

MISSISSIPPI'S NONPOINT SOURCE
POLLUTION CONTROL
SECTION 319(h) GRANT PROGRAM
WORK PLAN
FOR GRANT YEAR 2024



MISSISSIPPI DEPARTMENT OF
ENVIRONMENTAL QUALITY

Prepared for
United States Environmental Protection Agency
Section 319(h) of the Clean Water Act

Prepared by
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FY24 Workplan to address U.S. EPA
Goal 5: Ensure Clean and Safe Water for All Communities
Objective 5.2: Protect and Restore Waterbodies and Watersheds

June 26, 2024

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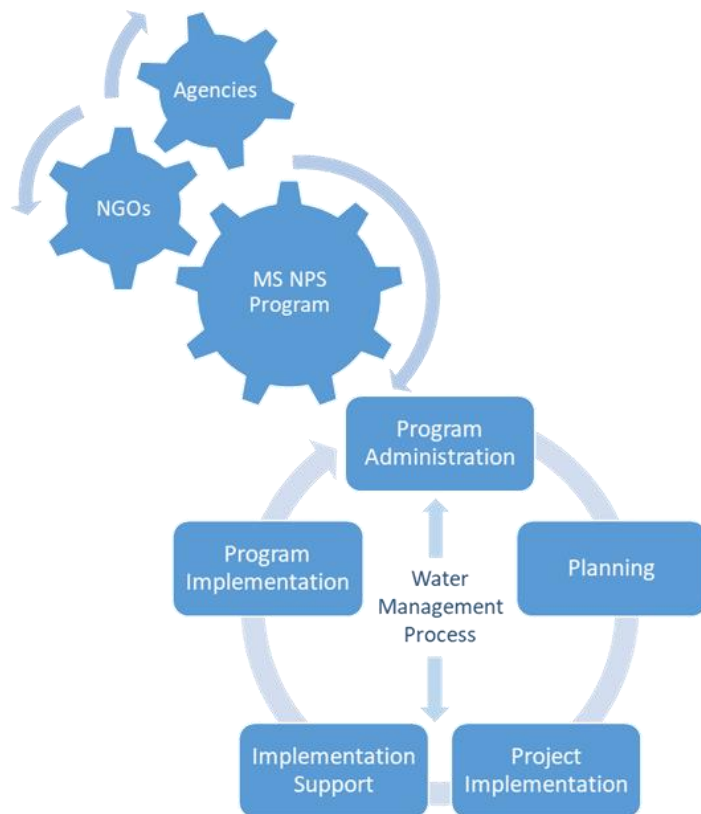
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Introduction

The state’s Nonpoint Source (NPS) Pollution Control Program is implemented under the guidance of the Mississippi Department of Environmental Quality’s Mission Statement “to safeguard the health, safety and welfare of present and future generations of Mississippians by conserving and improving our environment and fostering wise economic growth through focused research and responsible regulation.”

Information contained herein represents work outlined for fiscal year 2024 Section 319(h) NPS Grant funding and is structured to support U.S Environmental Protection Agency (EPA) Goal 5: Ensure Clean and Safe Water for All Communities; Objective 5.2: Protect and Restore Waterbodies and Watersheds. This work also supports the implementation of both the long-term and short- term goals identified in the EPA approved update to the state’s NPS Management Program Plan. The plan fulfills the requirements of both Section 319(h) of the Clean Water Act Amendments of 1987, and Section 6217 of the Coastal Zone Act Reauthorization Amendments (CZARA). It comprehensively describes a framework for agency coordination and cooperation and serves to implement a strategy for employing effective management measures and programs to control NPS pollution statewide.

The state’s strategy for the management and abatement of NPS pollution relies on statewide and targeted watershed approaches. These approaches are implemented through both regulatory and non-regulatory programs on the federal, state, and local levels. The implementation of program activities or categories that are not regulated rely primarily on the voluntary cooperation of stakeholders and are supported financially through federal assistance programs such as Section 319(h) and available state resources. The approach for addressing NPS pollution on a statewide level includes education and outreach, monitoring and assessment, planning activities, consensus building, and partnering. At the watershed level, implementing the Mississippi NPS Program includes the development of watershed-based plans, implementation of practices to control NPS pollution, inspection of NPS pollution control practices, monitoring to detect changes in water quality, as well as local consensus building, partnering, and education and outreach efforts. Upon approval of the work plan and receipt of funds, the work will be completed using a combination of MDEQ staff, contractors, subrecipient entities, and federal partnerships.



