The 2019 Arkansas Annual Report

Prepared Pursuant to Section 319 (h) of the Federal Clean Water Act

The Arkansas Department of Agriculture Division of Natural Resources

January 2020

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1 SUMMARIES

Notes from the Director:

This past year has certainly been a year of change. Programmatically, goals and objectives remain consistent, but responsibilities and agency names have been revamped and undergone change.

Entering his second term, Governor Hutchinson promised the citizens of Arkansas a more efficient and effective state government. In July of 2019, that promise was fulfilled by taking 50 plus state agencies, commissions, and boards and consolidating them under one of fifteen cabinet secretaries. The governor's transformation plan is reducing the duplication of efforts and maximizing resources, thus making Arkansas state government more economically sustainable.

The Arkansas Natural Resources Commission (ANRC) was placed under the Arkansas Department of Agriculture. The ANRC still has its board of commissioners, serving at the discretion of the governor, but administratively the agency is now the Natural Resources Division of the Arkansas Department of Agriculture.

The transformation process also dedicated the Arkansas Unpaved Roads Program (AUPR) to the Natural Resources Division. Approximately 85% of roads in Arkansas are dirt/gravel and these roads are a major source of sediment entering our water bodies. The AUPR has been given a state budget of $300K per year to work with counties and demonstrate environmentally sensitive road management practices. The AUPR will assist our existing NPS Management program to enhance water quality and it also gives us the ability to leverage other partnerships for success.

The NPS Management program has met several notable milestones for 2019. Some of which include:

- A success story in the Lake Conway – Point Remove watershed
- After taking a year off, the NPS Annual meeting was held this year with over 85 in attendance. The format of the meeting was changed to a single day and participant feedback supported this change for subsequent years
- An EPA accepted nine-element plan was develop for the Middle White River watershed

Partnerships and active participation continue to be the backbone for environmental conservation in our state. We continually look for opportunities to develop and grow new partnerships and value our existing ones. It truly takes the cooperation and commitment of all government agencies/divisions, conservation districts, organizations, groups and citizens to promote conservation and influence water quality. Although new or added responsibilities and name changes occur, we continue our dedication to enhance or maintain water quality in our state. We work daily to meet or exceed that commitment.

The Arkansas Department of Agriculture Division of Natural Resources is proud to provide this 2019 Annual Report for the Arkansas Nonpoint Source Management Program.

Bruce Holland,

Executive Director
Arkansas Department of Agriculture
Natural Resources Division

Executive Summary:

The Arkansas Department of Agriculture Division of Natural Resources (ADA) is the lead agency responsible for the Arkansas Nonpoint Source (NPS) Management Program. The ADA and its many partners and stakeholders collaboratively work together to develop the NPS Pollution Management Plan. The Plan provides a broad framework and aspirational objectives and milestones for implementation of the NPS Management Program. Watersheds are prioritized for resource allocation using a risk matrix assessment tool that is contained within the Plan. The Plan is updated every five years based upon an adaptive approach. The current Plan was updated and approved by EPA Region VI and covers the 2018-2023 timeframe.

The Arkansas Department of Environmental Quality (ADEQ) is the primacy agency for overseeing water quality in Arkansas. ADEQ is required to develop and provide an Integrated Water Quality Assessment Report and listing, commonly referred to as the 305(b) report and the 303(d) list, every two years for EPA acceptance and approval. The assessment and report defines if waterbodies (streams, lakes, and impoundments) are meeting and supporting their designated uses. The 305(b) report and subsequent 303(d) list provides the initial and foremost basis to direct efforts to restore water quality within the state.

The NPS Program's success has been evaluated primarily on the 303(d) list. When impaired waterbodies are restored, they are removed from the list. The level of effort needed to remove a waterbody is enormous and cannot be accomplished by a single agency, program, project or activity. It is essential that the ADA Division of Natural Resources, its partners, and stakeholders work together in a collaborative effort to improve water quality. Throughout this report you will see the many partners that contribute to the success of the NPS Program.

This Annual Report focuses on the accomplishments that were made in meeting milestones of the NPS Program for FY 2019. It details projects, efforts, and activities initiated, implemented, or completed by partners and stakeholders over the past year. This report also contains calculated load reductions of sediment, nitrogen, and phosphorus; installed Best Management Practices (BMPs); and how federal dollars were allocated within the NPS Program.

Efforts continue to be made in improving water quality in select areas and watersheds. For this progress to continue, certain achievements will have to be accomplished, such as:

- State and Federal agencies continue to provide technical and financial assistance.
- Stakeholders "buy in" and becoming actively involved in restoring waterbodies.
- Low Impact Development (LID) and Green Infrastructure (GI) techniques are demonstrated in urban areas and demonstrations are implemented for educational purposes for students, developers, municipalities, and citizens of the community.
- Watershed stakeholders and groups organize and identify common water quality goals.
- Watershed plans, conservation plans, and comprehensive nutrient plans are developed, utilized, and implemented.
- Continuation of water quality monitoring in priority watersheds evaluating the status of those watersheds.

2 Education and Outreach

Education and outreach projects continue to be a focus of the Arkansas 319(h) program. Educating landowners and the citizens of Arkansas about NPS pollution and the methods of control, reduction or abatement is challenging. Assessing the water quality benefits of education is almost impossible. Continuing to demonstrate projects and repackaging education materials is the most effective means we have found to promote the NPS Program.

The Murphy Pond pollution prevention project was initiated and completed during FY 2019 and connected with many residents in Northwest Arkansas. This project is highlighted below:

Improving NPS Pollution Prevention in a Small Urban Community Watershed

Murphy Pond is located within the city of Springdale, Arkansas and flows directly into Spring Creek, which drains into the Illinois River Watershed (HUC 11110103). The City of Springdale recognized an ongoing issue with NPS pollution, specifically, urban litter. This pond attracts many visitors and has several recreational uses, such as fishing, picnics, community events, and walking/jogging. The urban litter was creating problems for the City of Springdale staff and the amount of litter was unsightly and caused local flooding issues during heavy rainfall events. It was decided that the NPS problem should be addressed through an education and demonstration project. The University of Arkansas Cooperative Extension Service along with the City of Springdale managed the project and took the lead in addressing this apparent issue with Murphy Pond.

The goals of the project were: to provide a cleaner, healthier, and more attractive Murphy Pond; address the trash collection point before discharge into Spring Creek; and help make park users aware of the litter problem through educational outreach. Project managers proposed resolving trash collection points, demonstrating the impact of NPS Pollution using catchments, public displays, and educational signage, engaging residents, park users, and business on the impact of the NPS pollution, and using social media, events, and activities to provide education and feedback opportunities.

This project installed a litter gate, pet waste stations, new little bins (with bi-lingual educational messaging), and interpretive signage. A measure of success for this project was bringing in and collaborating with the Education Accelerated by Service and Technology (EAST) lab from JO Kelly Middle School. These middles schoolers helped develop educational materials, conducted outreach, and took lead on a litter removal and trash audit around Murphy Park. The trash audit that was conducted in 2019 yielded around 31 pounds of litter.

There were challenges with this project and lessons learned. The duration of the project was 6 months, which proved challenging in timing and completion of the project. Weather tends to be a challenge in implementing projects and it was the case for this project as well. However, the weather challenges were met and overcome with great partners, good planning, and clear goals. The original litter gate that was installed was destroyed during an unexpected flood event. City staff immediately began plans to rebuild the structure and improved its strength. The litter gate has been a great success for all parties involved. It has cut down the time spent cleaning Murphy Pond in half for City staff.

Nonpoint source pollution has not always been well-understood by residents, municipalities, and stakeholders, but it is becoming more widely understood among the public due to efforts like this project. The University of Arkansas Cooperative Extension Service had developed strong relationships and focused efforts in the education and demonstration arena. Through these efforts, communities appear to be more concerned and proactive when it comes to addressing NPS Pollution. These efforts are going to be the key in combating current and future challenges regarding urban NPS issues. This project is a great example in capacity building, educational demonstration, and pollution prevention.

Keep Murphy Park Clean & Litter-Free

LITTER AFFECTS WATER BY:

Murphy pond drains water from 0.3 square miles of urban neighborhoods, businesses, streets, rooftops, yards, and sidewalks. When it rains, runoff flows down gutters and storm drains, picking up anything left on the ground like litter, sediment, yard waste, automotive fluids, or pet waste. These pollutants can collect in Murphy Pond or flow to Spring Creek, a major tributary to the Illinois River, harming water quality, recreation, and wildlife habitat.

SMALL CHOICES = BIG DIFFERENCES

When we all do our part, small choices can lead to big improvements to water quality. **You can do your part by:**

- properly disposing of litter and cigarette butts
- make clean choices in your yard or business
- clean up pet and yard waste
- never throw anything down a stormdrain!

These small actions keep your park clean, reduce costs and time of cleanup, and maintains safe and quality recreation. Remember, its your park! Help keep it clean!

Murphy Park, the city's oldest park, was named after Robert Murphy, who moved to Springdale in 1901. The Murphys sold their farm to the city in 1955 to build a park and swimming pool.

During heavy rains, litter can become stranded along the shoreline or flow into Spring Creek

Improper trash maintenance leads to litter polluting waterways

Murphy Pond flows into Spring Creek

A juvenile green heron scouts Murphy Pond for fish

LA BASURA AFECTA EL AGUA:

El Estanque Murphy drena agua de 0.3 millas cuadradas de vecindarios urbanos, negocios, calles, techos, patios y aceras. Cuando llueve, la escorrentía fluye por los canales de agua y los desagües pluviales, recogiendo todo lo que queda en el suelo, como basura, sedimentos, desechos de jardines, fluidos automotrices o desechos de mascotas. Estos contaminantes pueden acumularse en el Estanque Murphy o fluir al Arrollo Spring, un importante afluente del río Illinois, perjudicando la calidad del agua, la recreación y el hábitat de la vida silvestre.

PEQUEÑAS ELECCIONES = GRANDES DIFERENCIAS

Cuando todos hacemos nuestra parte, las pequeñas elecciones pueden llevar a grandes mejoras en la calidad del agua. **Puedes hacer tu parte:**

- Eliminando adecuadamente la basura y las colillas de cigarrillos
- Haciendo elecciones limpias en tu patio o negocio
- Limpiando los desechos de tu mascota y del jardín
- ¡No tires nada en el drenaje pluvial!

Estas pequeñas acciones mantienen tu parque limpio, reducen los costos y el tiempo de limpieza y mantienen una recreación segura y de calidad. Recuerda, ¡es tu parque! ¡Ayuda a mantenerlo limpio!

