Phase II Stormwater Management Plan

Prepared for

City of Nixa, Missouri



Permit Term 2021 – 2026

Chapter 1

Phase II Plan Coordination

A. General Information

NPDES #:	MOR040067
Facility Name and Address:	City of Nixa Small MS4 P.O. Box 395, Nixa, MO 65714
Owner's Information:	City of Nixa 715 W. Mt. Vernon St. P.O. Box 395, Nixa, Mo. 65714
Primary Staff Contact:	Danny Newell, Public Works Inspector/MS4 Coordinator, (dnewell@nixa.com) (417) 725-2353
Secondary Staff Contact:	Nate Miller, Asst. Public Works Inspector (<u>nmiller@nixa.com</u>) (417) 725-2353
Primary Management Contact	Doug Colvin, Public Works Director (<u>dcolvin@nixa.com</u>) (417) 725-2353
Facility Region:	Southwest Region, Main Office in Springfield, MO
Facility County:	Christian County, MO
Facility Type:	Small MS4
Facility Description:	Discharges from Regulated Small MS4

B. Executive Summary

The following document is an outline for the City of Nixa, Missouri to use as it enters the 2021–2026 permit term of the Phase II MS4s Program. The City intends to comply with the regulations as outlined by State of Missouri General Permit No. MO-R040067 to the maximum extent practicable. This document is divided into a total of 8 chapters. The first chapter begins with an outline of the plan coordination and overview of the program. As the chapters progress the City's approach to meeting the six minimum control measures is clearly outlined with the final chapter devoted to setting the framework for record keeping.

The City understands the importance of clean ground water, streams, and rivers. One of the most important steps in ensuring clean ground water, streams, and rivers is to improve the quality of stormwater runoff. As the City continues to develop this program over the next permit term, it is the hope that measurable positive impacts will be seen by the City and its citizens.

C. Phase II Overview

As a result of the 1987 amendments to the Clean Water Act, the United States Environmental Protection Agency (EPA) began to regulate large to medium Municipal Separate Storm Sewer Systems (MS4). This regulation, known as Phase I, went into place in 1990. The original Phase I placed the requirement for urban areas with a population of greater than 100,000 to obtain a permit for the discharges of the urban area's MS4 system.

In 2003 the EPA expanded the program by implementation of Phase II. Under Phase II, the MS4 program was expanded to include communities with a population exceeding 10,000 or smaller communities that are included in a Metropolitan Area. In Missouri, Phase II of the program requires individual communities to comply with a general state operating permit. This Permit is State of Missouri General Permit No. MO-R04000.

Figure 1-1: A copy of the City of Nixa MDNR General Operating Permit cover sheet (print copy available on request)

STATE OF MISSOURI DEPARTMENT OF NATURAL RESOURCES MISSOURI CLEAN WATER COMMISSION



MISSOURI STATE OPERATING PERMIT

General Operating Permit

In compliance with the Missouri Clean Water Law, (Chapter 644 R.S. Mo as amended, hereinafter, the Law), and the Federal Water Pollution Control Act (Public Law 92-500, 92nd Congress) as amended,

Permit No

Owner: Address: City of Nixa PO Box 395 NIXA, MO 65714 City of Nixa

PO Box 395 NIXA, MO 65714

Nixa Phase II MS4

715 W Mt Vernon St NIXA, MO 65714

MOR04C060

Continuing Authority:

Facility Name: Facility Address:

Legal Description: See Page 2 UTM Coordinates: See Page 2 Receiving Stream: See Page 2 First Classified Stream - ID#: See Page 2 USGS# and Sub Watershed#: See Page 2

is authorized to discharge from the facility described herein, in accordance with the effluent limitations and monitoring requirements as set forth herein.

