and will have cast 25% of this unit's walls by 1/12/24.
- d. The contractor has cast the Clarifier Splitter Box base slab and is forming walls.
- e. In preparation to begin work on the new influent distribution structure, it was discovered on 1/5/24 that the 20-inch force main from PS 9 is actually located

under the south slope of the EQ Basin embankment. This in-situ location is in conflict with the location for this new structure and will require the relocation of the force main. The contractor is securing final location information for this force main so that a relocation plan may be developed by FA for pricing by MFCC.

- f. MFCC submitted their Application for Payment No. 3 on January 3, 2024. FA reviewed and recommended payment of \$2,246,456.02, bringing the total amount billed to date of \$7,078,029.23.

4. 2022 Flow Monitoring

- a. This will be done after PS3/PS4 online and point repair/CIPP.

5. 2022 Sewer Main Rehab.

- a. Point Repair- BS and KW have developed a spreadsheet detaining those areas where pipe bursting or pipe replacement will likely be necessary due to access issues with property owner. TV will use this information to amend CIPP/Pipe Bursting/Pipe Replacement bid documents.
- b. CIPP/Pipe Bursting/Line Replacement 90% plans will be delivered for WMU review in January 2024. This schedule is still on track.

6. PS 7

- a. In discussions with PH, he stated that another motor has failed and will need replacement. He requested that this station be rehabbed as soon as possible due to continual motor and pump failures. It was decided to approach WWTP Expansion contractor to request pricing for this rehabilitation as it will likely save several months of time. TV will develop RFP and issue to MFCC.

7. ADEQ

- a. ADEQ has issued a time extension for completion of CAP required system improvements.

8. Next Meeting date February 21, 2024 at 10:00 AM at WMU Office.



WEST MEMPHIS UTILITY COMMISSION

604 East Cooper

Phone: 870-735-3355

West Memphis, AR 72301

MONTHLY CAP MEETING MINUTES

February 21, 2024

Present at the February Meeting were Bob Atkins, GM WMU, Ward Wimbish, PE, Brett Sims, Asst. Manager, WMU, Paul Holloway, WWTP Supervisor, Katerina Webb, Staff Engineer, WMU, and Tim Verner, PE, FA.

1. Review January Meeting Minutes

Minutes of the January meeting were approved.

2. PS 3/PS4 and Common Force Main Extension

- a. The contractor is currently awaiting the CT cabinet to arrive before work to PS 3 can proceed. The contractor's electrical subcontractor has not been able to source an equivalent cabinet to possibly accelerate the power connection. B. Simms is going to follow up on preparatory work that WMU may need to undertake to be ready to accommodate this work once CT cabinet is onsite.

3. WWTF Modifications

- a. Electrical VE Redesign is essentially complete with plans distributed to the contractor for review/comment/pricing. A final coordination meeting with controls engineer will be held late this week to insure original control integration has been maintained throughout the VE process. The RAS/WAS VE has been completed, less the minor revisions to HVAC to reduce cooling load in electrical side of building.
- b. The contractor has completed all slab and exterior wall construction for Clarifier 3, and has completed the slab and approximately 60% of the exterior walls for Clarifier 2. Exterior walls for Clarifier 2 should be complete next week. This will allow for the commencement of the final excavation for Clarifier 1. Some backfilling of the exterior wall on the west and north sides of Clarifier 3 has commenced.
- c. The contractor has completed the Clarifier Splitter Box.

- d. The contractor has been provided plans for the relocation of the 20-inch force main from PS 9 that was found in conflict with the aeration splitter box. Materials for this relocation have been placed on order.
- e. Initial demolition work is underway for the new influent channel with foundation excavation anticipated to begin by the first week of March.
- f. The EQ PS location has been staked and construction should commence in next thirty days.
- g. MFCC submitted their Application for Payment No. 4 on February 8, 2024. FA reviewed and recommended payment of \$1,105,384.69, bringing the total amount billed to date of \$8,241,592.06.

4. 2022 Flow Monitoring

- a. This will be done after PS3/PS4 online and point repair/CIPP.

5. 2022 Sewer Main Rehab.

- a. Point Repair
- b. CIPP/Pipe Bursting/Line Replacement 90% plans are complete and FA is going to develop an OPC for all of the CIPP work prior to advertisement.

6. PS 7

- a. Mechanical plans detailing demolition, pumps, valves and piping have been sent to MFCC for comment/pricing. Once electrical plans are complete, those will also be sent. The plan will be for MFCC to go ahead and get long lead items (pumps/valves) on order.