This project is supported by a 319(h) grant through the Arkansas Natural Resources Commission in cooperation with the University of Arkansas System Division of Agriculture Cooperative Extension and the City of Springdale.

SPRINGDALE

U of A DIVISION OF AGRICULTURE RESEARCH & EXTENSION University of Arkansas System

3 Best Management Practice Demonstration Projects

Best Management Practice (BMP) Demonstration projects continue to be a focus of the Arkansas 319(h) program. These projects are vital in getting conservation on the ground and having an immediate impact on the reduction of nonpoint source pollution. For FY 2019, the Arkansas 319(h) program worked with several partners implementing various BMPs around the State.

Below you will see some of the partners and projects that are implementing BMPs throughout various watersheds in the State:

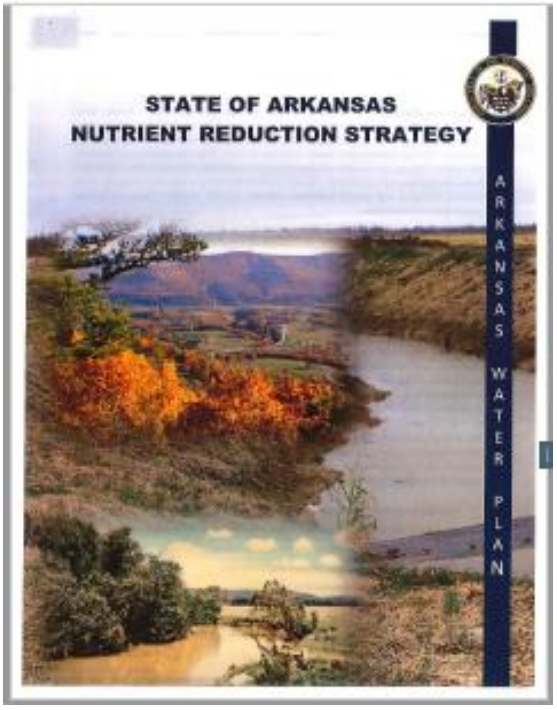
Project #	Project Title	County/Watershed	Total Federal $s
16-200	Hicks Creek – White River Watershed Project	Baxter / Middle White	$190,000.00
16-300	Big Creek – White River Watershed Project	Marion / Bull Shoals	$215,000.00
16-400	Strawberry River Pasture Improvement Program	Izard / Strawberry	$75,000.00
16-900	Strawberry River Improvement Project	Sharp / Strawberry	$75,000.00
17-700	Lower St. Francis River Watershed Cost-Share Project	St. Francis / St. Francis River	$55,000.00
17-800	Poteau River Sub Watershed Project	Scott / Poteau River	$75,000.00

BMP Demonstration Projects primarily focus on the implementation of several different types of BMPs, however projects also include outreach and educational opportunities. Typical BMPs that are utilized through these projects are: Fencing, Forage and Biomass Planting, Alternative Watering Systems, Irrigation Pipeline, Water Control Structures, Brush Management, Heavy Use Area Protection, and Cover Crops. BMP Demonstration projects are one of the more effective ways in getting conservation on the ground and having an immediate impact on water quality.

4 Nutrient Reduction Strategy

Gulf of Mexico Hypoxia Task Force & The Nutrient Reduction Strategy

Arkansas, along with 11 other states within the Mississippi River Basin, voluntarily participates in the Gulf of Mexico Hypoxia Task Force. The Task Force was established in 1997 by the United States Environmental Protection Agency (USEPA) to understand the causes and effects of eutrophication in the Gulf of Mexico; coordinate activities to reduce the size, severity, and duration; and mitigate the effects of hypoxia. Arkansas, represented by Arkansas Department of Agriculture's Natural Resource Division, has been involved in the Task Force since 1999.



Assistance is provided to the Task Force through project-specific subcommittees and a long-standing Coordinating Committee. The nonpoint source working group produced the *2018 Progress Report on Coordination for Nonpoint Source Measures in Hypoxia Task Force States*. This document, released May 2018, represents the first-ever report that focuses on the Hypoxia Task Force coordinated efforts to account specifically for nonpoint source changes that influence nutrient loading from a variety of methods. The Task Force also released the second *Report on Point Source Progress in Hypoxia Task Force States* in October 2019. This report documents the extent of nitrogen and phosphorus monitoring and discharge limits for major sewage treatment plants within the Hypoxia Task Force States.

The USEPA, in conjunction with the Task Force, released an updated *Gulf Hypoxia Action Plan* in 2008 addressing critical needs and how to move forward at the federal and state level. As a result of the updated Action Plan, Arkansas developed a Nutrient Reduction Strategy (NRS). The NRS was released in 2014 and guides the state in reducing excess nutrients in waters so that in-state and downstream water quality goals are ultimately met. The NRS specifically guides activities that support nitrogen and phosphorus reductions from point and nonpoint sources of pollution. In 2018, a stakeholder process was initiated to update and revise the NRS. The updated NRS will build on the successes of the current strategy and will focus on establishing a new method of measuring overall progress, targeting nutrient focus watersheds, and reporting nutrient reductions from nonpoint sources.

5 Flooding in Arkansas

The Arkansas River Flood of 2019 (May – June 2019) was an historic event with significant impacts to infrastructure, residents, and the environment. Impacting nearly every major community along the Arkansas River, floodwaters exceeded previous record highs in five locations along the river. Record crests were established at Van Buren (Crawford County), Dardanelle (Yell County), Morrilton (Conway County), Toad Suck (Perry County), and Pendleton (Desha County). Water levels were the highest since the McClellan–Kerr Arkansas River Navigation System went into operation in 1971. The subsequent federal disaster declaration included sixteen counties along the river.

Arkansas River Flooding

Weather Forecast Office
Little Rock, AR
Issued June 11 2019 9:30 PM CDT

Location	Flood Stage	Crest/Date	Versus Highest Crest On Record	Rank	Record Crest/Year Prior to Event
Van Buren	22.0 ft	40.8 ft/June 1	+2.7 ft	1st	38.1 ft/1945
Ozark	357.0 ft	375.0 ft/May 30	-0.5 ft	2nd	375.5 ft/1943
Dardanelle	32.0 ft	45.9 ft/May 30	+1.8 ft	1st	44.1 ft/1943
Morrilton	30.0 ft	43.0 ft/June 4	+1.0 ft	1st	42.0 ft/1927
Toad Suck	275.0 ft	285.4 ft/June 4	+2.5 ft	1st	282.9 ft/1990
Little Rock	23.0 ft	29.7 ft/June 5	-4.9 ft	7th	34.6 ft/1833
Pine Bluff	42.0 ft	50.8 ft/June 6	-1.3 ft	2nd	52.1 ft/1943
Pendleton	31.0 ft	37.6 ft/June 6	+3.5 ft	1st	34.1 ft/1973

An historic flood event unfolded along the Arkansas River. Record or near record crests occurred, with previous high marks surpassed by more than two feet at Van Buren (Crawford County), Toad Suck (Perry County), and Pendleton (Desha County). Some long time records (1940s or before) were broken.

NWSLittle Rock weather.gov/lzk

The flood was the result of two significant events. First, the Southern and Central United States experienced rainstorm after rainstorm in the spring of 2019, leading to abundant rainwater pouring into rivers and streams. Additionally, as Keystone Lake (Oklahoma) reached capacity in May, the U.S. Army Corps of Engineers released water from the reservoir into the Arkansas River. This release resulted in de facto open flow as water coursed through the floodgates at roughly the same rate that water flowed into it from swollen upstream rivers.

Impacts from the flooding were significant. Two deaths and ten injuries were attributed to the flood. Crop damage was estimated to exceed $3 million and property damage was estimated at approximately $13.5 million. The swift-moving water from weeks of heavy rain also challenged Arkansas' aging levee system. The levee at Dardanelle breached with rapid currents from the river ripping a 40-foot section from the levee. A levee in Logan County, in an area of mostly farmland, and one in Perry County, were also overwhelmed.

The flooding also posed a less visible, but still significant threat: contamination of surface and groundwater supplies as floodwaters flushed pollutants and soil into rivers and streams.

Contaminants like soil, animal waste, salt, pesticides, oil, bacteria, and nitrate flow from the surface into groundwater supplies from farms, septic systems and other sources. Swiftly flowing floodwaters only sped up that process. As water ran over and through the Arkansas River watershed, it picked up and carried pollutants. The scouring of bank channels by swiftly flowing floodwaters exacerbated the transfer of sediment and nutrients.

The result is a significant and serious risk to essentially anyone or anything the floodwater has contacted, including individual drinking water wells or community water systems. Floodwaters can fully inundate water wells for days or weeks. The force of floodwaters can also disrupt or damage well or water supply infrastructure and directly introduce the contaminated water into the well.

6 Update on the Buffalo River

Background: The Buffalo River, located in Northern Arkansas, was the first National River to be designated in the United States. The Buffalo River is 153 miles (246 km) long. The lower 135 miles (217 km) flow within the boundaries of an area managed by the National Park Service, where the stream is designated the Buffalo National River. The river flows through Newton, Searcy, Marion, and Baxter Counties, from west to east. The river originates in the highest part of Boston Mountains of the Ozarks, flows out onto the Springfield Plateau near the historic community of Erbie, and finally crosses a portion of the Salem Plateau just before joining the White River. The upper section of the river in the Ozark National Forest is managed by the U.S. Forest Service and is designated as a National Scenic River and a National Wild River; that section is not part of the area managed as a park by the Park Service, but is managed as a part of the Ozark National Forest.

The Buffalo National River was established by an Act of Congress on March 1, 1972, ending the recurring plans of the U.S. Army Corps of Engineers to construct one or more dams on the river. The National River designation protects natural rivers from industrial uses, impoundments and other obstructions that may change the natural character of the river or disrupt the natural habitat for the flora and fauna that live in or near the river. Three segments totaling 11,978 acres (48.47 km^2) were designated the Buffalo National River Wilderness in 1975.

Watershed Management Plan (WMP): A confined animal feeding operation (CAFO) was given a permit to operate in the watershed under the Beebe administration to raise hogs in the watershed. After it was established, it was a constant point of controversy. Many in the state disagreed with the farm being able to operate in the watershed and believed it would degrade water quality in the Buffalo River.

Therefore, on September 30, 2016, Governor Asa Hutchinson announced the Beautiful Buffalo River Action Committee (BBRAC). The Committee was to address water quality concerns throughout the watershed and ensure the Buffalo National River maintains all designated uses by *"establishing measurable objectives, setting achievable action items, establishing durable partnerships, and sharing agency resources, and informing policymakers and the general public of relevant progress."* One of the action items set forth was for the State to develop a holistic management plan for the watershed.