FACILITY DESCRIPTION All Outfalls SIC #9511 All Outfalls - Stormwater discharges from Regulated Phase II Municipal Separate Storm Sewer Systems. Comprehensive permit

SIC 9511/NAICS 924110

This permit authorizes only wastewater, including storm water, discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System, it does not apply to other regulated areas. This permit may be appealed in accordance with RSMo Section 644.051.6 and 621.250, 10 CSR 20-6.020, and 10 CSR 20-1.020.

October 01, 2021 Issue Date

Edward B. Sallarth.

Edward B. Galbraith, Director Division of Environmental Quality

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September 30, 2026 Expiration Date

Cynthia S. Davies, Regional Director Southwest Regional Office

To fully comply with the terms of the permit, it is the intention of the City to:

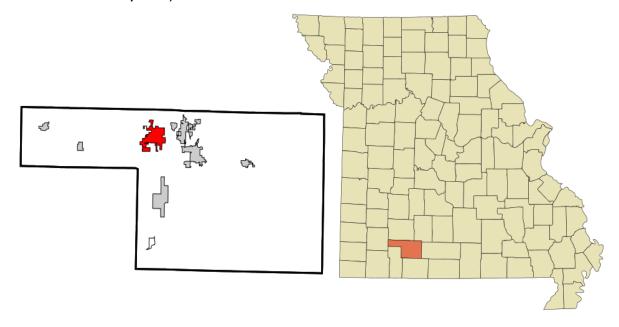
- Adjust and update the existing Phase II MS4 Program to meet the ever-changing permit requirements and regulations of the upcoming 2021 – 2026 permit term.
- Identify areas where additional programs or resources will be needed and areas where outdated programs may be eliminated.

The City will continue to strive to educate the public and targeted audiences. The goal of the City is to meet all six minimum control measures set forth by the State and Federal Government. As the City continues to work towards these measures, we are encouraged that the quality of stormwater runoff will continue to improve. Each year the plan will be reviewed and where necessary, based on situations, data and inspection results, changes to improve the overall program will be developed and implemented.

D. Plan Coverage

The City of Nixa is in north central Christian County, entirely within the James River Basin Watershed. Nixa is situated approximately 2.5 miles south of Springfield, Mo. and Nixa's east city limits abuts its neighbor to the east, Ozark, Mo. According to research, Nixa is the 8th fastest growing city in Missouri (<u>www.missourilegends.com</u>) in the fastest growing county in Missouri (<u>www.usa.com</u>).

Figure 1-2: Map of Missouri, Location map of Nixa. (print copy available on request)



A study by the American City Business Journal in Buffalo, N.Y., shows Christian County as one of the top metropolitan counties in the country for growth potential. Anonymous

Between 1990 (population 4,706) and 2010 (population 19,022), the city experienced a staggering growth rate of 304%.

The City population, based upon official Census Bureau Data of 2020, is officially 23,257 which can be seen at the following link: <u>https://data.census.gov/cedsci/all?q=nixa%20mo</u>.

Nixa has a humid continental climate, characterized by generally mild winters and hot summers. The average yearly temperature is in the 50s (F°) and the average relative humidity is 73%.

Total precipitation for years of record range from a low of 25.21 inches in 1953 to a high of 63.19 inches in 1990, with an average annual precipitation normally ranging between 30 to 50 inches.

Nixa is home to several commercial, retail and industrial businesses (approximately 750 total) employing between 1 and 825 employees with the following eight as the city's largest employers (as of 2021):

- 1. Nixa R-2 School District
- 2. Wal-Mart
- 3. City of Nixa
- 4. Diversified/Accurate Plastics
- 5. Springfield Aluminum
- 6. Christian Health and Rehab
- 7. Ample Industries
- 8. Nixa Hardware

Drainage features in the City include detention/retention ponds, underground storm sewer piping (including RCP, HDPE, CMP, etc.) in addition to numerous open channels (grass lined, concrete lined, etc.). There are over 60 miles of total storm drain system piping, 2750 manholes, inlets, outlets, junction boxes, weir structure, 12 Miles of trickle channels, 138 detention/retention basins, and 96 weir structures currently within our stormwater map GPS database.