7. ADEQ

- a. ADEQ did finally respond that they have accepted WMU's request for time extension and that they will draft a formal Amendment to the CAO for review/execution.
- b. Guy Lester with ADEQ Permit Branch made a site visit to the WWTP on January 8, 2024. This was required as part of their review of the new NPDES Permit renewal.

8. PS 8 and PS 9

- a. FA was requested to develop plans to install emergency generators for each of PS 8 and PS 9, as well as replacement of existing FM pumps with Flygt pumps.

9. Next Meeting date March 20, 2024.



WEST MEMPHIS UTILITY COMMISSION

604 East Cooper

Phone: 870-735-3355

West Memphis, AR 72301

MONTHLY CAP MEETING

March 20, 2024

1. Review February Meeting Minutes

2. PS 3/PS4 and Common Force Main Extension

- a. WMU has obtained CT cabinet, and the contractor is finalizing scheduling to get their electrician on-site to begin work. As of 3/15/24, their electrician was about two weeks from finishing another job commitment before they could reasonably be on-site to begin their work. Argo is finalizing their schedule to be on-site prior to electrician mobilizing to begin existing station bypass, demolition, and new station installation. A more formal completion schedule has been requested and should be in hand this week.

3. WWTF Modifications

- a. Controls system modification to accommodate electrical redesign has been completed and those plans shared with contractor to begin pricing. Contractor also has RAS/WAS modifications and is working with their vendors to finalize pricing.
- b. The contractor has completed all slab and exterior wall construction for Clarifiers 2 and 3 and continues casting effluent trough slab and wall sections on Clarifier 3. The contractor has backfilled approximately 50% of Clarifiers 2 and 3 and has excavated for the first half of the bottom slab for Clarifier 1. Placement of concrete for this first slab pour is likely March 25/26.
- c. The contractor has cast the first section of the equalization basin effluent PS caisson and will be forming the next section week of 3/18.
- d. Relocation of the filter wash pumping station discharge force main is being completed this week with foundation work to commence immediately thereafter.

- e. The contractor has installed the ancillary floating aerators and their electrical contractor should complete the wiring and testing this week so that they can be energized.
- f. MFCC submitted their Application for Payment No. 5 on March 11, 2024. FA reviewed and recommended payment of \$2,048,021.05, bringing the total amount billed to date of \$10,397,403.69.

4. 2022 Flow Monitoring

- a. This will be done after PS3/PS4 online and point repair/CIPP.

5. 2022 Sewer Main Rehab.

- a. CIPP/Pipe Bursting/Line Replacement are complete and ready to assign a bid advertisement date.

6. PS 7

- a. MFCC is obtaining quotes from GSE for new pumps.

7. PS 8 and PS 9

- a. The Engineer has provided existing Fairbanks Morse pump data to GSE to determine options for Flygt pump replacement for PS 8. Pump data for PS 9 is already known.

8. Next Meeting date April _____, 2024.



WEST MEMPHIS UTILITY COMMISSION

604 East Cooper

Phone: 870-735-3355

West Memphis, AR 72301

MONTHLY CAP MEETING

May 6, 2024

1. Review March Meeting Minutes

2. PS 3/PS4 and Common Force Main Extension

- a. The contractor has essentially completed the work to install the new PS3 and has start-up scheduled for May 8, 2024. After this station is placed online, they will transition to PS 4 on Lehr Street. The contractor has reached out to the City about road closure to facilitate bypass pumping as the manhole that he is required to bypass to is in the middle of the street. Now that PS 3 is nearing completion TV will request an updated schedule to complete PS 4.

3. WWTF Modifications

- a. The contractor has indicated that costs data on the electrical VE and RAS/WAS redesign should be completed in the next 10 days.
- b. The contractor has completed all slab and exterior wall construction for all three clarifiers and is now focusing attention to the installation of effluent trough walls and slabs. Backfilling operations are well underway, along with the installation of groundwater piping behind exterior walls, as well as the installation for the scum pump station.
- c. The contractor has cast the last section of the EQ basin pump station and is excavating to sink to final elevation so that the bottom plug can be cast. He is forming the top slab to be cast, cured and placed after the station bottom slab is completed.
- d. The contractor has cast the bottom slab of the influent/grit chamber structure and is forming support walls.
- e. The ancillary floating aerators have been in operation for approximately five weeks and DO levels seem to be much higher with a positive effect on the effluent quality.

- f. MFCC submitted their Application for Payment No. 6 on April 8, 2024. FA reviewed and recommended payment of \$1,485,936.14, bringing the total amount billed to date of \$11,961,547.00.

4. 2022 Flow Monitoring

- a. This will be done after PS3/PS4 online and point repair/CIPP.