Funding through EPA was obtained to produce a WMP for the Buffalo River. Stakeholder meetings were held in 2017 to gather input to be incorporated into the plan. A fully developed WMP was submitted to EPA in March of 2018 and the State received a letter of acceptance from EPA in June of 2018. The WMP identified six sub-watersheds as priority areas: Mill Creek (upper), Calf Creek, Bear Creek, Brush Creek, Tomahawk Creek, and Big Creek (lower).

Update: In June of 2019, Governor Asa Hutchinson announced a deal had been struck to remove the C & H hog farm from the watershed. He also announced a permanent moratorium on large scale CAFOs being permitted to operate in the Buffalo River watershed. The farmers will get $6.2 million to close down their operation. Most of the funds used were state funds with some private money coming from The Nature Conservancy. The funds will help the farmers pay off their loans on the farm and shut the farm down in an environmentally sensitive manner. The farmers also have agreed to give the State a permanent conservation easement on the property.

In the fall of 2019, Governor Hutchinson signed an executive order creating the Buffalo River Conservation Committee (BRCC). He also announced that a total of $2 million in state and private funding will be allocated for conservation projects within the Buffalo River Watershed.

The BRCC committee is a public-private partnership designed to identify and fund projects within the Buffalo River area. "It will focus on supporting best practices and a grant program for farmers, land owners and cities and counties within the watershed," Hutchinson says.

For the project, $2 million will go toward conservation projects and water quality grants. Half of the funding will be drawn from the Governor's discretionary funds, pending legislative approval, while the remaining half will be provided by private funding, namely the Nature Conservancy and the Buffalo River Foundation.

"We want the protection and enhancement of water quality in the Buffalo River Watershed to continue as a state-led effort," Hutchinson said. "Now that the watershed management plan is in place, it is the right time to engage with stakeholders and landowners to start implementing projects that make a difference. The Buffalo National River is an irreplaceable resource, both for Arkansas and the nation. Protecting its quality and enhancing its value as a driver of economic development will require a unique cooperative effort. The Buffalo River Conservation Committee comprises the state departments with the most engagement in the watershed, and I am confident in their ability to connect with other engaged leaders to coordinate this effort."

The Buffalo River Conservation Committee is composed of four state Cabinet secretaries (or their designees. The four committee members include:

- Wes Ward, Secretary of Agriculture (chair)
- Becky Keogh, Secretary of Energy and Environment
- Stacy Hurst, Secretary of Parks, Heritage and Tourism
- Nathaniel Smith, Secretary of Health

The BRCC committee is tasked with implementing the management plan. The committee members will be responsible for creating subcommittees to lead the Buffalo River management plan process. The BRCC is expected to engage with local landowners, conservation organizations, tourism officials, environmental experts and regional and federal officials during the process. Each year, the state will be reviewing the Buffalo River Watershed Management Plan. A report, including a list of recommendations and updates on the process, are expected to be submitted to the Governor's office.

7 Watershed Management Plans (WMPs)

Nine Element Watershed Management plans are developed in a cooperative effort between ADA Division of Natural Resources and local watershed stakeholders. The goal with developing Watershed Management Plans is to preserve, protect, and enhance resources and surface waters throughout the state. A watershed approach considers the entire geographic area (on an 8-digit HUC scale) that a watercourse drains to address a broad range of issues.

Middle White River Watershed Management Plan

In FY 2019, one WMP was completed. The Middle White River Watershed Management Plan was completed with assistance of local stakeholders, state agencies, various organizations and FTN & Associates Environmental Engineering. Below is a summary of the completed plan.

The Middle White River watershed is located in north central Arkansas. It is the watershed for the White River from the confluence of the Buffalo River, in Baxter County, to the confluence of the Black River, in Independence County. This 1,476.2 square mile watershed also includes large areas of Baxter, Independence, Izard, and Stone Counties. There are two large towns in the watershed, Batesville and Mountain Home; however, the watershed is mostly rural. Forest covers 69% of the watershed and includes the Sylamore District of the Ozark National Forest, in Stone County. Economic drivers in the watershed include tourism and outdoor recreation, livestock farming (18% of the watershed is pasture or hayland), poultry and timber production and processing, small manufacturing, and mining (sand, stone, and gravel).

Water quality in this watershed is generally considered to be good. This watershed includes important habitats for threatened and endangered species including caves, two springs designated as Ecologically Sensitive, and a portion of the White River designated as Critical Habitat for the Rabbitsfoot mussel. In addition, two streams in the watershed, North Sylamore Creek and Salado Creek, are designated as Extraordinary Resource Waters, and North Sylamore Creek is also designated as a Natural and Scenic Waterway.

This Middle White River watershed management plan has been developed as part of the ADA Division of Natural Resources Nonpoint Source Program goal of developing plans for all 57 8-digit hydrologic unit code watersheds within the state. This watershed was selected because there are two streams, Hicks Creek near Mountain Home, and Greenbrier Creek near Batesville, that were included on the approved 2016 and draft 2018 state lists of impaired waterbodies. Hicks Creek is impaired due to high E. coli levels from the Mountain Home wastewater treatment plant and runoff from the developed areas in and around Mountain Home. Greenbrier Creek is listed as impaired due to the number of low dissolved oxygen concentrations; however, this impairment is expected to be removed as a result of revised ADEQ water quality assessment methodology. Stakeholder concerns related to water quality include the effects of erosion, use of pesticides and other chemicals, mining, livestock and poultry waste, forest management, and sewage on surface and groundwater.

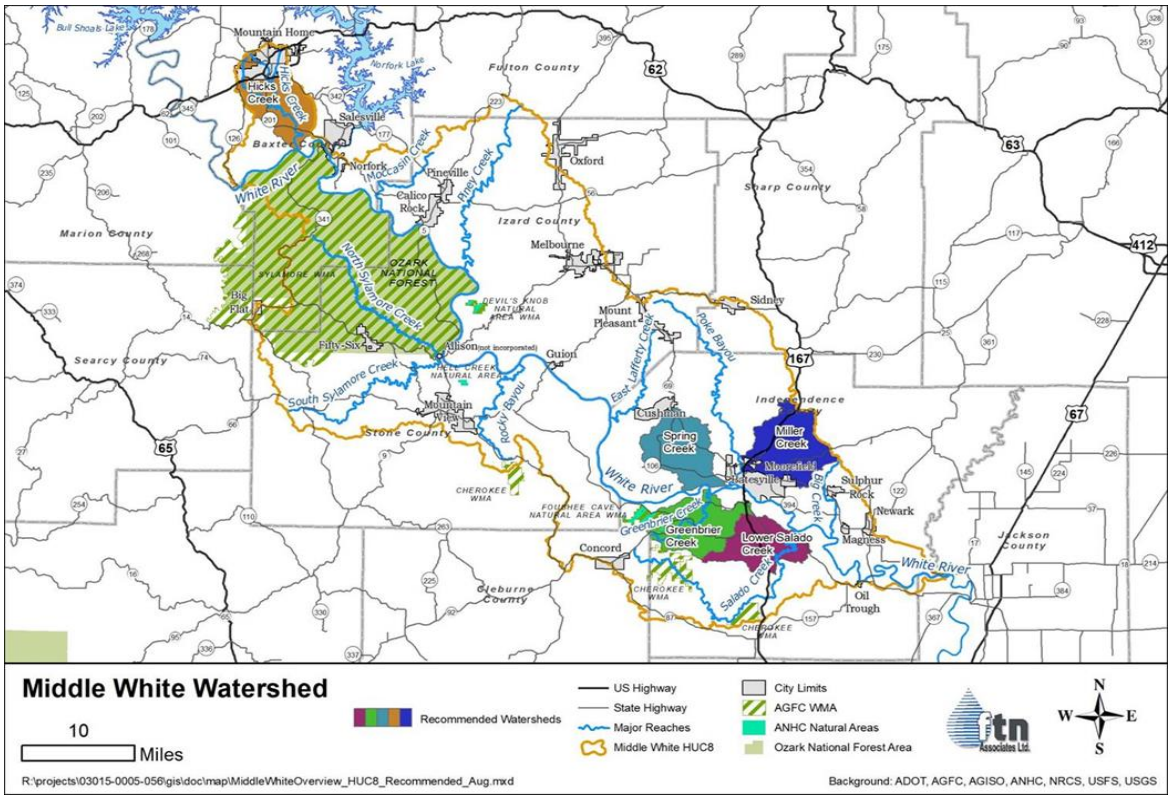
The focus of this watershed management plan is the protection and improvement of surface water quality in the White River and its tributaries through management of unregulated nonpoint sources of pollution. The mission of the watershed management plan is to increase awareness of water quality issues, outreach and education, and voluntary activities to implement good water quality management practices.

The vision this plan is intended to create is: The uses of the Middle White River and its tributaries are attained and sustained, resulting in clean, healthy streams that enhance the socioeconomic and natural amenity benefits of the watershed, as visitors, landowners, and local communities work together to protect and improve both water quality and the quality of life throughout the watershed.

The WMP identified and recommended five subwatersheds (12-digit HUC scale) that could benefit from increased BMP implementation, additional in-stream water quality monitoring, increased collaboration between stakeholders and education of landowners and seasonal tourist. These subwatersheds that were identified include: Hicks Creek, Spring Creek, Miller Creek, Greenbrier Creek and Salado Creek. This identification does not preclude any of the recommendation from being implemented in other subwatersheds.