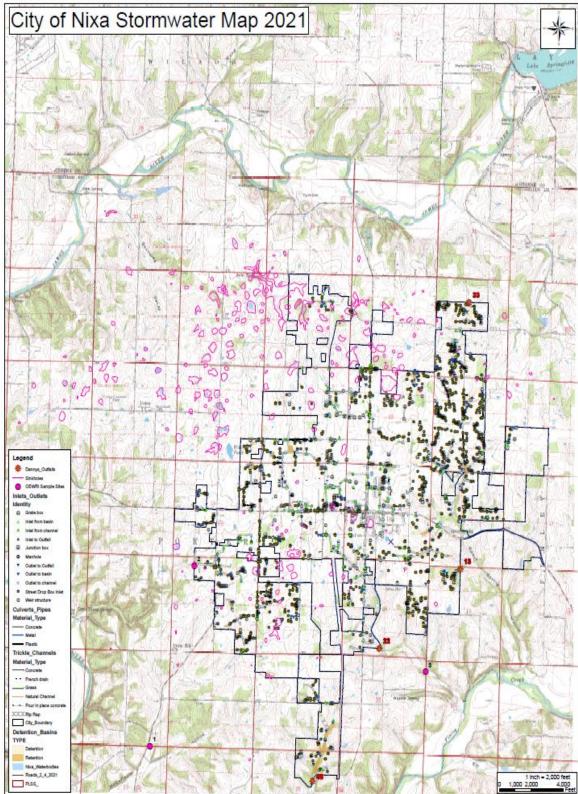


Figure 1-3: City of Nixa Stormwater Map (print copy available on request)

The City of Nixa has a total area footprint of approximately 8.48 square miles, and is part of the Springfield, Missouri Metropolitan Statistical Area.

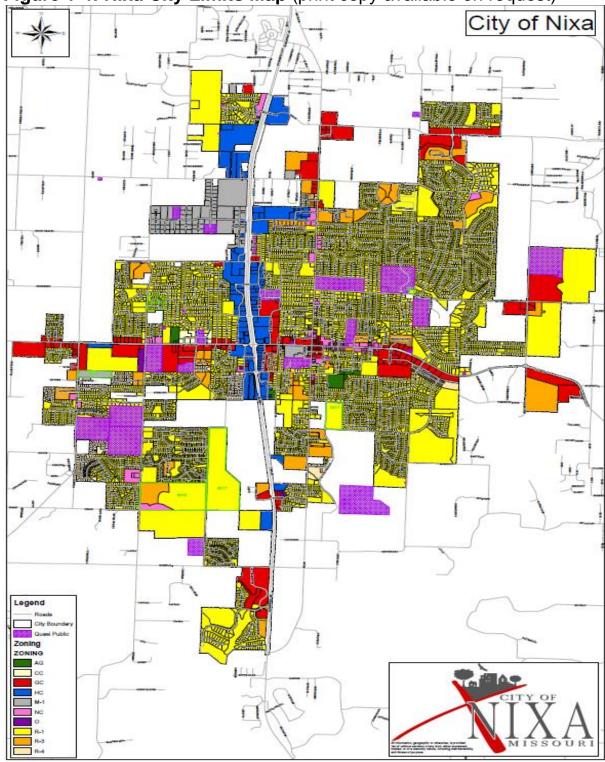


Figure 1-4: Nixa City Limits Map (print copy available on request)

E. Definitions

BMP – Best Management Practices

CERLA – Comprehensive Environmental Responses, Compensation, and Liability Act of 1980

CWA – Clean Water Act of 1972

EPA – Environmental Protection Agency

GIS – Geographic Information System

GPS – Global Positioning System

IDDE – Illicit Discharge Detection and Elimination

ITERATIVE -- Is a process for calculating a desired result by means of a repeated cycle of operations, iteration can include repetition of a sequence of operations in order to get ever closer to a desired result. To reiterate.