5. 2022 Sewer Main Rehab.

- a. TV will supply to WMU a revised priority list of those lines to be CIPP'd based on the RJN reports previously completed. This information will then be utilized to dictate desired progression of CIPP work by contractor(s). A decision still must be made to determine whether this will be bid as one package, or multiple packages. Given time constraints with ADEQ, it may be wise to bid as one package with an anticipated cost of between \$6 million and \$6.5 million.

6. PS 7

- a. Final electrical and controls drawings will be going to MFCC so they can complete their quote.

7. PS 8 and PS 9

- a. The Engineer has provided existing Fairbanks Morse pump data to GSE to determine options for Flygt pump replacement for PS 8. Pump data for PS 9 is already known.

8. ADEQ

- a. A meeting has been scheduled with ADEQ at their North Little Rock office for 11 AM, Wednesday, May 15, 2024, to discuss their proposed Amended Consent Administrative Order/schedule/fine.



WEST MEMPHIS UTILITY COMMISSION

604 East Cooper

Phone: 870-735-3355

West Memphis, AR 72301

MONTHLY CAP MEETING MINUTES

July 24, 2024

1. Members Present and Review May Meeting Minutes

- a. Present at the meeting was Bob Atkins, GM, Brett Sims, AGM, Paul Holloway, WWTP Supt., Katerina Webb, EI, Ward Wimbish, City Engineer, and Tim Verner, Fisher Arnold.
- b. Minutes of May meeting will be distributed for record.

2. PS 3/PS4 and Common Force Main Extension

- a. The replacement motor has been installed on PS 3 and the station is operational. The contractor has moved efforts to PS 4. Currently he is awaiting the fabrication of a 14" x 10" true wye HDPE to tie to the discharge force main to the common force main, as well as awaiting special fabricated stainless steel suction side fittings for the new pumps to tie to existing suction lines from wet well. The wet well has been cleaned and coated. Electrical work is nearing completion. Expected start-up date is September 1, 2024.

3. WWTF Modifications

- a. The contractor has provided costs associated with the VE of the electrical redesign, the revised RAS/WAS PS and Structure, Effluent Pump VFDs/Controls, and Upsized Filter Wash/Grit Chamber PS that will replace existing undersized pump station.
- b. The contractor has completed the relocation of the 20-inch force main from PS 9 to allow for the construction of the Aeration Basin Splitter Box.
- c. The contractor has completed all concrete construction on the three new clarifiers and has begun prep and painting of new clarifier equipment that should begin in the next thirty days. Additionally, OD to CL splitter boxes have been completed with installation of gates to commence in the next few weeks. Interconnecting distribution piping to each clarifier from the OD splitter box has been completed and the 24-inch effluent lines from Clarifiers 2 and 3 have been completed.

- d. The contractor has cast the top slab of the EQ basin pump station and is preparing to set pump bases/guide rails, etc.
- e. The contractor has completed all concrete work on the influent structure and grit chamber.
- f. The second lift of the Aeration Basin splitter box is being cast today.
- g. MFCC submitted their Application for Payment No. 9 on July 1, 2024. FA reviewed and recommended payment of \$1,344,813.15, bringing the total amount billed to date of \$16,583,599.98.
- h. The contractor has requested WMU consider whether they would allow them to attempt to re-establish the existing diffused air system in the easternmost basin so that the basin can be placed back into service after new rotor support structures are completed without running temporary power to new rotors as they are still awaiting new switchgear. In discussion Paul Holloway does not have confidence that the original air header, lateral lines, and diffuser heads can be placed back into operation without blowing apart once pressurized, as has been the case the two times WMU has attempted to place back into service. However, after discussion WMU does not take exception to the contractor attempting to do this as a means to place the basin back into service while awaiting electrical switchgear to power the new rotors. However, the contractor will not be able to drain the next basin after reassembly until it has operated at least 2 weeks after reconstruction to insure it will remain functional. Verner relayed this conditional permission back to MFCC on 7/24/2024 and they do not have an issue with the conditions.
- i. Per WMU, the RAS/WAS sump pump discharge point should be the new clarifier distribution box, above normal water level, to prevent the backflow of waste into the pump pit.
- j. Other issues
 - i. Aeration Basin EJ sealing
 - ii. Capping of abandoned 36-inch and 24-inch lines

4. 2022 Flow Monitoring

- a. This will be done after PS3/PS4 online and point repair/CIPP.

5. 2022 Sewer Main Rehab.

