



March 7, 2023

**CORRECTIVE ACTION PLAN**  
**for**  
**Sanitary Sewer Overflows (SSO's)**  
**NPDES Permit No. AR0021466**

Prepared for:

**The City of Alma**  
811 Fayetteville Avenue  
Alma, Arkansas 72921

Prepared by:

**Neal Morrison Consulting, LLC**  
4000 Blue Hole Road  
Rudy, Arkansas 72952



March 7, 2023

**CORRECTIVE ACTION PLAN**  
**for**  
**Sanitary Sewer Overflows (SSO's)**  
City of Alma, Crawford County, Arkansas  
NPDES Permit No. AR0021466

**1. INTRODUCTION**

The City of Alma, Arkansas is in receipt of correspondence from the Arkansas Department of Energy and Environment (ADEE) dated February 15, 2023 detailing thirteen Sanitary Sewer Overflows (SSO's) that occurred system wide between February 25, 2013 and January 10, 2023. The letter correctly points out that five (5) incidents of SSO's were in the vicinity of 829 Maple Shade Road. Four (4) of the SSO's occurred at Manhole No. 62 behind the residence at 829 Maple Shade Road and one (1) SSO occurred nearby at Manhole No. 63-1 at the intersection of Maple Shade Road and Northwoods Drive.

The purpose of this report is to document past corrective actions for SSO's on the list that have already been resolved and to put forth a plan and schedule for ongoing work to address the remainder.

**2. CORRECTIVE ACTION PLAN**

Appendix A of this report provides status information for all the SSO's identified in the aforementioned correspondence. As shown, most of the issues were one-time routine failures due to blockages caused by fats, oils and grease (FOG), rags, root intrusions, and pump control failures. However, five (5) of the items proved to be more serious and reoccurring issues: at Manhole 62 (Items 5, 7, 8 and 11) and at and at Manhole 63-1 (Item 2). The following are corrective actions that have been executed and those that are planned for these issues:

**A. Items 5, 7, 8 and 11, 829 Maple Shade Road**

As shown in Appendix A, a total of four (4) SSO's were documented at Manhole 62 behind the residence at 829 Maple Shade Road. This overflow was caused by root intrusion of a large tree downstream of Manhole 62. The tree was removed and 670 linear feet of existing 6-inch PVC sanitary sewer from Manhole 59 to Manhole 61 was replaced with 8-inch polyethylene pipe using the pipe bursting method. This work was completed on November 23, 2021, and no SSO's have occurred at Manhole 62 since that time.

**B. Item 2, Maple Shade Road and Northwoods Drive**

The suspected cause of the SSO at Manhole No. 63-1 is excessive inflow and infiltration (I and I) in the Northwoods neighborhood. This sanitary sewer subsystem was constructed in the 1970's in an area that is known to be underlain by a shallow formation of sandstone making it more susceptible failures that lead to I and I.

With the assistance of the Arkansas Rural Water Association (ARWA), smoke testing of the entire Alma system is planned to be done during dry weather later this year. Using the results of the smoke testing, certain sections of the system will also be examined using CCTV. Using data gathered by the City and ARWA, appropriate corrective actions will be taken to minimize I and I throughout the City, but a high priority will be given to the area upstream of Manhole 63-1 due to the documented SSO.

### **3. COMPLIANCE SCHEDULE**

#### **A. Items 5, 7, 8 and 11, 829 Maple Shade Road**

As stated in the previous section, corrective actions for this location were completed on November 23, 2021, and appear to have eliminated the recurring SSO problems at Manhole 62.

#### **B. Item 2, Maple Shade Road and Northwoods Drive**

The only issue identified in the ADEE correspondence of February 15, 2023 that remains unresolved is the SSO at Manhole 63-1. As previously stated, the suspected cause of this SSO is excessive I and I in the collection system above Manhole 63-1. The anticipated steps to resolution and milestone dates are shown in the table below:

<b>Action</b>	<b>Estimated Completion Date</b>
Smoke testing and CCTV inspection	September 2023
Evaluation of data and project scoping	March 2024
Development of budget and funding source	February 2025
Design and bidding	June 2025
Construction	December 2025

Requests to revise the schedule will be submitted to the Office of Water Quality, Enforcement Branch for approval.

### **4. CONCLUSION**

Of the thirteen (13) items listed in Appendix A, only one (1) remains unresolved. This illustrates that the City of Alma Water and Sewer Department has been attentive to these and other operational problems and has been diligent in correcting them. Through implementation of this plan, Item 2 will also be addressed. In the meantime, the City will continue to strive for compliance with the NPDES Permit requirements and applicable State and Federal laws.

## APPENDIX A

### Sanitary Sewer Overflow (SSO) Summary of Issues and Corrective Actions City of Alma, Crawford County, Arkansas

Page 1 of 2

No.	Date	Location	Cause	Corrective Action
1.	1/10/2023	Manhole 50-2 to 50-3 on West Collum Lane, overflow into ditch	Blockage due to rags from apartments upstream	Jetted/cleared blockage
2.	10/10/2023	Manhole 63-1 at the intersection of Northwoods Drive and Maple Shade Road	Overflow due to excessive I and I	See Section 2.B of this report for planned corrective actions and schedule
3.	4/4/2022	Manhole 50-3, West Collum Lane and Heather Lane	Blockage due to rags from apartments upstream	Jetted/cleared blockage
4.	11/29/2021	Manhole 50-10, 122 Evergreen Road	Blockage due to rags from apartments upstream	Jetted/cleared blockage
5.	11/15/2021	Manhole 62, 829 Maple Shade Road	Blockage due to root intrusion	Tree causing root intrusion was removed and 670 LF of 6" line was replaced with 8" HDPE by pipe bursting. See Section 2.A of this report
6.	10/14/2021	Manhole 29-5-6, Highway 64 East	Blockage due to FOG	Jetted/cleared blockage
7.	6/8/2021	Manhole 62, 829 Maple Shade Road	Blockage due to root intrusion	Tree causing root intrusion was removed and 670 LF of 6" line was replaced with 8" HDPE by pipe bursting. See Section 2.A of this report
8.	5/24/2021	Manhole 62, 829 Maple Shade Road	Blockage due to root intrusion	Tree causing root intrusion was removed and 670 LF of 6" line was replaced with 8" HDPE by pipe bursting. See Section 2.A of this report

**APPENDIX A**

Sanitary Sewer Overflow (SSO) Summary of Issues and Corrective Actions

City of Alma, Crawford County, Arkansas

Page 2 of 2

9.	4/14/2018	Manhole 50-12, 109 Maple Shade Road	Blockage due to FOG	Jetted/cleared blockage
10.	2/22/2018	Manhole 46, 400 Heather Lane	Blockage due to rags from senior care center upstream	Jetted/cleared blockage
11.	2/22/2018	Manhole 62, 829 Maple Shade Road	Blockage due to root intrusion	See Section 2.A of this report
12.	1/18/2018	Manhole 17-2, Behind 1110 Harris Drive	Blockage due to FOG	Jetted/cleared blockage
13.	2/25/2013	Collum Lane Lift Station	Overflow due to pump control failure	Defective pump controls were replaced