The BMPs that were recommended for these subwatersheds are:

- Bank stabilization/stream restoration
- Riparian buffers
- Livestock stream access control
- Pasture planting
- Filter strips
- Nutrient management plans
- Forestry best management practices

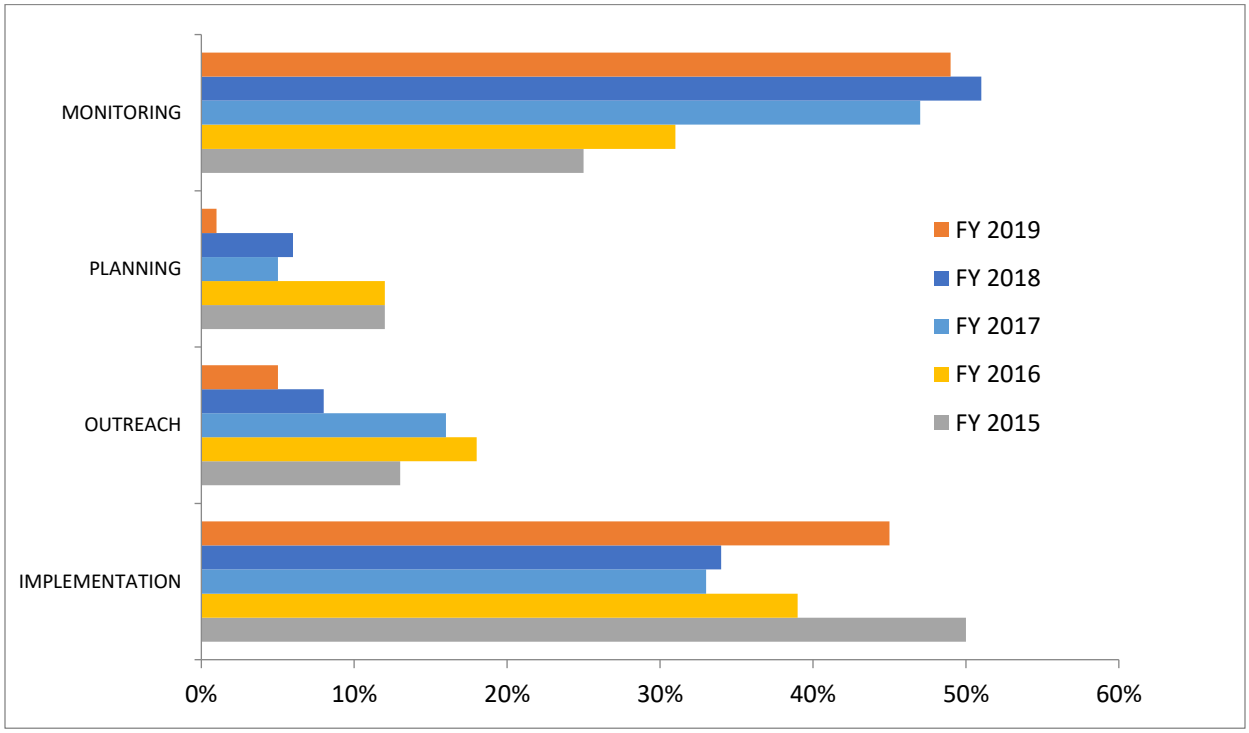


8 Federal Resource Allocation and Best Management Practices

Program Expenditures for FY 2019:

The Arkansas Nonpoint Source Program allocates most of its Clean Water Act 319(h) funds to its partners who plan to implement projects in priority watersheds that best meet the goals and milestones of the Program. These partners must be capable of carrying out projects and are typically required to provide a minimum of 43% match in non-federal funds. In FY 2019, the ADA Division of Natural Resources and its project partners spent approximately 2.1 M in federal funds to address water quality resource concerns and to reduce or prevent nonpoint source pollution.

The chart below shows how federal funds disbursed for projects were allocated among monitoring, planning, outreach, and implementation projects. Monitoring expenditures decreased 3% of federal expenditures from FY 2018 to 2019. Planning expenditures decreased slightly to 5% while outreach expenditures decreased to 5%. Implementation expenditures increased to 45% in FY 2019. This is due to favorable weather conditions allowing BMPs to be installed.



Best Management Practices Implemented in FY 2019

The table below contains BMPs that have been implemented during FY 2019 and the quantity of each practice.

		Demonstration Projects						
Best Management Practices	NRCS #	16-200	16-300	16-400	16-900	17-700	17-800	**Total**
Fencing (feet)	382	4,604	11,420	17,040	16,725	-	2,534	52,323
Forage and Biomass Planting (acres)	512	99	40	127.6	38.5	-	-	305.1
Pond (units)	378	1	-	-	-	-	-	1
Watering Facility (units)	614	1	2	2	2	-	-	7
Heavy Use Area (sq.ft.)	561	225	-	4,450	450	-	-	5,125
Livestock Pipeline (feet)	516	300	40	1,300	350	-	-	1,990
Brush Management (acres)	314	698	167	-	-	-	-	865
Spring Development (units)	574	-	1	-	-	-	-	1
Cover Crop (acres)	340	-	-	-	-	159	-	159

9 Program Success Stories in FY 2019

The Arkansas Department of Agriculture Division of Natural Resources identified three segments that were delisted from the 2018 303(d) list. These segments were located in the West Fork and East Fork of the Point Remove River Watershed (HUC# 11110203). A success story was developed and submitted to EPA on July 10, 2019. After a thorough review and comment period from EPA, the success story was approved and accepted by EPA on September 17, 2019. Below is a brief synopsis of the success story for the West and East Fork Point Remove Watershed:

Reducing Erosion Improves Water Quality in the West Fork and East Fork Point Remove Watersheds

High levels of turbidity due to surface erosion had impaired Arkansas' West Fork and East Fork Point Remove watersheds. The Arkansas Department of Environmental Quality (ADEQ) added three stream segments (38.6 miles total) to the 2014 Clean Water Act (CWA) section 303(d) list of impaired waters. All three stream segments were listed for turbidity impairment from a surface erosion source. Watershed partners initiated implementation of agricultural best management practices (BMPs) to reduce sediment runoff. In-depth monitoring was also conducted through the Arkansas Department of Agriculture Division of Natural Resources' CWA section 319 program. The turbidity levels in the West Fork Point Remove (AR-3F-11110203-016 and AR-3F-11110203-017) and East Fork Point Remove (AR-3F-11110203-014) watersheds have declined, prompting ADEQ to propose removing these three segments from the draft 2018 CWA section 303(d) list of impaired waters.

Runoff from forested areas, pasturelands and gas well areas were contributing excess turbidity in these watersheds. ADEQ's assessments determined that reach 017 (14.4 miles) and reach 016 (3.3 miles) of the West Fork Point Remove Watershed and reach 014 (20.9 miles) of the East Fork Point Remove Watershed were not meeting the state's water quality standard for turbidity. The water quality standard for turbidity in the Arkansas River Valley Region states that values should not exceed 21 nephelometric turbidity unit (NTU) during base flows (June to October) in more than 20 percent of samples and not more than 40 NTUs during all flow conditions in more than 25 percent of samples taken in not less than 24 monthly samples. These segments were placed on the 2014 and 2016 CWA section 303(d) list of impaired waters for not meeting the Regulation 2 standards for turbidity.

Multiple CWA 319 section grants have supported work completed in the Lake Conway–Point Remove Watershed, including use of a no-till drill on watershed farmland to reduce erosion; installation of irrigation best management practices, which resulted in a reduction of an estimated 230 tons/year of sediment/siltation; completion of assessments; and education efforts.

The Natural Resources Conservation Service (NRCS) implemented several projects and practices within the watershed using programs like the Environmental Quality Incentives Program (EQIP) and the Mississippi River Basin Healthy Watersheds Initiative (MRBI). The Lake Conway–Point Remove Watershed Alliance has also contributed to the success of these watersheds reaching water quality standards.

Many partners contributed to the improvement of the West Fork and East Fork Point Remove Watershed segments, The NRCS invested funds through the EQIP and MRBI programs into pollution control practices in the watershed. The ADA Division of Natural Resources provided $1,370,918 in EPA CWA section 319 funds to support water quality improvement and assessment projects, including numerous projects led by

the nonprofit Equilibrium. Other partners have invested money, resources, and in-kind match, including Lake Conway–Point Remove Alliance, Point Remove Wetlands Reclamation and Irrigation District, the Conway County Conservation District, and local landowners.

NONPOINT SOURCE SUCCESS STORY

Arkansas

Reducing Erosion Improves Water Quality in the West Fork and East Fork Point Remove Watersheds

Waterbodies Improved High levels of turbidity due to surface erosion had impaired Arkansas' West Fork and East Fork Point Remove watersheds.

The Arkansas Department of Environmental Quality (ADEQ) added three stream segments (38.6 miles total) to the 2014 Clean Water Act (CWA) section 303(d) list of impaired waters. All three stream segments were listed for turbidity impairment from a surface erosion source. Watershed partners initiated implementation of agricultural best management practices (BMPs) to reduce sediment runoff. In-depth monitoring was also conducted through the Arkansas Natural Resources Commission's (ANRC) CWA section 319 program. The turbidity levels in the West Fork Point Remove (AR-3F-11110203-016 and AR-3F-11110203-017) and East Fork Point Remove (AR-3F-11110203-014) watersheds have declined, prompting ADEQ to propose removing these three segments from the draft 2018 CWA section 303(d) list of impaired waters.

Problem

The West Fork and East Fork of Point Remove Creek emerge in the northernmost portion of the Lake Conway–Point Remove Watershed and flow southward (Figure 1). Land use in the Lake Conway–Point Remove Watershed is predominately forested, especially in the headwater (northern) portion of the basin. Pastures are distributed in a mosaic fashion throughout the forested areas and agricultural land use constitutes much of the southern portion of the basin. The West Fork Point Remove Creek Watershed is the most sizable of the subwatersheds in the northwestern portion of the Lake Conway–Point Remove Watershed. Approximately 90 percent of the West Fork Point Watershed is forest and pastureland. The East Fork comparatively is comprised of about 77 percent forest and pastureland use. The area also supports numerous natural gas wells.

Runoff from forested areas, pasturelands and gas well areas were contributing excess turbidity in these watersheds. ADEQ's assessments determined that reach 017 (14.4 miles) and reach 016 (3.3 miles) of the West Fork Point Remove Watershed and reach 014 (20.9 miles) of the East Fork Point Remove Watershed were not meeting the state's water quality standard for turbidity. The water quality standard for turbidity

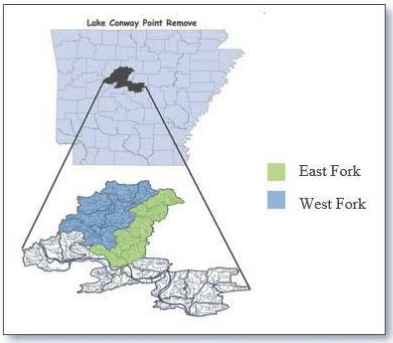


Figure 1. The Lake Conway–Point Remove Watershed is in central Arkansas.

in the Arkansas River Valley Region states that values should not exceed 21 nephelometric turbidity unit (NTU) during base flows (June to October) in more than 20 percent of samples and not more than 40 NTUs during all flow conditions in more than 25 percent of samples taken in not less than 24 monthly samples. These segments were placed on the 2014 and 2016 CWA section 303(d) lists of impaired waters for not meeting the Regulation 2 standards for turbidity.

