



CITY OF HOT SPRINGS

Utilities Department

780 Adams Street

Hot Springs, Arkansas 71901

September 15, 2023

Leslie Allen-Daniel
Enforcement Analyst – Water Division
Arkansas Energy & Environment – Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118-5317

VIA Email

**RE: City of Hot Springs Utilities
Permit No. AR0033880 / AFIN 26-00145 / CAO LIS 08-099-002
Semi-Annual Report**

Dear Ms. Allen-Daniel,

The City of Hot Springs, responding to the above Consent Administrative Order (CAO), submits the following report.

The CAO specifically addresses deficits at the Davidson Drive (Regional) Wastewater Treatment Plant and in the collection system in general with an emphasis on The Gulpha Sewer Basin.

COLLECTION SYSTEM IMPROVEMENTS

Completed Projects

The City has completed improvements on Grand Avenue using 2020 Bond funds at a cost of \$315,145. Completed improvements to the Main Street Sewer Project were funded through CIP funds at a cost of \$781,575. A hydraulic model was completed to help identify capacity needs.

Gulpha Sewer Basin

The Gulpha Basin is the primary focus of our collection system work. The current project includes the Lower Gulpha Interceptor, the Gulpha Pump Station Improvements, and the Gulpha Force Main. The Spring Street Collection System project is paused and the Hot Springs Creek Pump Station improvement project is waiting for equipment delivery.

The City of Hot Springs Utilities Department had engaged four engineering firms to address the primary deficits in the basin: the RJN Group to design and upsize the existing gravity flow trunk main from Spring Street to the Gulpha Pump Station, Crist Engineering to upgrade the existing pump station and design a new station, Hanson & McLaughlin to engineer forcemain improvements and Hawkins Weir to design gravity line improvements to the Spring Street Collection system.

Lower Gulpha Interceptor

The RJN Group, Inc. has the contract for the Lower Gulpha Gravity Interceptor from Spring Street to the Gulpha Pump Station. Plans are 90% complete. The new pipe will get progressively larger, going from 30" to 36" to 42," as it reaches the pump station, carrying wastewater from the gravity system to the pump station.

The project will be constructed in four phases. The project specifies approximately 5,000 LF of 42" pipe, 9,000 LF of 36" pipe and 4,500 LF of 30" pipe, will complete the interceptor.

Gulpha Pump Station Improvements

Crist Engineers, Inc. has the contract for the Gulpha Pump Station Improvements. Plans are 100% complete. After only one bidder responded to the June 19, 2023 bid date, the City extended the bid date to July 17, at which time two bidders had responded. Both bidders exceeded the budget by \$3.8 M to \$4.4 M respectively. The high bidder withdrew. The City met with the remaining bidder and discovering a number of complications to the bid, the City rejected the remaining bid.

The project is now being combined with the Davidson Drive WWTP improvements in hopes of attracting more respondents and better budget outcomes. In early October, we are soliciting Statements of Qualifications for Construction Management at Risk at a Guaranteed Maximum Price. We anticipate the Notice to Proceed by November 31, 2023. The estimated construction schedule for completion will be forthcoming upon selection of the contractor. This work, along with improvements at the Davidson WWTP, will be done in coordination with the Gulpha Force Main.

The pump station, currently rated for 12 million gallons per day, is inadequate during wet weather events. We have contracted with Crist Engineers to design a wet weather pump station that can handle the 32 MGD demand expected during extreme weather events. The existing Gulpha Pump Station still has usable assets that are included in the design. Eventually, we will convert all of the flow over to a new pump station that is part of this project.

Gulpha Force Main

From Gulpha Pump Stations, two new force mains will convey the flow to the Davidson Drive Wastewater Treatment Plant at a minimum velocity design. Hanson & McLaughlin, LLC has the engineering contract for the Gulpha Force Main. The existing 20" force main is severely deteriorated, resulting in multiple line failures. We revised our contract with Hanson & McLaughlin to include a new 24" force main to replace the existing 20". The new 24" line will handle dry weather flows while a new 30" line is large enough to carry wet weather flows.

Phase One, now out for bids, includes the 30" force main and the 24" force main. The lines will be laid parallel from the pump station to a point in Chase Place, where the 24" line will connect to a 24" gravity sewer. The 30" line will be capped at that point. In a later phase, the 30" force main will be continued to the Davidson WWTP.

Spring Street Collection System Improvements

The Spring Street project has been postponed because of budget issues. Current economic conditions have caused project costs to exceed forecasts. Hawkins Weir Engineer has completed design on that phase and Spring Street is ready to bid. Construction will be pursued in phases, after completion of other collection and treatment projects using whatever bond funds remain and CIP funds.

Hot Springs Creek Pump Station and Associated Manholes

A few manholes near the Hot Springs Creek Pump Station had a history of surcharge during heavy rain events. Hot Springs raised the lid elevation of the affected manholes, constructed a berm around one and contracted Crist Engineers to develop plans for the pump station improvements. Plans are complete. We are awaiting delivery of pumps and valves to complete the project. It is to be noted that the work completed to date has resulted in no SSOs since May, 2023, though we have had several significant rain events.

