



Office of the Mayor  
**JAMES W. SANDERS**

---

124 WEST WALNUT • BLYTHEVILLE, AR 72315 • (870) 763-3602 • FAX (870) 762-0443

October 6, 2017

Ms. Jacqueline Trotta, Water Division, Enforcement Branch  
ADEQ  
5301 Northshore Drive  
North Little Rock, AR 72118-5317

Dear Ms. Jacqueline Trotta, Water Division, Enforcement Branch,

The City of Blytheville are in agreement with the Correction Action Plan prepared by PMI Engineering Firm. These are the plans that were discussed and agreed on by the Director of Blytheville Wastewater Division.

Sincerely,

A handwritten signature in blue ink that reads "James Sanders". The signature is stylized and cursive.

James W. Sanders, Mayor

# CORRECTIVE ACTION PLAN

OCTOBER 2, 2017

## WEST WASTEWATER TREATMENT PLANT

BLYTHEVILLE, ARKANSAS

ISSUED FOR REVIEW

PREPARED FOR:

Blytheville Wastewater Department

PREPARED BY:

Brad Wingfield, P.E.  
PMI  
3512 South Shackelford Rd.  
Little Rock, AR 72205



**Corrective Action Plan  
West Wastewater Treatment Plant  
Blytheville Wastewater Department**

**Table of Contents**

Introduction ..... 1

Purpose ..... 1

Scope..... 1

Existing Facility ..... 1

**History**..... 1

**Conditions of Existing Facility** ..... 2

Environmental Resources ..... 2

Growth Area and Population ..... 2

System Operation & Maintenance ..... 2

Case Background..... 2

Proposed Goals of the Plan..... 2

*Alternative #1 – Continued Operation of Existing Plant* ..... 2

Selected Alternative..... 3

Project Funding ..... 3

Sewer Rates..... 3

Milestone Schedule..... 3

Figure 1: Site Location Map

**Corrective Action Plan**  
**West Wastewater Treatment Plant**  
**Blytheville Wastewater Department**

Introduction

This Corrective Action Plan (CAP) was prepared by PMI on behalf of the Blytheville Wastewater Department (Blytheville). The CAP was prepared at the request of the Water Division Enforcement Branch of the Arkansas Department of Environmental Quality (ADEQ), and presents a proposal for compliance with effluent limitations.

Purpose

Blytheville was presented with an outline of 34 effluent limit violations listed in Part 1, Section A of the NPDES Permit No. AR0022560. Effluent violations include 9 for Fecal Coliform, 3 for Mercury, and 22 for ammonia nitrogen. Blytheville is determined to achieve full compliance with the effluent limits of the aforementioned Permit with necessary operational changes and plant upgrades.

Scope

The project consists of a scope of work consisting of:

- Submit a Corrective Action Plan with a milestone schedule to the Arkansas Department of Environmental Quality (ADEQ).
  - Develop operation procedures to enable nitrification of ammonia.
  - Continue with improved mercury sampling methods.
  - Evaluation of existing UV disinfection system performance.

Existing Facility

**History**

The Blytheville West Plant provides sewer service to an average of 6,000 customers representing a population of approximately 14,375 people. The current facility was constructed in 1988. The wastewater system is a combination of gravity sewer and pump stations that collect and convey water to the treatment facility.

**Location**

The Wastewater Treatment Plant (WWTP) is generally located along N Co Road 635 west of Blytheville. See the attached Site Location Map for the exact project location.

## **Conditions of Existing Facility**

The existing WWTF has a permitted capacity of 1.6 million gallons per day (MGD). Flows over the past year (2016-2017) indicated an annual average flow of approximately 0.517 MGD average and 3.807 MGD peak. The plant experiences problems with complete nitrification of ammonia due to insufficient alkalinity and/or toxicity issues. The plant also experiences difficulty with Fecal Coliform potentially due to transmissivity during high flows.

## Environmental Resources

Pending results of the UV disinfection study, an ADEQ construction permit might be required.

## Growth Area and Population

The Blytheville customers reside in the Blytheville, AR area. According to available data, Blytheville had a population of 15,620 in 2010 and had a population of approximately 14,375 in 2016. The 2010 population represents a -8.0% growth rate over the 2000 population.

Industrial facilities are present in Blytheville, those that contribute to the West Plant are:

N/A

## System Operation & Maintenance

Blytheville is operating the WWTP with the current staff. Additional personnel will not be required for the updated facility. Some changes to operational procedures will be required.

## Case Background

The existing plant is adequately sized to handle the flowrate and loadings that are received from the sewer system. The ammonia violations were caused by insufficient alkalinity present in the water. The West plant receives discharges from the Blytheville dog kennel causing spikes in ammonia levels. Fecal coliform violations were likely caused by turbidity during high flow events resulting in transmissivity issues and loss of UV disinfection. Mercury violations were caused by improper sampling techniques and no violations have occurred since April 30, 2016.

## Proposed Goals of the Plan

The goal of the proposed Corrective Action Plan is to eliminate effluent violations from Blytheville's West Plant.

