

Lake Conway – Point Remove

Arkansas Department of Energy and Environment Division of Environmental Quality Planning Segment 3F
Hydrologic Unit Code 11110203

Introduction

The Lake Conway – Point Remove Watershed is located in central Arkansas and covers parts of Faulkner, Conway, Perry, Pope, and Van Buren counties. The watershed contains a 206 mile stretch of the Arkansas River, including Winthrop Rockefeller Lake and its tributaries, East and West Forks of Point Remove Creek, Overcup Creek, Gum Log Creek, Palarm Creek, and Galla Creek. There are several other reservoirs in this watershed, including Lake Conway and Overcup Lake. The watershed has been an Arkansas Nonpoint Source Pollution Management Program (Arkansas NPS Program) priority watershed since 2006. In 2020, the Lake Conway-Point Remove Watershed was home to 138,715 Arkansans (U.S. Census Bureau 2021). The watershed includes several large towns, including Conway, Russellville, and Morrilton. Conway is the 7th largest city in Arkansas and one of the fastest growing cities in Arkansas (World Population Review 2023). Point Remove Creek will be the site of a new water supply reservoir to serve Faulkner County and the City of Conway (Faulkner County 2022). Tributaries to the Arkansas River in this watershed provide important spawning habitat for alligator gar. Figure 1 shows a map of 2019 land cover in the watershed. Forty-three percent of the watershed is forest and 28 percent is pasture.

Nonpoint Source Pollutants in Illinois River Watershed

Several waterbodies in the Lake Conway – Point Remove Watershed are listed as water quality impaired in the Arkansas 2018 303(d) List (Figure 1). A total of 57 stream miles are listed as impaired, representing 24.6 percent of the total assessed stream miles within the watershed (231.4 miles). An additional 28 acres of Driver Creek Lake are listed as impaired.

In addition, this watershed had been identified as a Tier 1 focus watershed for reduction of nitrogen and phosphorus loads through the Arkansas Nutrient Reduction Strategy (NRD 2022). Both point and nonpoint sources of pollution contribute to these concerns. NPS pollutants of concern in this watershed are low pH, sediment, turbidity, nitrogen, phosphorus, oxygen-demanding materials, and nitrates. Nonpoint sources of these pollutants in this watershed that are of concern include runoff from development and urban areas, runoff from pastures and poultry operations, livestock, fertilizer (including poultry litter), and surface erosion. Climate change is causing an increase in storm intensity in

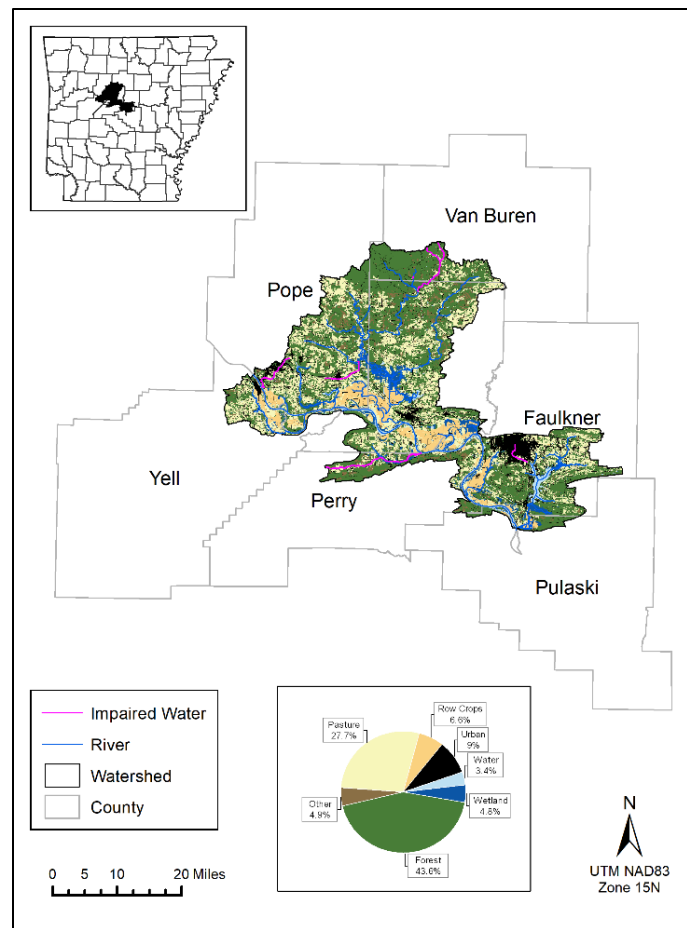


Figure 1. Lake Conway – Point Remove Watershed

Arkansas, which can result in more runoff and erosion, leading to increased pollutant loads to surface waters.