To improve transparency and consistency with both reporting and management of funds under the §319 grant, all grant funded activities are grouped into five core functions or elements. This allows for more seamless, consistent reporting of both program level and project level activities as well as submittal of required financial reports. As such, all grant activities are organized under one of the following 5 functional elements of the Mississippi NPS Management Program: Program Administration, Program Implementation, Planning, Project Implementation, and Project Implementation Support. Specific goals, objectives, and outcomes for each of these elements are identified in Appendix A of Mississippi's approved [Nonpoint Source Pollution Management Plan](#) (MDEQ, 2020). Each year, MDEQ reports on the deliverables and/or outcomes achieved through grant implementation. In accordance with grant requirements as identified in EPA's *Nonpoint Source Program Grants Guidelines for States and Territories* (USEPA, 2013), MDEQ will allocate all funds within one year of the grant award. Although final project numbers are not available until the funds have been obligated, on average each grant funds approximately 15-20 projects to achieve the goals identified in the workplan. The sections below describe the work activities and/or projects funded in each of these core elements of the program using FY 2024 Section 319 grant funds.

The work plan supports MDEQ's efforts to focus on nutrient pollution reduction activities and leverage multiple state and federal resources. Components of the nutrient reduction efforts support the Gulf Hypoxia Action Plan through the development and implementation of regional nutrient reduction strategies and Mississippi's Nutrient Criteria Development Plan. In support of these efforts, §319(h) NPS funding will continue to be used statewide to implement the nutrient pollution reduction efforts.

This grant year (GY) 2024 work plan includes specific restoration and protection projects. The work plan is divided into two major sections: *Program Fund Allocation and Watershed Project Fund Allocation*. The Program Fund Allocations from the GY 2024 §319 NPS grant will be used to implement program support activities such as program administration, statewide collaborative strategies, education and outreach programs, statewide monitoring and assessments, and watershed planning activities. The Watershed Project Allocation from the GY 2024 §319 NPS grant will be used to implement watershed restoration and protection plans which focus on implementing technical best management practices to reduce pollutants entering watersheds and engaging key targeted audiences to reduce nonpoint source pollutants from developed areas. These management practices will be in areas within the Bear Creek-Wasp Lake, McElroy Creek-Tuscumbia River Canal, Crowder Creek-Little Bogue, Upper Piney Creek, Fuller Creek-Town Creek, Muddy Bayou, and Platner Bayou-Tippo Bayou watersheds. These watersheds have been prioritized because they have impaired waters with completed total maximum daily loads (TMDLs) for identified pollutant(s); have existing water quality monitoring data and collection sites; have been identified as having critical sediment and nutrient issues in the watershed(s); and the local stakeholders and partners have expressed a desire to participate in area wide best management practice implementation to address the watershed issues of concern. The Watershed Project Allocation from the GY 2024 §319 NPS grant will also be used to implement actions in the Beaverdam Creek-Big Creek watershed. This watershed was prioritized for protection by stakeholders that want to focus on activities that will ensure that the watershed continues to support healthy land and water resources.

Implementation of the NPS Program is done in cooperation with numerous agencies, organizations, and groups at all levels of government and in the private sector. Priority will be given to activities that promote consensus building and resource leveraging opportunities to increase the overall effectiveness of the state's NPS Program.

To meet our NPS Management Program goals and the priorities selected in the Basin Management Approach, the following funding breakdown is proposed. Approximately 8% will fund Statewide NPS Program Administration, approximately 31% will fund Statewide NPS Program Implementation, and 10% will fund NPS Watershed Planning. These first three elements make up the Program Funds (49%) of the grant. The remaining funds (51%) will be spent to support project implementation activities described in Elements 4 & 5. A detailed budget summary is provided in Table 1 below.

