FSPPC127

DIVISION OF AGRICULTURE
RESEARCH & EXTENSION
University of Arkansas System

PUBLIC POLICY Center

Nonpoint Source Pollution in the Lake Conway-Point Remove Watershed

November 2015

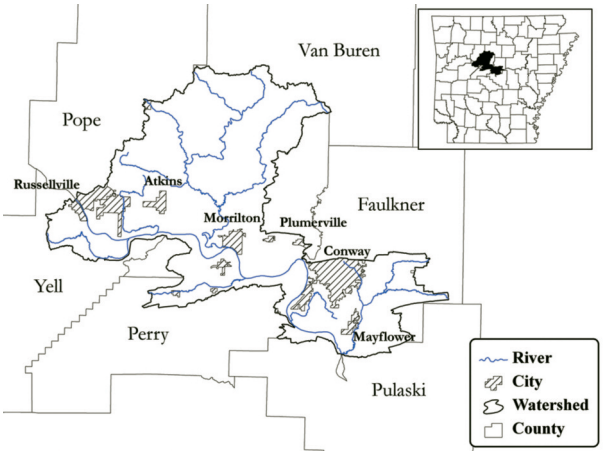
The Lake Conway-Point Remove Watershed is located in central Arkansas and includes communities in Conway, Faulkner, Perry, Pope, Pulaski, Van Buren and Yell counties.

A "watershed" is an area of land where all of the water that drains from it goes to the same place, so rainwater or snowmelt in this watershed eventually drains to a common location.

The Lake Conway-Point Remove Watershed is actually two separate watersheds that are considered as one set by the U.S. Geological Survey. The conjoined watershed spans 1,144 square miles and is mostly forested or used for pastureland. Very little of the watershed is used for row crop farming.[1] The population is increasing at an accelerated rate, with Faulkner County growing 31.6 percent over the last 10 years.[2] More than 88,000 people lived here as of 2011.[3]

Nonpoint Source Pollution

Water pollution that comes from multiple sources spread over an area, such as runoff from parking lots, agricultural fields, residential lawns, home gardens, construction, mining and logging, is known as nonpoint source pollution. As runoff moves across the landscape, it carries natural and manmade substances that can accumulate in waterways and make them uninhabitable for aquatic species or unusable by people. Potential pollutants include bacteria, nutrients, sediment, hazardous substances and trash.[4] Given the number of potential sources and variation in their potential contributions, these pollutants are not easily traced back to their source.



Lake Conway Point Remove Watershed
Data source: GeoStor. Map created March 2011.

Major streams: Arkansas River, Beardy Branch, Brock Creek, Clear Creek, Galla Creek, Gum Log Creek, Harris Creek, Hill Creek, Isabell Creek, Overcup Creek, Palarm Creek, Point Remove Creek, Rocky Cypress Creek, Stone Dam Creek, Tupelo Bayou, White Oak Creek

This fact sheet is intended to provide a better understanding of the Lake Conway-Point Remove Watershed and its place on the state's priority list of 10 watersheds impacted by nonpoint source pollution.

Lake Conway-Point Remove Watershed Water Quality Issues

Through water quality monitoring, environmental officials in Arkansas have determined that the primary nonpoint source pollution concerns for this watershed are turbidity, silt and total dissolved solids.

[1]CAST, 2006. Land Use/Land Cover Data. Biological and Agricultural Engineering Department, University of Arkansas: Fayetteville, Arkansas. As reported in the Nonpoint Source Pollution Management Plan available at http://www.uaex.uada.edu/environment-nature/water/quality/NPSPollutionMgmt-Revised2015.pdf,

[2]UALR, 2011. Percent Change in Total Population. GIS Applications Laboratory, University of Arkansas at Little Rock. Available at http://argis.ualr.edu.

[3]BAEG, 2011. County-Wise Population Data. Biological and Agricultural Engineering Department. University of Arkansas Division of Agriculture: Little Rock, Arkansas. See the Nonpoint Source Pollution Management Plan.

