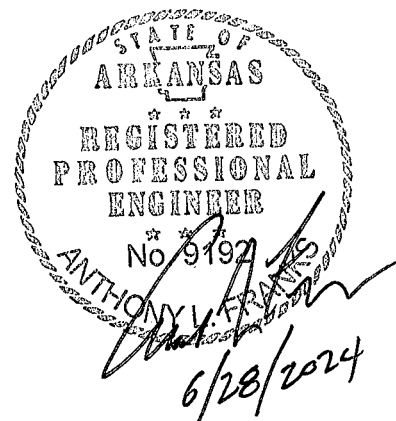


**CITY OF MAGNOLIA, ARKANSAS**  
***CORRECTIVE ACTION PLAN***  
**NPDES PERMIT NUMBER AR0043613**

June 2024  
(Revised)

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## INTRODUCTION

The City of Magnolia operates and maintains a wastewater collection system and treatment facility (NPDES Permit #AR0043613). The treatment facility generally consists of aeration, clarification, and chlorine disinfection. The plant has a design flow of 2.5 MGD. The original collection system consists of clay pipe and brick manholes. More recent additions have been made to the collection system consisting of pvc pipe and concrete manholes.

## PRESENT CONDITIONS

The City is authorized under the National Pollution Discharge Elimination System (NPDES) permit number AR0043613 to operate the wastewater treatment facility. Beginning in February 2019 and continuing through June 2023, the treatment system has experienced twenty-five (25) effluent violations and the collection system experienced twelve (12) sanitary sewer overflows (SSOs), totaling approximately 33,000,000 gallons. All referenced violations are outlined in the Consent Administrative Order. An inspection of the wastewater facilities was conducted by A.L. Franks Engineering with the following observations and conclusion being reached.

Based on the evidence provided by the operator of the collection system, we believe most of the effluent violations are a direct result of multiple ongoing projects associated with the clarifiers. Currently, one clarifier is online and a second is operable and ready for use as needed. The majority of the volume identified in the SSOs is attributed to the pond levee failure.

To be more specific, each parameter violation and suggested cause is identified as follows:

1. Ammonia Nitrogen (16) – Cause: Intermittent clarification due to capital projects on multiple clarifiers. This issue has been resolved. No further action is required.
2. Total Suspended Solids (3) – Cause: I/I. The Utility is in the process of an extensive SSES.
3. Total Recoverable Lead (3) – Cause: We acknowledge one excursion in Q2 2022 with no obvious explanation. All results since that time have been within permit limits. See Attachment A. This issue has been resolved. No further action is required.
4. Total Residual Chlorine (2) – Cause: The SO<sub>2</sub> regulators failed and have now been replaced. This issue has been resolved. No further action is required.
5. Fecal Coliform Bacteria (1) – Cause: I/I. The Utility is in the process of an extensive SSES.

The city is currently performing a sanitary sewer evaluation survey (SSES) in an effort to identify I/I locations. The current cost to the city for the SSES is \$450,000. The city has also located and repaired several sources of I&I. In the past three (3) years the city as spent \$50,000/yr. on manhole rehabilitation.

## RECOMMENDATIONS AND MILESTONE SCHEDULE

1. Complete collection system SSES to identify potential sources of Infiltration and Inflow (I&I) and repair the pond levee to permanently resolve the SSO potential at this location.

Completion Date December 2024

2. Repair sources of I&I located on mains and manholes

Completion Date December 2025

## ATTACHMENT A

### Quarterly Lead Results

Monitoring Period	Date	Concentration	Loading
Q2 2022	4/3/2022	15.6 ug/l	0.31 lb
Q3 2022	8/14/2022	0.313 ug/l	0.00296 lb
Q4 2022	10/10/2022	0.26 ug/l	0.00230 lb
Q1 2023	1/23/2023	0.500 ug/l	0.010 lb
Q2 2023	4/24/2023	0.260 ug/l	0.00612 lb
Q3 2023	7/17/2023	0.584 ug/l	0.018 lb
Q4 2023	10/29/2023	0.787 ug/l	0.0185 lb
Q1 2024	1/23/2024	0.520 ug/l	0.0117 lb
Q2 2024	4/22/2024	0.416 ug/l	0.017885 lb