- a. TV will supply to WMU a revised priority list of those lines to be CIPP'd based on the RJN reports previously completed by the August CAP Meeting so that a schedule may be developed for use in the revised CAP, due in September, 2024.. This information will then be utilized to dictate desired progression of CIPP work by contractor(s). A decision still must be made to determine whether this will be

bid as one package, or multiple packages. Given time constraints with ADEQ, it may be wise to bid as one package with an anticipated cost of between \$6 million and \$6.5 million.

6. ADEQ

- a. An Amended CAO has been entered and agreed to by the City and ADEQ. It will become effective of August 20, 2024, which triggers due dates for Revised CAP, milestone schedule, and the submission of the first of the new quarterly progress reports (See attached). The first quarterly report is due September 15th, and the revised CAP is due September 19, 2024.

7. Next Meeting date August 21, 2024



WEST MEMPHIS UTILITY COMMISSION

604 East Cooper

Phone: 870-735-3355

West Memphis, AR 72301

MONTHLY CAP MEETING MINUTES

August 20, 2024

Attending Meeting was Bob Atkins, General Manager, Paul Holloway, WWTP Supt., Brett Sims, Asst. General Manager, Katerina Webb, WMU Intern Engineer, and Tim Verner, Fisher Arnold.

1. Review July Meeting Minutes

- a. The minutes of the July Meeting were reviewed and approved.

2. PS 3/PS4 and Common Force Main Extension

- a. The contractor is reinstalling the new pumps in PS 4 to allow for additional horizontal clearance to remove pumps. As of this week, the contractor is still aiming for start-up around September 1, 2024.

3. WWTF Modifications

- a. The contractor has provided costs associated with the VE of the electrical redesign, the revised RAS/WAS PS and Structure, Effluent Pump VFDs/Controls, and Upsized Filter Wash/Grit Chamber PS (1,000 GPM) that will replace existing undersized pump station. Per his Proposal Dated July 26, 2024, his requested costs to perform these modifications totals \$447,100.00. Reviewing the costs and considering costs for similar pump station work (PS 3 and PS 4), the pricing is not unreasonable, and it is recommended that we move forward and provide a construction directive to the contractor to begin work. After discussion with PH, KW, BS, BA approved TV to contact MFCC and direct them to proceed via construction directive. (This CD-3 was issued by TV on 8/22/2024).
- b. The contractor has completed all interconnecting influent and effluent piping from OD JB 1 downstream into the clarifiers, as well as effluent lines from the clarifiers to CL JB 1. The contractor has also completed the cutting/capping of the long abandoned 36-inch bypass line and 24-inch clarifier effluent line that has to be removed to allow for the construction of the new UV and RAS/WAS building.
- c. The contractor is casting the final lift on the OD influent splitter structure today.

- d. The contractor has cleaned solids from OD 1 and is modifying the existing gate openings in the influent channel in an attempt to prevent the trough from overflowing into OD 1. Once this is accomplished, final cleaning can be performed and work for new rotor supports and temporary aeration system can be undertaken.
- e. The contractor has completed all concrete work on the influent structure and grit chamber.
- f. MFCC submitted their Application for Payment No. 10 on August 8, 2024. FA reviewed and recommended payment of \$1,045,846.51, bringing the total amount billed to date of \$17,629,446.49.
- g. Other issues
 - i. RAS/WAS Pre-engineered building siding colors were selected by PH (Rustic Red for siding and Burnished Slate for gutters/trim.
 - ii. Aeration Basin EJ sealing of existing wall joints will be requested for those joints that have been showing signs of failing.

4. 2022 Flow Monitoring

- a. This will be done after PS3/PS4 online and point repair/CIPP.

5. 2022 Sewer Main Rehab.

- a. TV has supplied a breakdown of recommended CIPP that has each line segment delineated with expected I/I removal (See Attached). A decision still must be made to determine whether this will be bid as one package, or multiple packages. Given time constraints with ADEQ, it may be wise to bid as one package with an anticipated cost of between \$6 million and \$6.5 million. After discussion, it was decided that the City would prioritize the work under one contract, beginning with Basin 3, 15, and 10, with the remainder to follow.

6. ADEE-DEQ

- a. A Revised Corrective Action Plan (R-CAP) draft has been prepared for review prior to submission to ADEE-DEQ as required by the Amended CAO. After discussion of alternate and additional language as it relates to plant upsets and corrective actions WMU is taking in verifying reporting is on time, BA directed TV to make the edits and return to he and PH for final review and approval before submission to ADEE-DEQ. (TV subsequently made edits that were approved, and R-CAP was sent to ADEE-DEQ and was acknowledged by Richard Healy on 8/22/2024).

7. Next Meeting date September 25, 2024 at 10 AM