10 Other Entities That Augment Section 319(h) Programs and Initiatives

The Arkansas NPS program has several partners and other entities that work to reduce non-point source pollution. Partners consist of, but are not limited to, the Natural Resources Conservation Service (NRCS), Arkansas Natural Heritage Commission (ANHC), Arkansas Department of Environmental Quality (ADEQ), the University of Arkansas Cooperative Extension Service (UACES), The Nature Conservancy (TNC), Beaver Watershed Alliance (BWA), Illinois River Watershed Partnership (IRWP) and various other entities. Listed below are several partners and the implemented projects and programs that have enhanced the mission of the Arkansas NPS program in FY 2019.

Natural Resources Conservation Service (NRCS)

The Natural Resources Conservation Service (NRCS) Arkansas Annual Report is usually available in January or February of each year. The NRCS 2018 Arkansas Annual Report noted more than $136 million in financial assistance obligated through Farm Bill conservation efforts and over 1 million in conservation acres. NRCS has several programs that help producers implement conservation practices and address resource concerns. NRCS delivered conservation technical assistance through the voluntary Conservation Technical Assistance Program (CTA) and helped farmers, ranchers, and foresters with their conservation planning process. In FY 2018, Arkansas NRCS worked with more than 250 partners to help put conservation on the ground. The goal of the NRCS is to help Arkansas producers get conservation on the ground through technical and financial assistance and direct relationships with farmers, ranchers, and foresters!

Environmental Quality Incentives Program (EQIP)

EQIP promotes agricultural production and environmental quality as compatible goals, providing technical and financial assistance to install or implement structural and management conservation practices on agricultural lands. Farmers received more than $44 million in financial assistance for FY 18. There were 3,599 active contracts on 625,905 acres under this program. There were 1,392 new contracts added to the EQIP program. The EQIP program funded sixteen different types of partners during 2018. Some examples of these partners include: Beginning Farmer/Rancher, Certified Organic, Limited Resource, Forest Service Partnership, Locally Led, Planning, and Socially Disadvantaged. Top practices installed using this program typically include: Cover Crops, Fencing, Irrigation practices, Heavy Use Area Protection, Nutrient Management, Forage and Biomass Planting, and Prescribed Burning.

Agricultural Conservation Easement Program (ACEP)

There were 16 easements that Arkansas NRCS enrolled under ACEP Wetlands Reserve Easements (WRE). More than $9 million was obligated under this program and over $3 million put towards restoration. This program offers landowners opportunities to protect, restore and enhance wetlands on their properties.

Conservation Stewardship Program (CSP)

The goal of CSP is to encourage agricultural and forestry producers to undertake additional conservation activities to improve and maintain existing conservation on their land. By providing financial and technical assistance, this program conserves and enhances soil, water, air, and related natural resources. There were 712 new contracts developed on 709,153 acres in FY 2018. CSP had 2,912 active contracts on 2,847,423 acres in Arkansas for FY 2018. The program accounts for more than $73 million in obligations and made payments in the amount of $58.7 million for 2018.

Regional Conservation Partnership Program (RCPP)

RCPP is a program that promotes coordination between NRCS and partners to deliver assistance to producers and landowners. RCPP encourages partners to increase the restoration and sustainable use of soil, water, wildlife, and related natural resources on regional or watershed scales. This program had 92 contracts funded, 42,733 acres treated, and over $3.45 million in obligations.

The Nature Conservancy (TNC)

The Nature Conservancy in Arkansas has been working cooperatively with private landowners, businesses, public agencies and other organizations to conserve and restore the lands and waters of the Natural State for people to enjoy since 1982. The mission of TNC is to conserve the lands and waters on which all life depends. The Nature Conservancy has worked with many partners to conserve more than 300,000 acres of critical natural lands in Arkansas for people to use and enjoy. Some of the accomplishments from FY 2019 include (but are not limited to): Restoration in the upper Little Red River watershed (Eagle's Nest) using natural channel design eliminating 1,240 tons of sediment entering the river and planting 1,200 trees to reforest the streambanks; enrolled 9,800 acres in the Delta into the Wetlands Reserve Enhancement Program; initiated Rockhouse Creek restoration (tributary of the Kings River) which will improve public safety, reduce gravel and sediment entering the river, and restore fish access to Rockhouse Creek; acquired a 210 acre tract in Benton County for the protection of endangered species; constructed a stream crossing on the South Fork of the Little Red River; and helped support farmers by installing timers on irrigation pumps, which reduces groundwater consumption and decreases excess runoff from fields.

The Arkansas State Plant Board

The Arkansas Abandoned Pesticide Program was developed as a way for farmers and landowners to safely and properly dispose of old or unwanted chemicals. The program began in 2005 and has overseen the collection of 4,267,119 pounds of unwanted pesticides and herbicides in counties across Arkansas. This program is conducted in cooperation with the Arkansas State Plant Board, the University of Arkansas Cooperative Extension Service, the Arkansas Farm Bureau, the Arkansas Department of Agriculture Division of Natural Resources, and the Arkansas Department of Environmental Quality. Representatives from these agencies make up the Abandoned Pesticide Advisory Board.

The Abandoned Pesticide Advisory Board meets twice a year and selects approximately ten counties to participate annually with a goal of holding at least one collection event in every county in Arkansas over a 5-6 year period. Every county has had at least one event at this time. Participation in collection events is free and anonymous to farmers and other non-industrial landowners. The Arkansas State Plant Board works with a hazardous waste contractor to dispose of the unwanted pesticides collected during events.

Pesticide collections began in 2005 in Northeast Arkansas targeting the Mississippi River Delta area of Eastern Arkansas because of the areas very high agricultural land use. By the spring of 2009 at least one collection had been held in each county in Eastern Arkansas. Pesticide collections are paid for by the chemical manufacturers through a fee added to the registration of each agricultural chemical registered in Arkansas. There is no cost to the landowner, and it is completely anonymous for those who wish to participate.

Abandoned Pesticide Program FY-2019 events were conducted in November 2018

COUNTY	TOTAL WEIGHT IN POUNDS
Crittenden	95,229
Jackson	93,816
Lawrence	106,331
Mississippi	58,923
Monroe	82,514
St. Francis	75,380
Woodruff	108,529
TOTAL	620,722
PROGRAM TOTAL	4,267,119

Arkansas Department of Agriculture Division of Natural Resources Clean Water and Drinking Water State Revolving Loan Fund

The Water Development Section at the Arkansas Department of Agriculture Division of Natural Resources promotes financing and implementation of effective and affordable solutions to Arkansas's water supply, flood control, and waste disposal needs. Through this program landowners borrow money at a 3% loan rate for up to $250,000. Landowners use these loans to implement practices that help reduce nonpoint source pollution. Typical best management practices that are utilized are: cover crops, irrigation pipeline, and water control structures. Landowners also may purchase equipment, such as: no-till drills and sprayers. For FY 2019, there were 6 applications approved within this program for a total of $714,900 in loans.

University of Arkansas Cooperative Extension Service – Public Policy Center

The Public Policy Center at the University of Arkansas System Division of Agriculture co-hosted the 2019 Nonpoint Source Pollution Stakeholder Meeting in Little Rock. The September annual meeting attracts stakeholders from across the state from public and private sectors and offers an opportunity for agencies and individuals to provide input and receive updates about Arkansas' NPS Program. In 2019, the one-day meeting was attended by 86 people from watersheds across the state. The stakeholder meeting is made possible by a 319 grant and in some years is used as the medium for soliciting stakeholder input on Arkansas' NPS Management Plan. The Public Policy Center also continues to provide fact sheets on Arkansas' 11 priority watersheds for education and NPS activities, and support watershed and stormwater education efforts in Jefferson County (Bayou Bartholomew Watershed) in partnership with the small MS4s of the City of Pine Bluff, City of White Hall, Jefferson County, and the University of Arkansas at Pine Bluff.

Just a few of our many Partnerships:

Snapshot Reporting for FY 2019 (July 2018 – August 2019)

Snapshot reporting was developed in 2014 as a method to share Arkansas water quality projects or activities with ADA Division of Natural Resources. The goal of Snapshot Reports is to capture water project efforts around the state that are contributing to the benefit of the Nonpoint Source Management Program. Snapshot reports have helped the ADA Division of Natural Resources better understand the work that is being accomplished around the state. These reports demonstrate the commitment partners have in enhancing or improving water quality.

The table below represents projects that were reported to ADA Division of Natural Resources for FY 2019. There were 28 projects reported from various groups managing them with assistance from various partners. If you would like more information on any of these projects please contact the ADA Division of Natural Resources at (Allen.Brown@arkansas.gov or Kevin.Mcgaughey@arkansas.gov).

Title	Management	Timeframe	Location (HUC/County)	Project Type	Partners
Middle Strawberry MRBI	NRCS	October 2018 – September 2019	110100120304, 110100120402, 110100120401 / Sharp County	BMP Implementation, Education and Outreach	ADA Division of Forestry and Natural Resources, AGFC, Cave City Middle School, Earth Team, Cattleman's Association, Farm Bureau, Sharp Co. CD, and landowners
Caney Creek MRBI	NRCS	October 2018 – September 2019	80202050402 / Cross County	BMP Implementation, Education and Outreach	ADA Division of Forestry, AGFC, ASU, U of A, Cross Co. Farm Bureau, Cross Co. CD, and local landowners
Cache Willow-Podo MRBI	NRCS	October 2018 – September 2019	80203020306, 080203020305 / Jackson, Lawrence, and Craighead	BMP Implementation, Education and Outreach	Cache River Drainage District, Arkansas State University, Jackson County CD, Lawrence County CD, Craighead County CD, and local landowners
Upper Bayou Macon MRBI	NRCS	October 2018 – September 2019	80500020101, 080500020102, 080500020103 / Desha County, Lincoln County	BMP Implementation, Education and Outreach	UAPB Center for Aquaculture and Fisheries, John Deere, Scott Equipment, CPS, Greenpoint, Helena, South Ark, Retail Agronomy, Desha County CD, Lincoln County CD, and local landowners
Tupelo Bayou-Beaverdam MRBI	NRCS	October 2018 – September 2019	111102030505, 111102030507 / Faulkner County	BMP Implementation, Education and Outreach	Antioch Baptist Church, Farm Bureau, Farm Credit Services, Faulkner County CD, and local landowners
Greasy Creek-Strawberry River NWQI	NRCS	October 2018 – September 2019	110100120201 / Fulton County	BMP Implementation, Education and Outreach	ADA Division of Forestry, AGFC, University of Arkansas Extension Service, Fulton County CD, and local landowners