Table 1: FY 24 Section 319 Grant Program Budget Summary

Table 1-Program Budget Summary for FY24 Grant	
Object Class Category (Non-construction)	Total Budget Period Cost
Personnel	\$580,911.00
Fringe Benefits	\$197,509
Travel	\$23,975
Equipment	\$14,500
Supplies	\$19,601
Contractual	\$523,000
Construction	\$0
Other	\$3,504,128
Total Direct Charges	\$4,863,624
Indirect Costs	\$294,709
Total Recipient Share (Match 40%)	\$2,063,333
Total (Share: Recipient 40% Federal 60%)	\$5,158,333
Program Income	\$0
Total EPA Amount Award	\$3,095,000
Total Grant Award	\$5,158,333

NPS Program Fund Allocations

Element 1: Program Administration

The Mississippi Department of Environmental Quality (MDEQ), Office of Pollution Control (OPC) serves as the lead agency in Mississippi for water quality management. Therefore, OPC is responsible for the development and implementation of the State's NPS Management Program. To do this, OPC performs several key administrative functions to ensure statewide implementation of NPS initiatives. These functions include oversight of the program; management of the program budget and associated grant; and, development of the required annual reports as required per the §319 grant administrative conditions.

Program Oversight

Day-to-day administration of the Mississippi NPS Program is primarily the responsibility of the Chief of the MDEQ Basin Management and NPS Branch. However, MDEQ personnel outside of the Basin Management

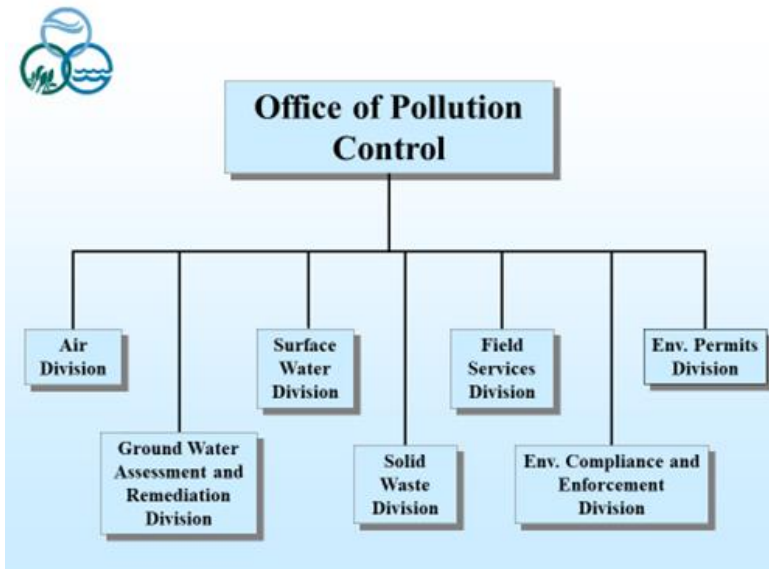


Figure 1: Office of Pollution Control Organizational Chart

and NPS Branch also contribute to the administration of the Mississippi NPS Program. The Basin Management and NPS Branch is part of the Surface Water Division within the MDEQ Office of Pollution Control. This organizational structure also keeps the program included as an integral part of MDEQ's Clean Water Act (CWA) water management programs and allows for communication and integration of Mississippi's NPS Program goals with other CWA programs managed within Office of Pollution Control and other programs at MDEQ. The Surface Water Division Chief facilitates and ensures this communication among programs and provides oversight of the Mississippi NPS Program.

Budget and Grant Administration

This is a critical component as tracking expenditures is vital to program oversight. Many grant implementation activities are handled through sub-grants with other agencies. Management of the Mississippi NPS Program budget is an important part of administering the program. Federal grant money

provided to MDEQ under §319 makes up part of the Mississippi NPS Program budget. The federal government requires that the use of §319 grant money, and match, be tracked and reported to ensure it is being used appropriately. Reporting on use of §319 grant money, and other grant management activities, are part of managing the Mississippi NPS Program budget. Management of Mississippi NPS Program grants includes interaction between MDEQ and EPA in the form of:

- Overseeing grant preparation,
- Negotiating grant agreements,
- Receiving grant awards,
- Reporting on expenditures and deliverables, and
- Developing grant close-out reports.

The MDEQ Office of Administrative Services has staff that specialize in grant applications, federal financial reporting, and in performing financial risk assessments for sub-grantees. These staff work with Basin Management and NPS Branch staff to ensure the financial reporting requirements for the Mississippi Section 319 grants are met.

Annual Report

Each year the Basin Management and NPS Branch prepares a report describing the activities completed by Mississippi’s NPS Program during the last year. This annual report is also a federal requirement for NPS Programs. The annual report is submitted to EPA in December and made available to the public on the MDEQ website. This annual report includes:

- A summary of activities over the past year in each of the Mississippi NPS Program elements,
- Explanation of how the activities over the past year contribute to achievement of NPS Program goals,
- A summary of the progress in achieving Mississippi NPS Program milestones, and
- An estimate of the status of expenditures for each of the five active §319 grants at the end of the year.