Future Projects

Included in City planning for future improvements are Lakeside Pump Station Improvements and the Ridgeway Street Collection System Improvements, along with other collection system improvements that have related SSOs.

DAVIDSON DRIVE WASTEWATER TREATMENT PLANT

The effectiveness of the above Collection System projects and our ability to maintain compliance with our environmental permit limits, is dependent on the capacity of the Davidson Drive Wastewater Treatment Plant to treat the incoming flows or divert the flows to the existing EQ basin. Our project is designed to treat the larger flows and stay within our permit parameters. DEQ/EPA is still reviewing the construction permit for the treatment plant improvements as of today's date.

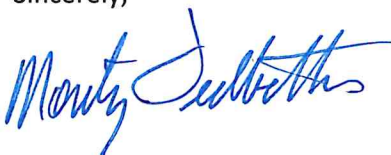
The project, designed by Crist Engineers, includes new aeration diffuser equipment that increases treatment capacity through the existing aeration basins. A new chemical building is added to the plant. The addition of coagulant chemicals to aid in the settling of suspended solids, reduce ammonia and phosphorus levels will enhance our treatment capacity. Another element of the project is the addition of a fifth clarifier that will help remove suspended solids in wastewater and add critical detention time for the settling process. Our UV Disinfection unit will be expanded to accommodate the higher flows. The final element of the project is replacement of the effluent discharge line and diffuser that carries the treated wastewater back to the environment, specifically back into the Ouachita River watershed.

Since we are encountering lead time delays in equipment delivery and still awaiting our NPDES Construction Permit, we will likely find it necessary to ask for an extension on the December 21, 2024 completion date for the Davidson Drive (Regional) Wastewater Treatment Plant Improvements.

These projects are part of our continuing work to comply with two Consent Administrative Orders that address the Davidson Drive Wastewater Treatment Plant, the Gulpha Sewer Basin and other I&I issues in the City's wastewater system. The City of Hot Springs Utilities Department remains committed to completing all of the projects addressed in this report.

Should you need further information, please contact me at (501)651-7730 or by email at mledbetter@cityhs.net.

Sincerely,



Monty Ledbetter
Utilities Director

cc: **Arkansas Energy & Environment** – Richard Healey, Enforcement Manager
City of Hot Springs - Bill Burrough, City Manager; Denny McPhate, Deputy City Manager; Harold Mauldin, Wastewater Facilities Operations Manager; Todd Piller, Capital Project Manager;
Consultants - Karl Hanson, Hanson McLaughlin; Chris Leathers, RJN Group; Craig Johnson, Crist Engineers; Elizabeth Heiles, Hawkins-Weir

Attachments:

- Phase 1 Force Main alignment from Gulpha Pump Station to Chase Place
- Updated Milestone Schedule for Davidson WWTP Improvements and Collection System Improvements.

PHASE 1 – 30" & 24" FORCE MAINS FROM GULPHA PUMP STATION TO CHASE PLACE



UPDATED MILESTONES FOR DAVIDSON WASTEWATER TREATMENT PLANT AND COLLECTION SYSTEM IMPROVEMENTS

Davidson Wastewater Treatment Plant

Item No.	Davidson Drive WWTP Milestone Description	Initiation Date	Completion Date
1	Davidson Drive WWTP Professional Services: Design, Construction Administration, and Resident Project Representative	September 2020	December 2024 (TBD)
2	AEE/DEQ Permit Construction and NPDES Modification Submission DEQ Review and Approval	November 2021	¹ Pending Approval
3	Construction Contract for Improvements	December 2023	
4	Performance and Demonstration Period	June 2024	² December 2025 TBD
5	Final Compliance for WWTP Improvements	-	³ December 2026 TBD

¹Delay in NPDES Construction Permit approval

^{2,3}Permit approval, delay in obtaining a contractor and delay in delivery of equipment will require an extension of the completion date.

Collection System Improvements

Item No.	Collection System Milestone Description	SSO Mitigation MH No.	Initiation Date	Completion Date
1	Hydraulic Model Update – System Wide Crist Engineers	N/A	February 2021	Complete
2	East Grand Avenue Collection	10578	February 2021	Complete
3	Main Street Collection	NA	February 2021	Complete
4	Spring Street Collection (Upper Gulpha) Hawkins- Weir Engineers	4117 / 4118	February 2021	December 2030
5	Lakeside Pump Station	5259 / 5260	February 2021	December 2030
6	Lower Gulpha Interceptor RJN Group	1750	March 2022	December 2025
7	Gulpha Pump Station Crist Engineers	1750	March 2022	June 2025
8	Gulpha Force Main Hanson & McLaughlin, LLC.	1750	March 2022	June 2025
9	Ridgeway Street	1754 / 1755	December 2024	December 2030
10	Marion Anderson Collection Improvements	13483 /13484	December 2027	December 2030
11	Mazarn Pump Station No. 1	9250	December 2027	December 2030
12	Hot Springs Creek Crist Engineers	12242, 1865, 1866	September 2022	December 2024
13	Manhole 1684	1684	December 2027	December 2030