## *Alternative #1 – Continued Operation of Existing Plant*

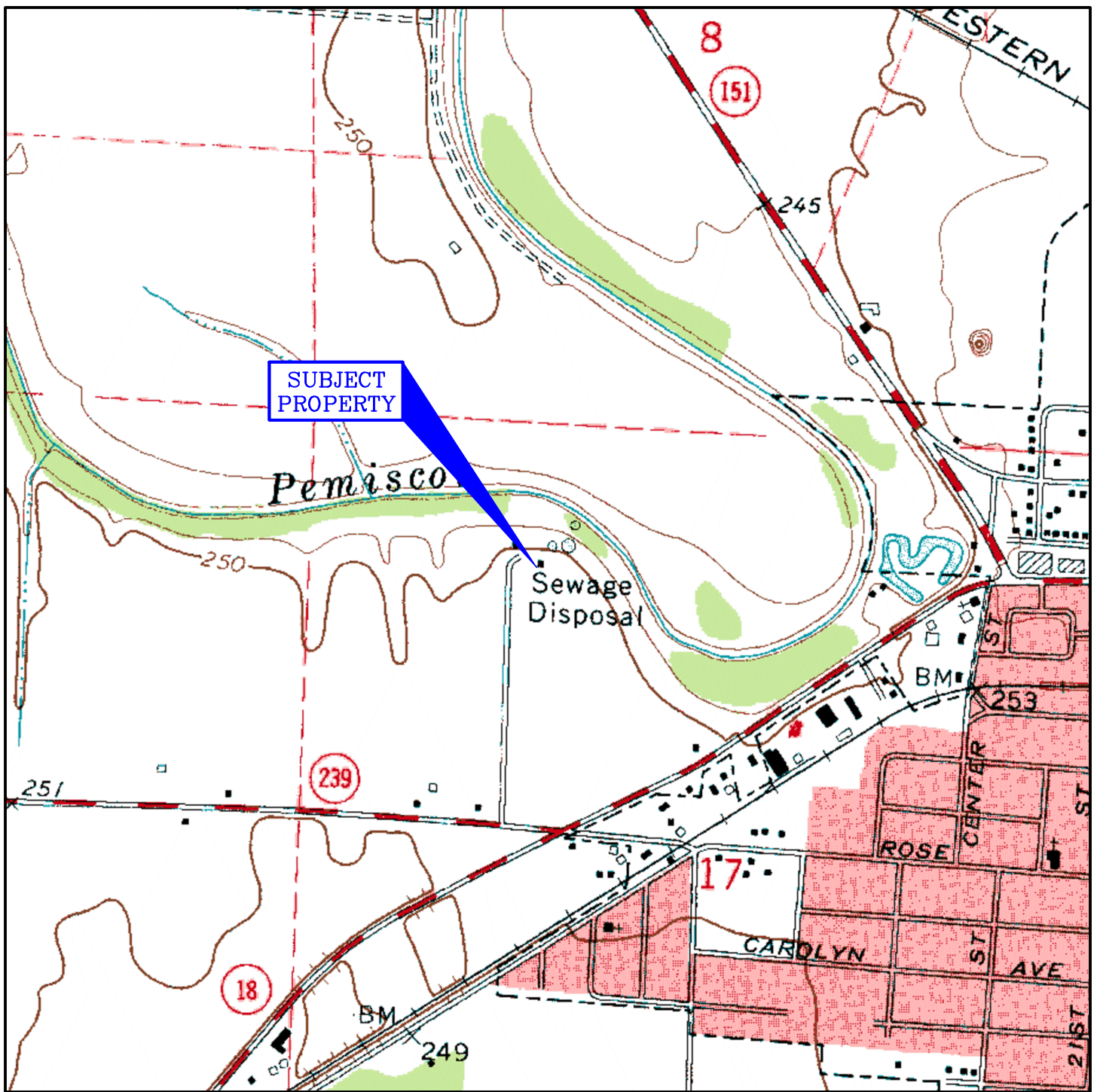


- UV Sampling and Evaluation
- UV Modifications (if necessary)
- Compliance with Effluent Limits

February 28, 2018

June 30, 2018

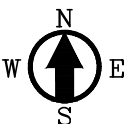
June 30, 2018



DRAWING NO. 1

TOPOGRAPHIC MAP TAKEN FROM BLYTHEVILLE QUADRANGLE MAP

WEST TREATMENT FACILITY  
BLYTHEVILLE, ARKANSAS



CIVIL ENGINEERING AND ENVIRONMENTAL SERVICES  
3512 South Shackelford Road  
Little Rock, Arkansas 72205  
(501) 221-7122 fax (501) 221-7775

SUBMITTED:	B. WINGFIELD
DRAWN:	B. WINGFIELD
CHECKED:	B. WINGFIELD
DATE:	OCTOBER 2, 2017

SCALE:  
NTS

JOB NUMBER:  
BLYW-10356

FILE: BLYW-10356.DWG