Title	Management	Timeframe	Location (HUC/County)	Project Type	Partners
Buffalo Slough-Cache River NWQI	NRCS	October 2018 – September 2019	80203020209 / Lawrence County, Greene County	BMP Implementation, Education and Outreach	University of Arkansas Extension Service, Greene and Lawrence County CDs, and local landowners
North Arkansas Quail Focal Landscape Project	NRCS	October 2018 – September 2019	11110103, 11070209, 11070208, 11010001, 11010003, 11010005, 11110202, 11010004, 11010006, 11010010, 11010012, 11010011, 11010009 / Searcy, Fulton, Sharp, Randolph, Baxter, Stone, Izard, Marion, Benton, Carroll, Washington, Newton, Madison, and Boone	BMP Implementation, Education and Outreach	Arkansas Wildlife Federation, Quail and Upland Wildlife Federation, Quail Forever, National Wild Turkey Federation, Searcy, Fulton, Sharp, Randolph, Baxter, Stone, Izard, Marion, Benton, Carroll, Washington, Newton, Madison, Boone Conservation Districts, and Local landowners
Greers Ferry lake Watershed Project	NRCS	October 2018 – September 2019	11010014 / Searcy, Stone, Van Buren, and Cleburne Counties	BMP Implementation, Education and Outreach	Farm Service Agency, ADA Division of Forestry, Community Water System, Arkansas State University, University of Arkansas Extension Service, County Assessor's Office, Searcy, Stone, Van Buren, and Cleburne Counties CDs, and local landowners
West Fork White River Watershed Project	NRCS	October 2018 – September 2019	110100010403 / Washington	BMP Implementation, Education and Outreach	ADA Division of Forestry, AGFC, ADA Division of Natural Resources, Watershed Conservation Resource Center, Beaver Watershed Alliance, Beaver Water District, Walton Family Foundation, Northwest Arkansas Land Trust, Arkansas Farm Bureau, Washington County CES, Ozark Water Watch, Washington Counties CDs, and Local landowners
Growing Conservation in the Illinois River Watershed Project	NRCS	October 2018 – September 2019	11110103 / Benton and Washington Counties	BMP Implementation, Education and Outreach	ADA Division of Forestry, AGFC, ADA Division of Natural Resources, USFS, IRWP, TNC, Washington and Benton County CDs, U.S. Congressman Steve Womack, 3rd district, U.S. Senator John Boozman, and local landowners

Title	Management	Timeframe	Location (HUC/County)	Project Type	Partners
Carroll County White River Project	NRCS	October 2018 – September 2019	11010001 / Carroll County	BMP Implementation, Education and Outreach	AACD, Ecodrum, Powell Milling, Carroll County CES, Cornerstone Bank, Anstaff Bank, Carroll County CD, and local landowners
Little Red River Irrigation Project	NRCS	October 2018 – September 2019	08020302, 11010014, 11010013, 1110205 / White County	BMP Implementation, Education and Outreach	BASF Chemical Cooperation, Little Red River Irrigation District, ADA Division of Natural Resources, White County CD, and local landowners
Mid-South Graduated Water Stewardship Program	NRCS	October 2018 – September 2019	08020302, 11010007, 11010008, 11010009, 11010004, 08020203, 08020304, 08020301, 08020303, 08020402, 1110207, 11110205, 11110203, 11010014, 08040205, 08050001, 08050002, 08030100, 11010012, 11010010, 08040202 / Randolph, Clay, Lawrence, Greene, Independence, Jackson, Craighead, Mississippi, Poinsett, Pope, Conway, Faulkner, White, Woodruff, Cross, Crittenden, Pulaski, Lonoke, Prairie, Monroe, St Francis, Phillips, Jefferson, Arkansas, Phillips, Lincoln, Desha, Drew, Ashley, Chicot	BMP Implementation, Education and Outreach	Delta Wildlife, Horizon Ag, White River Irrigation District, Field to Market, Arkansas Farm Bureau, Arkansas Rice Research and Promotion Board, National Black Growers Council, Arkansas Rice Federation, Ag Council of Arkansas, American Carbon Registry-Winrock International, Delta F.A.R.M., Ricetec Inc, McCrometer, Delta Plastics, Entergy, Ducks Unlimited, Walmart Foundation, The Mosaic Company, USA Rice Federation, Riceland, The Landscape Flux Group, Louisiana Rice Growers Association, Environmental Defense Fund, Applied Geosolutions,, and local landowners
Devil's Den State Park Education and Outreach	City of Fort Smith	May 9 & 14, 2019	11110201	Education and Outreach	Devil's Den State Park and local elementary schools
Experimental demonstration of ponds for source water protection and watershed management	Beaver Watershed Alliance	October 2017 – September 2020	110100104; Washington County	BMP Demonstration, Education and Outreach, WQ Monitoring	Walton Family Foundation, Baylor University, and Poultry and Cattle Producer in the West Fork White River Watershed
Riparian, Forest and Source Water Protection Landowner Outreach	Beaver Watershed Alliance	October 2018 – September 2019	1101001; Benton, Carrol, Madison and Washington Counties	Education and Outreach	Beaver Water District, Walton Family Foundation, Arkansas Forestry Commission, Arkansas Game and Fish, Natural Resources Conservation Services, Watershed Conservation Resource Center, Benton, Carroll, Madison and Washington Counties, and landowners

Title	Management	Timeframe	Location (HUC/County)	Project Type	Partners
Western Arkansas/SE Oklahoma Woodland Restoration a Joint Chiefs' Landscape Restoration Partnership Project	NRCS	October 2018 – September 2019	11110103, 11110201, 11010001, 11110202, 11010005, 11010004, 11110203, 11110204, 08040101, 08040102, 11140109, 11140108, 08040203, 11010006, 11110105 Benton, Carroll, Boone, Baxter, Izard, Stone, Searcy, Newton, Washington, Madison, Crawford, Franklin, Johnson, Pope, Conway, Van Buren, Sebastian, Logan, Scott, Yell, Perry, Saline, Garland, Montgomery, Polk, Pike, Clark, Howard, Sevier, Little River Counties	BMP Implementation, Education and Outreach	ADA Division of Natural Resources, Oklahoma Forestry Services (OFS) (TA) USFS – Ouachita (CASH), USFS – Ouachita (TA), USFS – Ozark (CASH), USFS – Ozark (TA), USFWS, Tulsa, OK, USFWS – Conway, AR OK Dept. of Wildlife Cons., AGFC, AACD, Oklahoma Conservation Districts, Arkansas Forestry Association, The Nature Conservancy, Native Expeditions, National Wild Turkey Federation, and local landowners
Source Water Protection Speaker Series	Beaver Watershed Alliance	2013-ongoing	1101001; Benton, Carroll, Madison and Washington Counties	Education and Outreach	Beaver Water District, City of Fayetteville, Arkansas Native Seed Program, Audubon of Arkansas, Arkansas Department of Health, Communities Unlimited, Central Arkansas Water, Arkansas Game and Fish Commission
Low Impact Development / Green Infrastructure construction, LID Mini Grant Program & LID Management	Beaver Watershed Alliance	October 2017 – September 2020	1101001; Benton, Carroll, Madison and Washington Counties	BMP Implementation	Arkansas Department of Agriculture Division of Natural Resources, City of Huntsville, Madison County Master Gardeners, Beaver Lake Sail Club, City of Winslow, Waterford Estates, Historic Johnson Farms, City of Fayetteville, U.S. Army Corps of Engineers and City of Huntsville, and landowners
National Fish and Wildlife Foundation - Five Star and Urban Waters Restoration Program 2017: Initiating Community Stewardship through Watershed Discovery (AR)	Beaver Watershed Alliance	7/15/2017 through 1/30/2020	1101001; Benton, Carroll, Madison and Washington Counties	BMP Implementation, Education and Outreach, and Management planning	National Fish and Wildlife Foundation, City of Fayetteville, City of Greenland, Arkansas Natural Heritage Commission,

Title	Management	Timeframe	Location (HUC/County)	Project Type	Partners
Free Tree and Shrub Program	Beaver Watershed Alliance	2016-ongoing	1101001; Benton, Carroll, Madison and Washington Counties	BMP Implementation, Education and Outreach	Beaver Water District, National Fish and Wildlife Foundation, Arkansas Natural Resources Commission, United States Environmental Protection Agency, City of Fayetteville, City of Greenland, City of Winslow, City of Elkins, City of Goshen, Northwest Arkansas Land Trust; Watershed Conservation Resource Center, and landowners
Pasture Aeration Demonstration	Beaver Watershed Alliance	2016-ongoing	1101001; Benton, Carroll, Madison and Washington Counties	BMP Implementation, Education and Outreach	Beaver Water District, University of Arkansas, Benton County, Carroll County, Madison County, Washington County, and landowners
White River and Richland Creek Watershed Opportunity Assessment	Beaver Watershed Alliance	October 2016 – July 2019	Madison and Washington County; 110100102, 110100103, 110100101, 110100105	BMP Implementation, Education and Outreach, and WQ Monitoring	Arkansas Division of Agriculture Division of Natural Resources, Environmental Protection Agency, Arkansas Forestry Commission, Arkansas Game and Fish, Natural Resources Conservation Services, University of Arkansas Cooperative Extension Service (Washington & Madison County), Watershed Conservation Resource Center, Ozarks Water Watch, Beaver Water District, Madison and Washington County NRCS, and landowners
Riverbank Rehabilitation and Aquatic Habitat Improvements on Town Branch	Watershed Conservation Resource Center	November 2018 – October 2021	110702080203 – Benton County	BMP Implementation	City of Bentonville, Walton Family Foundation, and Watershed Conservation Resource Center
West Fork White River Stream Mitigation Bank Flood Damage Repair	Watershed Conservation Resource Center	October 2019 – November 2021	110100010404 – Washington County	BMP Implementation	WFWR Stream Mitigation Bank
Presley Property Streambank and Aquatic Habitat Improvements	Watershed Conservation Resource Center	May 2019 – July 2021	110100010403 - Washington County	BMP Implementation	USDA-NRCS
Riverbank Rehabilitation and Aquatic Habitat Improvements on Rock Creek	Watershed Conservation Resource Center	July 2019 – April 2021	110100010403 - Washington County	BMP Implementation and Education and Outreach	NRCS, Beaver Water Alliance, Walton Family Foundation, Beaver Water District, and Washington Co. Conservation District

11 NPS Pollution Management Program Milestones

Milestones for the NPS Pollution Management Program for FY 2019

In FY 2014, the Arkansas NPS program staff incorporated a section in the Annual Report outlining the specific milestones that the ADA Division of Natural Resources NPS program staff, cooperating partners, and stakeholders were making progress toward. In FY 2018, there were funded projects that directly addressed specific milestones.