Schedule: The overall completion date is consistent with the end of the grant period which is August 31, 2029. Funding to support the Program Administration functions represents 8% of the overall grant and therefore is in compliance with EPA’s requirements that administration cost cannot exceed 10% of the grant. Outcomes, outputs, milestones, and deliverable for the work completed under Element 1: Program Administration are provided in the table below:

Table 2: Element 1: Program Administration - Outcomes, Outputs, Milestones, & Deliverables

Program Administration – Element 1		
Outcome 1: Periodically review, assess, and report on progress toward achieving the NPS Program goals and milestones and revise as new information becomes available.		
Outputs	Milestones	Deliverables
Tracking and reporting of annual milestones to accomplish NPS Program goals and objectives.	Update identified activities in Appendix A Table from 5-year workplan	Update of Appendix A Table included in NPS Annual Report Submittal

Update of the NPS Management Plan every five years to reflect program changes and success toward meeting NPS Program goals.	Annual review of plan; Update plan every 5 years	Update of Mississippi's 5-yr NPS Management Plan
Outcome 2: Manage the NPS Program budget and grants efficiently using appropriate technical and financial instruments.		
Outputs	Milestones	Deliverables
Collaboration and coordination with the MDEQ OPC Grants personnel to submit financial reports required in administrative conditions of Section 319 grant.	Annual FFR Submittal	Annual and final Federal Financial Report (FFR) submittal as per grant agreement
Collaboration and coordination with the MDEQ OPC Administrative staff to perform required financial risk assessment for sub-grantees awarded monies to complete work under the Section 319 grant.	Completion of Annual Risk Assessments	Update of Appendix A Table included in NPS Annual Report Submittal
Allocating 50% of Section 319 funds to support project implementation.	Projects and Budget update in GRTS	Grant Workplan NPS Annual Report Grant Closeout Report
Expending grant funds by the grant end date.	Routine funds draw downs	Federal Financial Report (FFR) FFRs; Grant Closeout Report
Obligating Section 319 sub-awards within 1 year after the EPA grant award date.	Projects and Budgets loaded into GRTS	Grants Reporting and Tracking System (GRTS) annual reporting
Dedicating an average of \$100,000 in Section 319 grant funds to the coastal zones as defined by Section 6217 of CZARA until full program approval is achieved.	Projects and Budget update in GRTS;	Grants Reporting and Tracking System (GRTS); CZARA Reporting; NPS Annual Report
Preparing grant application and workplan for new Section 319 grant.	Submittal of grant application and workplan (6/30)	Grant Application and Workplan
Preparing and submitting grant close-out reports in compliance with administrative conditions of the Section 319 grant.	Annual Progress reports; Project final reports	Grant Closeout Report
Outcome 3: Ensure consistency among the NPS Program and other federal and state water resource programs and projects.		
Outputs	Milestones	Deliverables
Coordination with federal and state water management programs to maintain alignment of NPS priorities.	Active participation in workgroups, task force committees, and personal communication with cooperating programs to	NPS Annual Report.

	coordinate NPS priorities with partnering programs	
Coordination with MDEQ programs to leverage resources and identify priorities.	Active communication with MDEQ programs to ensure program consistency	NPS Annual Report

Element 2: Program Implementation

As with most water management programs, the Mississippi NPS Management Program is forced to function in both the technical environment of water quality management while also working to communicate goals and project outcomes with partners in both technical and non-technical fields. While technical information is important to the Mississippi NPS Program, understanding the social nature of differing stakeholder groups, how they best understand information presented to them, and how to encourage people to take an active role in managing NPS pollution in their watersheds is a critical component of program success. Ultimately, NPS pollution occurs as a result of human activities. Therefore, working with people is a critical part of implementing the Mississippi NPS Program. This includes collaboration, program transparency and awareness, education, and outreach.

Element 2 includes the activities that support the Mississippi NPS Program by implementing projects and activities that focus on work that is broader in scale than a HUC 12 watershed and is where most of the staff time is spent. Work done under this element ensures the NPS Program functions on a day-to-day basis, supports efficient management of grant funds, and helps to implement activities that support program objectives that are broader in scope but are instrumental to mitigating NPS pollution statewide. These activities include developing and managing subgrants; tracking and reporting progress; supporting awareness, education, and outreach; and supporting the development of strategies, tools, and providing for knowledge transfer.