[4]Learn more about these categories in the Arkansas Watershed Steward Handbook at http://www.uaex.uada.edu/environment-nature/water/docs/ag1290.pdf.

Turbidity is a measure of the clarity of water. High turbidity levels mean the water is murky from a variety of materials, such as soil particles, algae, microbes and other substances. White Oak Creek and Stone Dam Creek have experienced high turbidity and silt issues, and unknown sources have contributed sediment to White Oak Creek, according to the Arkansas Department of Environmental Quality. In 2006, environmental officials in Arkansas determined the maximum amount of turbidity White Oak Creek can receive and still meet water quality standards. This determination is a calculation called Total Maximum Daily Load, or TMDL.[5,6]

These concerns and the watershed's rapid urbanization led to the Lake Conway-Point Remove Watershed being designated as a priority by ANRC in the state's 2011-2016 Nonpoint Source Pollution Management Plan.[7]

Arkansas' Priority Watershed List for Nonpoint Source Pollution

Arkansas has used a watershed-based approach to nonpoint source pollution management, allowing the public to guide planning to address water quality concerns.[8] The Arkansas Natural Resources Commission, or ANRC, administers the Nonpoint Source Pollution Management Program. The program exists to reduce water pollution through the funding of watershed planning and restoration activities, adoption of voluntary best management practices and the development of technologies that assist in water pollution reduction in Arkansas. Based on public input and the use of a qualitative risk assessment matrix, ANRC has designated 10 priority watersheds as needing the greatest attention. The current risk matrix[9] identifies the following priority watersheds for 2011-2016: Bayou Bartholomew, Beaver Reservoir, Cache River, Illinois River, L'Anguille River, Lake Conway-Point Remove, Lower Ouachita-Smackover, Poteau River, Strawberry River and Upper Saline.

Stakeholder Priorities

To encourage continued public input, the University of Arkansas Division of Agriculture's Public Policy Center facilitated a water quality stakeholder forum for the Lake Conway-Point Remove watershed in August 2015. Participants identified water quality issues such as sedimentation, regulations and erosion as local priorities that need addressing. A group of stakeholders has worked with the University of Arkansas since 2013 to develop a Lake Conway-Point Remove Watershed plan to address nonpoint source pollution. A draft plan has been reviewed by the Environmental Protection Agency (EPA). Stakeholders are in the process of addressing EPA recommendations for finalizing the plan.

People who live, work or recreate in the Lake Conway-Point Remove Watershed are encouraged to consider these community priorities and the watershed plan when addressing water pollution. The public is also welcome to attend an annual stakeholder meeting where priority watersheds and nonpoint source pollution are discussed. For more information about nonpoint source pollution and its impact on the Lake Conway-Point Remove watershed, contact the Cooperative Extension Service, Arkansas Natural Resources Commission or the Arkansas Department of Environmental Quality. The Arkansas Watershed Steward Handbook is also a good source of information about basic water quality concerns and how the public can get engaged in addressing water pollution.[10]

[5] More information in the Glossary of Water-Related Terms at http://uaex.uada.edu/publications/PDF/FSPPC109.pdf.

[6] TMDL reports are available at http://www2.adeq.state.ar.us/water/tmdls/default.aspx#Display.

[7] The Nonpoint Source Pollution Management Plan is available at http://www.uaex.uada.edu/environment-nature/water/quality/NPSPollution-Mgmt-Revised2015.pdf.

[8] Learn more about water quality at http://www.uaex.uada.edu/publications/pdf/FSA-9528.pdf.

[9] Learn more about the qualitative risk assessment tool at http://www.uaex.uada.edu/publications/pdf/FSPPC116.pdf.

[10] The Arkansas Watershed Steward Handbook is available at http://www.uaex.uada.edu/environment-nature/water/docs/ag1290.pdf.

This fact sheet is one in a series of 10 fact sheets on nonpoint source pollution in priority watersheds.

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FSPPC127-PD-12-2015N