JRBP – James River Basin Partnership

MCM – Minimum Control Measure

MEP – Maximum Extent Practicable

MDNR – Missouri Department of Natural Resources

MDNR Land Disturbance Permit – State requirement for owners to use best management practices to control the migration of silt and sediment into state waters.

Missouri General Permit No. MO-R04000 – Requirements set by DNR for all MS4 Phase II applicants.

MS4 – Municipal Separate Sewer System

NPDES – National Pollutant Discharge Elimination System

RCRA – Resource Conservation and Recovery Act of 1976

SECTION 303(d) – A section of the Clean Water Act listing impaired waters

STORMWATER CONVEYANCE STRUCTURE – pipes, junction boxes, inlet boxes, and open channels used to transport stormwater

SWMP – Stormwater Management Plan

SWPPP – Stormwater Pollution Prevention Plan

CITY – refers to the City of Nixa, Missouri

TMDL – Total Maximum Daily Load

WATERSHEDS – An area or ridge of land that separates waters flowing to different rivers, basins, or other body of water

WWTP – Wastewater Treatment Plant

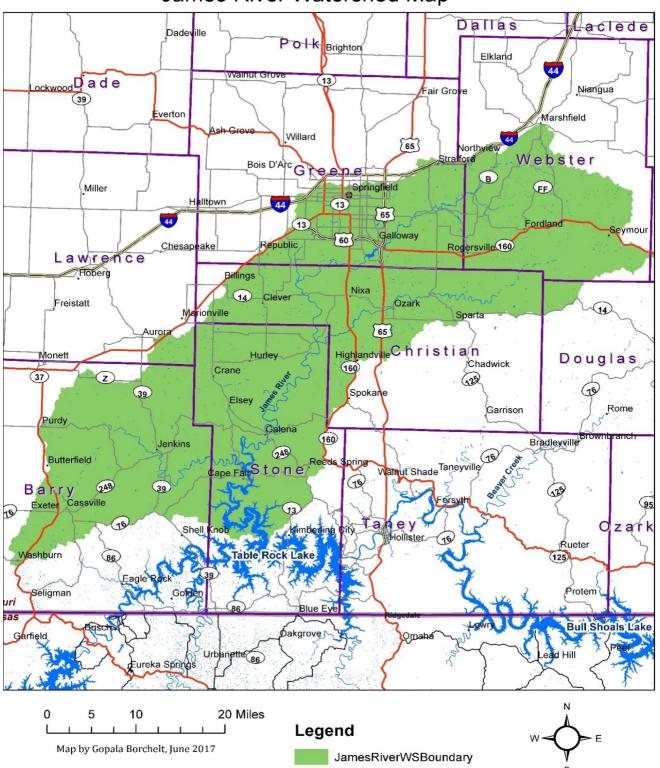
F. Watersheds

Nixa is situated on the upland Springfield Plateau and is entirely within the James River Watershed basin, which is a sub-watershed of the upper White River Watershed. The gently rolling landscape gives way to steep slopes in the James River drainage basin along the northern edge of the city with the southeast portion of the city draining to the Finley River.

Elevations range from a high of 1,325 feet above mean sea level in the southwest to a low of approximately 1,095 feet where the James River leaves the area. The city is in a Karst area where sinkholes are prevalent, with the highest concentration located in the northwest part of town. There are over 265 sinkholes and 23 caves in the Nixa Karst area.

The surface drainage for the City of Nixa is divided between the James River to the north and the Finley River to the south. Approximately 70% of the area drains into tributaries of the James River and 30% drains into the Finley River. The James River carries approximately 176 cubic feet of water per second with the Finley River caring an average of 30 to 50 cubic feet per second.

Figure 1-5: James River Watershed Map (print copy available on request)



James River Watershed Map

G. Endangered Species/Critical Habitats

Table 1

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County	Species	Status	Habitat
Christian	Gray Bat	Endangered	Caves
Christian	Indiana Bat	Endangered	Caves