BMP implementation projects continue to be vital in meeting several milestones including Milestone 6 and those milestones dealing with load reductions and the Grants Reporting and Tracking System (GRTS) database. These implementation projects produce tangible loads that can be measured and entered into the GRTS database. Implementation projects are a priority to the Arkansas NPS Program because they have the opportunity of getting the quickest results and load reductions.

Baseline monitoring projects in priority watersheds are still conducted to better assess the status of priority watersheds and the impact that BMP implementation is making around the state. Many of these projects are continuations of previous projects that have several years of data and trends. The data from these baseline monitoring projects are submitted to ADEQ and are used in the development of the 303(d) List of Impaired Waterbodies.

The program management team will continue to use the adaptive management process to adjust objectives and to measure progress toward identified short-term milestones. Project partners meet, as applicable, and review progress toward project objectives and established program milestones. The ADA Division of Natural Resources will continue to review milestones, track progress toward meeting milestones, and discuss possible additions, deletions and/or revisions, as appropriate.

The ADA Division of Natural Resources and the U.S. EPA recognize the achievement of goals and milestones are subject to potential changes in national funding levels, environmental and weather-related factors, the national economic climate, and other variables beyond the control of the state. EPA and the state must also recognize that changes to the goals and milestones can be influenced by revisions to national EPA guidance. Because of these possible changing factors, Arkansas will re-evaluate and update applicable goals and milestones of the plan. This adaptive management approach enables the state to make appropriate modifications to the Management Program for the continuation of attaining satisfactory progress.

Below are the milestones with contributing projects or work accomplished in FY 2019:

1. Update the qualitative risk assessment matrix after ADEQ releases the impaired waters list and it is accepted by EPA. Priority watersheds will be evaluated and updated after the qualitative risk assessment matrix is updated.

The NPS Pollution Management Program's priority watersheds (8-digit HUC level) were finalized at the NPS Annual Stakeholder and Project Review meeting in September 2016. These watersheds are the current focus for the 2018-2023 Arkansas NPS Management Plan. Further assessment beyond initial 8-digit SWAT modeling has not been conducted. Due to economic conditions, technical assistance is not readily available, but ADA Division of Natural Resources will continue to work with various partners in addressing this issue.

2. Continue to conduct strategic baseline monitoring in selected high priority 12-digit hydrologic units to assist in the development of Watershed Based Plans. The ADA Division of Natural Resources anticipates three to four priority watersheds will have baseline monitoring over the life of the plan.

15-200 Water Quality Monitoring for the L'Anguille River Watershed- This project is a continuation of baseline monitoring and is in a priority watershed. There are ten monitoring locations in selected 12-digit HUCs of the L'Anguille watershed. The accomplishments that have been made for FY 2019 are as follows: There were 478 routine grab samples and 96 QAQC samples that were collected from the monitoring locations, in-situ data was recorded at each monitoring station, 622 samples were analyzed, and data has been imported and validated in the STORET (WQX) database. Sampling has concluded with this project and the final report is under review.

15-300 Water Quality Monitoring for the Lake Conway Point Remove Watershed - This project is a continuation of the baseline monitoring from 2014 (11-600) and is located within a priority watershed. There are ten monitoring locations in selected 12-digit HUCs of this watershed. The accomplishments that have been made for FY 2019 are as follows: There were 479 routine grab samples and 96 QAQC samples collected from the monitoring locations, in-situ data was recorded at each monitoring station, 622 samples were analyzed, and data was imported and validated in the STORET (WQX) database. Sampling has also concluded with this project and the final report is in under review.

15-400 Water Quality Monitoring in the Upper Illinois River Watershed and Upper White River Basin - This project continued baseline monitoring for the Upper Illinois and Upper White River Watersheds. There were 15 sites that were monitored in the priority watersheds. The accomplishments that were made for FY 2019 were completing the data analysis and reporting all findings in the final report. The final report was submitted December 31, 2018 and received approval from EPA on February 12, 2019.

16-700 Strawberry River Watershed Monitoring - The Strawberry River Watershed is a designated priority watershed in the 2018-2023 NPS Pollution Management Plan. The main objective of this project is to measure the effectiveness of BMP's implemented over time by the 319 program and other partners and will hopefully help glean data that will help delist impaired stream segments in the watershed. In FY19, all sampling was completed. Data analysis is ongoing and final report is forthcoming.

16-800 Bayou DeView Watershed Monitoring - Bayou DeView is a portion of the Cache River Watershed which was once again designated a priority watershed in the 2018-2023 NPS Pollution Management Plan. The main objective of this project is to measure the effectiveness of BMP's implemented over time by the 319 program and other partners and will hopefully help glean data that will help delist impaired stream segments in the watershed. In FY19, all sampling was completed. Data analysis is ongoing and final report is forthcoming.

16-1000 Water Quality Monitoring in the Lower Ouachita Smackover Watershed - The Lower Ouachita Smackover watershed was designated as a priority by the ADA Division of Natural Resources in the 2011-2016 NPS Pollution Management Plan and remained a priority for the 2018-2023 NPS Pollution Management Plan. This project aims for monitoring water quality in the Lower Ouachita Smackover Hydrologic Unit to better understand the possible deficiencies in this watershed. The accomplishments that have been made for FY 2019 are as follows: There were 496 grab samples and 102 QAQC samples collected, in-situ data and any deviations were recorded during sampling, 646 samples were analyzed, 58% of the daily discharge was estimated, data was imported and validated into the STORET (WQX)

database, and reporting requirements were met. This project is scheduled to conclude in December 2020.

17-200 Upper Cache River Watershed Monitoring - The Cache River Watershed is designated as a priority watershed in the 2018-2023 NPS Pollution Management Plan. The main objective of this project is to measure the effectiveness of BMP's implemented over time by the 319 program and other partners and will hopefully help glean data that will help delist impaired stream segments in the watershed. A total of 765 samples were taken and analyzed during FY 2019 for a project total of 1,590.

17-300 Water Quality Monitoring in the Upper Poteau River Watershed – The Poteau River Watershed is designated in the 2018-2023 NPS Pollution Management Plan as a priority watershed. In late 2017, the Arkansas Water Resources Center began a baseline monitoring project in this watershed. The accomplishments that have been made for FY 2019 are as follows: A financial review was conducted and completed, discharge monitoring equipment was installed in HUC 12 sites, stage and discharge data was collected, 36 samples were collected at 3 USGS sites during base and storm-flow conditions, 12 samples were collected at 10 HUC 12 sites, 20 samples were collected at roving discharge stations, data was analyzed, and all reporting requirements were met.

17-400 Water Quality Monitoring for the Bayou Bartholomew Watershed- The primary goal of this project is to collect, analyze, and report water quality and discharge data at selected monitoring stations and provide monthly and annual parameter loadings in the Bayou Bartholomew Watershed for a four-year period. The Bayou Bartholomew River Watershed has been a priority watershed for the Arkansas 319 Program for many years. The accomplishments that have been made for FY 2019 are as follows: 488 routine samples and 102 QAQC samples were collected, in-situ data was recorded at each monitoring station, 622 samples were analyzed, stage rating discharge curves were developed, data was prepared, imported, and validated into the WQX data warehouse, and reporting requirements were met.

3. Continue to employ a review process of select (a minimum of 3) NPS projects funded with CWA 319 grants aimed at improving project effectiveness. The review results will be reported annually in the NPS annual report.

The ADA Division of Natural Resources has employed a review process with several projects in FY 2019. Demonstration projects continue to be a focus in inspections, but there are other projects that are still validated and reviewed. Projects 15-1100, 16-200, 16-300, 16-900, and 17-800 were just some of the projects that were chosen for review. These inspections that were conducted aimed at verifying specific BMPs that were installed through all five projects. A minimum of 10% of practices are inspected each year for every demonstration project. There are field visits conducted and in-office reviews as well. The in-office reviews consist of verification of farm plans, review of proper documentation, and discussion with project management regarding the status and success of the project. Visits were made on October 24th (Crooked Creek Co. CD, 16-300), October 31st (Fulton Co. CD, 15-1100), June 25th (Crooked Creek Co. CD, 16-300), August 6th (Poteau River CD, 17-800), August 22nd (Baxter Co. CD, 16-200), and September 12th (Sharp Co. CD, 16-900). Results from the visits were all positive. All projects were able to validate the inspected BMPs and display the needed in-office paperwork. These inspections have been a great benefit in improving project effectiveness.

4. As resources allow, continue cooperation with the Arkansas State Plant Board and the Abandoned Pesticide Program in the collection of data associated with the environmental risk reductions related to farmer participation in abandoned pesticide collection. Any developments in this area will be reported annually in the NPS annual report.

Since 2005, the Abandoned Pesticide Program has been conducted in all 75 counties in the state, successfully recovering over 4.2 million pounds of left-over agricultural pesticides. Over the past year, NPS staff has participated in quarterly meetings of the Abandoned Pesticide Collection Advisory Committee, giving input as to where and when collection events should be held. Collection events safely removed over 620,722 pounds of chemicals from the environment over the last fiscal year.

5. Continue to produce and submit the NPS annual report by the end of January each year.

The 2018 Arkansas Annual Report was submitted January 22, 2019 to EPA Region VI. The ADA Division of Natural Resources received correspondence dated March 27, 2019 from the Region related to receipt, review, acceptance and suggestions to the report. The comments that ADA received were positive and encouraging. There were a few areas of critique for the Program to address in the future. Difficulties that the program faced for FY 2018 were acknowledged and confirmed. The lack of a success story was addressed, and ADA was encouraged to bring back the Annual 319 Stakeholder meeting. Some positives were the updated and streamlined Arkansas NPS Management Plan, the acceptance of the Buffalo River Watershed Plan, the continued work in the city of Little Rock, the load reduction results, and the highlighted Partnerships section. The ADA Division of Natural Resources is appreciative of EPA's timely and helpful review of the 2018 NPS Annual Report. The 2019 Annual Report will be submitted by December 19, 2019.

6. Continue to report load reductions (sediment and nutrients) and BMPs in the Grants Reporting and Tracking System (GRTS) database each year. These results will be included in the NPS Annual Report.

15-1100 Strawberry River Sub Watershed Project-Fulton County Conservation District has assisted 77 applicants in helping improve water quality in the Strawberry River Watershed. BMPs implemented include: Fencing, Herbaceous Weed Control, Pasture Planting, Brush Management, Watering Facility and Heavy Use Areas. Also, field days, newsletters, newspaper articles and radio spots were used in informing landowners in the area about ways to prevent non-point source pollution.

16-200 Hicks Creek – White River Watershed Project- Baxter County Conservation District has assisted 96 applicants in helping maintain water quality in the Hicks Creek-White River Watershed in Baxter County. BMPs implemented include: Brush Management, Fencing, Forage and Biomass Planting, Livestock pipeline, Heavy Use Areas and Watering Facilities.