Nonpoint Source Pollution Goals

The long-term goal of the Arkansas NPS Program is for all waterbodies within the Lake Conway – Point Remove Watershed to support their designated uses. Table 1 lists Arkansas NPS Program short-term (2024-2029) objectives for the Lake Conway – Point Remove Watershed. The program also supports the load reduction goals identified in Total Maximum Daily Load (TMDL) studies that have been prepared for waterbodies in this watershed. TMDLs have established load reduction goals for nitrate and turbidity. Progress toward achieving the objectives is summarized in Table 1 and will be reported in Arkansas NPS Program annual reports which can be found at agriculture.arkansas.gov/naturalresources/divisions/water-management/nonpoint-source-management/.

Table 1. Arkansas NPS Program short-term objectives for Lake Conway – Point Remove Watershed

2024-2029 Objective	Tracking Strategy	2018-2023 Progress
Measurably reduce concentrations or loads of pollutants causing water quality impairments	Routine water quality monitoring with load calculations	On 2018 303(d) list: 4.8 miles delisted for TDS impairment 62.6 miles delisted for turbidity impairment 4.8 miles classified as attaining nitrate and ammonia standards, but not yet delisted 10.1 miles classified as attaining nitrate and copper standards, but not yet delisted
Social equity in water quality protection and improvement	Number or percent of activities in low income or minority dominated areas Number or percent impairments in low income or minority dominated areas	Unknown - not a listed objective 2018-2023
Increased resilience of natural systems and society	Routine water quality monitoring and Clean Water Act biennial water quality assessment	Water quality data collected at routine monitoring locations Water quality assessments 2018, 2020, and 2022
No new impaired stream reaches, or water quality criteria not being met	Routine water quality monitoring and Clean Water Act biennial water quality assessment	34.5 miles of impairments added 2016-2018 28 acres of impairments added 2016-2018 (Driver Creek Lake)

2024-2029 Objective	Tracking Strategy	2018-2023 Progress
2018 impaired stream reaches attain water quality standards	Routine water quality monitoring and Clean Water Act biennial water quality assessment	20.9 miles of East Fork Point Remove and 17.7 miles of West Fork Point Remove delisted for turbidity 2016-2018 4.8 miles of Stone Dam Creek delisted for TDS impairment 2016-2018
Finalize and implement nine-element watershed management plan	EPA acceptance of plan Number of watershed projects Number of BMPs	Draft plan prepared and submitted to EPA
Update Soil and Water Assessment Tool model	Modeling proposal, funded, completed	None

Nonpoint Source Pollution Strategy

A nine-element watershed management plan (WMP) is currently under development for the Lake Conway-Point Remove Watershed. A WMP identifies focus areas for water quality improvement and protection, as well as best management practices (BMPs) for reducing NPS pollutants of concern. The state NPS pollution management strategy for this watershed is to finalize the WMP and once it is accepted by EPA, support its implementation, as well as other plans that address NPS pollution.

Administration of Nonpoint Source Pollution Management

There is currently no single entity in the Lake Conway – Point Remove Watershed that is responsible for implementing a WMP. However, the Lake Conway-Point Remove Watershed Alliance has undertaken significant efforts in public education and outreach.

The Arkansas NPS Program will work with cooperating entities in the watershed to promote voluntary coordination and incorporate conditions requiring cooperation in grant agreements, as appropriate. Examples of partners active in this watershed include the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS), Arkansas Game and Fish Commission (AGFC), Arkansas Department of Agriculture’s Natural Resources Division (NRD), Arkansas Department of Energy and Environment Division of Environmental Quality (DEQ), University of Arkansas System Division of Agriculture (UADA) Cooperative Extension Service, county conservation districts, Metroplan, and city and county governments. Relationships among these and other partners have been developed through several recent natural resource projects in this watershed. A high degree of voluntary coordination already exists through the Arkansas Conservation Partnership.

Nonpoint Source Pollution Management Tracking and Monitoring

NPS pollution management is tracked and evaluated at three levels: education and outreach activities, behavioral and/or opinion changes, and water quality. Many of the organizations active in this watershed track and report their education and outreach activities, including those related to NPS pollution. In some cases, these activities are tracked in annual reports (e.g., Arkansas NPS Program), newsletters, and on websites and social media.

Behavioral changes can be tracked by implementation of BMPs and opinion polls. However, to date, very few such polls have been organized. Many of the organizations active in this watershed track implementation of BMPs through their programs, including NRD and NRCS. This information is listed in their annual reports and on their websites.

Water quality monitoring data will be used to evaluate the effectiveness of NPS pollution management activities in the Lake Conway – Point Remove Watershed. DEQ, U.S. Geological Survey, and the University of Arkansas Water Resources Center have conducted water quality monitoring within the watershed. DEQ uses data from all these sources in their biennial evaluation of water quality.

Nonpoint Source Pollution Management Support and Funding

Technical information and assistance with implementing BMPs to reduce NPS pollution is available from a number of sources. There are multiple programs available in the Lake Conway – Point Remove Watershed that can provide funding assistance for BMPs that reduce NPS pollution. Listings of sources of technical and financial assistance with NPS pollution BMPs will be available in the WMP. Technical and financial assistance can also be obtained by contacting AGFC, Lake Conway – Point Remove Watershed Alliance, county conservation districts, or county extension offices.

References

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