16-300 Big Creek – White River Watershed Project-Crooked Creek Conservation District has assisted 85 applicants in helping maintain water quality in the Big Creek-White River Watershed in Marion County. BMPs implemented include: Brush Management, Fencing, Forage and Biomass Planting, Livestock pipeline, Heavy Use Areas, Watering Facilities, and Spring Development.

16-400 Strawberry River Pasture Improvement Project - This project with the Izard County Conservation District is trying to address water quality concerns in the Strawberry River watershed. The project offers eligible landowners technical and financial assistance to implement BMPs on their property. At project end, 18 applicants had received assistance and implemented BMPs such as cross fencing, brush management, pasture planting and heavy use areas for cattle. This project started in October 2016 and concluded in September 2019. Load reductions for the project have been calculated and entered into the GRTS database.

16-900 Strawberry River Improvement Project - This project with the Sharp County Conservation District is trying to address water quality concerns in the Strawberry River watershed. The project offers eligible landowners technical and financial assistance to implement BMPs on their property. At project end, 23 applicants had received assistance and implemented BMPs such as cross fencing, brush management, pasture planting and heavy use areas for cattle. This project started in October 2016 and concluded in September 2019. Load reductions for the project have been calculated and entered into the GRTS database.

17-700 Lower St. Francis River Watershed- This project with the St. Francis County Conservation District is addressing water quality concerns in the Lower St. Francis River Watershed. The project offers eligible landowners technical and financial assistance to implements BMPs on their property. BMPs such as cover crops, mulch till, and water control structures are a few of the ones being implemented. At the time of this report, 19 landowners have received assistance. Load reductions have been calculated and entered into the GRTS database.

The table below reflects load reductions that have been accomplished during FY 2019. Every quarter these load reductions, and other information such as BMP amounts, are entered into the EPA GRTS database. Projects, that have information entered in for load reductions, consist of demonstration, BMP implementation, and streambank restoration projects. Most of these projects submit information quarterly or at the conclusion of the project. There are various models that are used in calculating load reductions and they can vary between projects. This table depicts active projects that had a quantifiable reported load reduction during the period of FY 2019.

FY 2019 ACTIVE PROJECT LOAD REDUCTIONS

	Nitrogen Reduced (lbs./year)		Phosphorus Reduced (lbs./year)		Sediment Reduced (tons/year)	
Project #	FY 19	Project Life	FY 19	Project Life	FY 19	Project Life
14-1300*	NA	NA	NA	NA	114,600	114,600
16-200	7,913	37,426	3,956	18,706	3,086	14,708
16-300	2,378	31,103	1,188	15,460	961	12,431
16-400	1,463	3,749	731	1,873	591	1,537
16-500	12,301	12,301	6,149	6,149	4,717	4,717
17-700	1,973	8,657	986	4,326	790	3,454
Totals	26,028	93,236	13,010	46,514	124,745	151,447

*Load Reductions taken from project's final report using (STEPL) model, other projects used Region 5 Model

7. Continue to partner and assist the Natural Resources Conservation Service (NRCS) in the review, selection or development of National Water Quality Initiative (NWQI), Mississippi River Basin Initiative (MRBI), Regional Conservation Partnership Program (RCPP), Environmental Quality Incentive Program (EQIP), or other conservation programs that will improve or enhance water quality in watersheds on an annual basis. The ADA Division of Natural Resources also will participate in the State Technical Committee and its Water Quality sub-committee annually or as it convenes. The ADA Division of Natural Resources will monitor (in-stream WQ monitoring) a minimum of 2-4 NRCS Program Initiatives (MRBI, RCPP or NWQI) 12-digit watersheds yearly through the life of this plan. Monitoring results will be assessed and reported in the NPS annual report as they become available.

The ADA Division of Natural Resources continues to participate in the State Technical Committee (STC). Meetings (WQ subcommittee and the general STC) were attended for FY 2019. Staff attended meetings on October 18, 2018; May 1, 2019; May 9, 2019; and August 29, 2019.

17-400 Water Quality Monitoring for the Bayou Bartholomew Watershed- The primary goal of this project is to collect, analyze, and report water quality and discharge data at selected monitoring stations and provide monthly and annual parameter loadings in the Bayou Bartholomew Watershed for a four-year period. The Bayou Bartholomew River Watershed has been a priority watershed for the Arkansas 319 Program for many years. The accomplishments that have been made for FY 2019 are as follows: 488 routine samples and 102 QAQC samples were collected, in-situ data was recorded at each monitoring station, 622 samples were analyzed, stage rating discharge curves were developed, data was prepared, imported, and validated into the WQX data warehouse, and reporting requirements were met.

8. Continue to evaluate and support in-stream water quality monitoring to assess the effectiveness of implemented 319(h) grant-funded projects or other projects (MRBI, NWQI etc.), and report monitoring data to ADEQ annually or as appropriate.

The ADA Division of Natural Resources continues to send baseline monitoring data to ADEQ annually and at the conclusion of monitoring projects. The data is sent by October 1 of every year but can be sent at other times of the year depending on when projects are completed. The ADA also requires all monitoring projects to upload their data to the WQX database and in turn ADEQ can access the data there as well. The following projects have had data submitted to ADEQ during FY 2019: 15-200, 15-300, 15-400, 16-700, 16-800, 16-1000, 16-1100, 17-200, 17-300 and 17-1200.

9. Review ADEQ's 305(b) report and subsequent 303(d) list approved by EPA for delisted streams or stream segments and determine if 319(h) funded projects assisted in the delisting or improvement of water quality. Review of the 303(d) list will occur every two years, and draft success stories will be developed for delisted segments as appropriate. The goal is to develop and submit two to three success stories within the time frame of this management plan.

The ADA Division of Natural Resources used the draft 2018 stream segment delistings for determining potential waterbodies coming off the list. The 2018 new listings and de-listings were reviewed by the ADA and there were several stream segments that were possibilities for success stories. From the de-

listings list, a success story was drafted, submitted, and approved for the West Fork and East Fork Point Remove Watersheds. With this success story there were 3 stream segments that were delisted. The ADA will continue to evaluate the 305(b) report and 303(d) list for possible successes and areas of interest for 319 projects.

10. Work with partners or other stakeholders to initiate or to have two to three watershed management plans accepted as meeting EPA's nine key elements within the time frame of this NPS Management Plan. Progress on working with watershed groups and/or submittal or acceptance of watershed plans could also be reported on an annual basis in the NPS annual report.

For FY 2019, the ADA Division of Natural Resources received notice from EPA of acceptance of the Middle White River Watershed Management Plan in May of 2019.

14-1000 Watershed-Based Management Plan for the Middle White Watershed, AR (HUC 11010004) - This project accomplished the goal of preparing an EPA-acceptable nine element watershed-based plan for the Middle White Watershed, while developing local support for the plan and its implementation. The plan was submitter to EPA for review and accepted by EPA in March of 2019.

12 FY 2019 Non-point Source Program Accomplishments

- **Watershed Management Plans**- The Middle White River Watershed Management Plan was initiated in FY 2018 and completed in FY 2019. This developed plan is a great accomplishment for all partners and stakeholders involved. It takes assistance from state agencies, local stakeholders, and various organizations to develop a 9-element watershed management plan. The development of the Middle White River Watershed Management Plan also assists in meeting milestone 10 of the 2018-2023 NPS Management Plan.

- **Green Infrastructure (GI) and Low Impact Development (LID)-** Green Infrastructure and Low Impact Development projects are being implemented and affecting water quality within their respective watersheds. The City of Little Rock project and the Markham Street Water Quality Demonstration project are just two examples of projects where implementation is taking place in urban environments and having great effects on stormwater mitigation. The Arkansas 319 program has used projects like these to be more involved in the urban arena and address issues that are prevalent in those types of settings. This will continue to be an accomplishment for the program whenever work is initiated and completed in Urban settings.

- **Education and Outreach-** Project 14-1200 "Improving NPS Pollution Prevention in a Small Urban Community Watershed through Education and Demonstration" is just one example of a successful education and outreach project conducted during FY19. Its goal was to provide a cleaner, healthier, and more attractive Murphy Pond (in Springdale, AR) through trash collection, pollutant education, outreach, and demonstration. Partnerships were formed and NPS pollution challenges were combated and reduced at the highly visible Murphy Pond and Park.

- **Enhancing Partnerships-**Partnerships continue to be a great accomplishment for the Arkansas 319 Program. In FY 2019, through the help of partners such as: NRCS, ADEQ, TNC, IRWP, BWA, FTN, the City of Little Rock, Conservation Districts, The Soil Health Alliance, and various others, several initiatives and programs reducing nonpoint source pollution have been initiated and/or completed.

- **GRTS Reporting**- For FY 2019, there were load reductions made that directly related to 319(h) funded projects. Load reductions were found in many of the priority watersheds around the State. Total load reductions for FY 2019 were 124,745 tons/acre for sediment, 13,010 lbs./acre for phosphorus, and 26,028 lbs./acre for nitrogen. All load reductions were entered into the GRTS database.

Program Staff

The Arkansas Department of Agriculture Division of Natural Resources, Nonpoint Source Management Program staff would like to thank EPA for the financial and technical assistance provided and the diverse partners and stakeholders that assisted in the endeavor to improve water quality in Arkansas.

Tony Ramick,
Fiscal/Program Manager

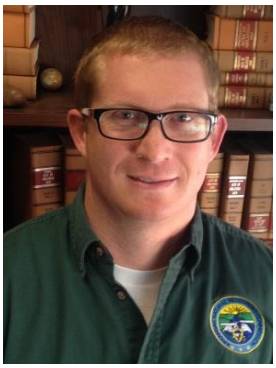
- Program Administration
- NPS Management Plan Update
- Project Development and Management
- Partnership Coordination and Development
- LID/GI, BMP Implementation and Education/Outreach

Kevin McGaughey,
Program Coordinator

- Project Development and Management
- BMP Implementation, Monitoring, GRTS, Conservation District Coordination and Technical writing

Allen Brown,
Program Coordinator

- Project Development and Management
- LID/GI, BMP Implementation, Education/Outreach, Streambank Stabilization and WMP Development



Robbie Alberson,
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- Project Development and Management
- Agricultural Demonstration development, in-field BMP site inspection, BMP implementation, Monitoring, GRTS and Technical writing

Steve Stake,
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- Project Development and Management
- BMP Implementation, LID/GI, Streambank Stabilization, Conservation District coordination and WMP Development