Developing and Managing Subgrants

The process of developing and managing sub-grants is critical to maintaining an effective NPS management program in MS. Many activities of the Mississippi NPS Program are implemented through sub-grants to other agencies, organizations, and institutions. When §319 grant funds are used to fund work by other agencies, organizations, and institutions, sub-grants or contracts are set up between MDEQ and the other partnering agencies/organizations. These agreements specify how the funds will be used and how the overall project will ultimately help address NPS pollution efforts in Mississippi. Basin Management and NPS Branch staff work with partners to develop workplans, budgets, and sub-grant agreements. Staff also are responsible for maintaining project budgets, monitoring expenditures, tracking matching funds, approving invoices, performing project audits, and maintaining active communication with project partners to ensure all goals and outcomes are met.

Tracking and Reporting Progress

MDEQ is committed to transparency in its programs and building efficient tracking and reporting mechanisms into the NPS Program provides needed transparency to EPA and the public. Tracking and

regularly reporting on projects, initiatives, and results, are critical activities of the Mississippi's NPS Program. These actions provide information to stakeholders on the work the program is supporting, meet reporting requirements for EPA, and ensure that all funded activities remain on schedule and within budget. Transparency is integrated into the Mississippi NPS Program in several ways, including making program progress reports and other documents available online, and making Basin Team and Watershed Implementation Team meetings open to the public. Examples of information tracked and reported include:

- Personnel attendance at meetings,
- Nutrient and sediment load reductions resulting from the Mississippi NPS Program,
- Entry of required data elements into EPA's GRTS database,
- Development of watershed-based plans,
- NPS Program success stories,
- Progress made in implementing §319 grant and sub-grant work plans, and
- Tracking and reporting on expenditures of §319 grant and sub-grant funds along with required matching funds or in-kind services.

Awareness, Education, and Outreach

The Mississippi NPS Program implements a variety of environmental education activities and programs. MDEQ contributes funding and information to many programs to promote awareness and education of NPS pollution while also investing staff resources to facilitate training whenever possible. It is recognized by the MDEQ that the level of success achieved in developing and implementing an effective NPS Program is greatly influenced by the level of stakeholder involvement both at the watershed and statewide levels and great focus is given to activities that promote consensus building and partnering. A primary objective of the Statewide NPS Program is to increase public awareness of nonpoint source pollution and ways to reduce its impacts at the individual, community, and watershed levels. Environmental awareness programs sponsored by MDEQ target a wide range of audiences including formal and informal educators, school aged children, private citizens, urban neighborhood groups, civic organizations, elected officials, landowners, communities, and government resource agencies. To increase participation in program activities, funds may be allocated to procure refreshments and facilities for meetings with our target audiences as needed. Listed below are routine programs/activities implemented as part of the statewide NPS focused awareness, education and outreach program:

Environmental Education and Outreach Mobile Classroom – A mobile, interactive classroom activity targeted for kindergarten through 5th grade students providing information about NPS pollution in watersheds and what people can do to improve water quality. Activities presented in the program align with the standards adopted by the Mississippi Department of Education.

Public Service Announcements – NPS messages and NPS workshop/event information are posted to social media and made available via online videos and tutorials. Other media utilized by MDEQ for NPS messages include posts to MDEQ website, newsletter articles, media outlets, etc.

Adopt-A-Stream – Workshops teach participants about watersheds, NPS pollution, land use, watershed delineation, water quality, and water quality indicators. Workshops are held in priority

watersheds and various regions of Mississippi to promote NPS education. In addition to the workshops, the program promotes the use of the *Storm Drain Marking Campaign* by providing an information packet and contact information to assist communities with storm drain marking projects. The packet includes examples of storm drain markers with a variety of pollution prevention messages, e.g. “No Dumping, Drains to River”. Also included are examples of a NPS informational doorknob hanger, a sample press release and a “how to” brochure on conducting a storm drain marking program.

Mississippi Envirothon – The Envirothon High School Competition tests student knowledge about water, soil, forestry, wildlife, and current environmental issues each year. The competition measures success by student oral presentations made to a panel of judges where each team applies their knowledge and field experiences to a real-life environmental problem/situation. It also includes both written and field tests. The Mississippi competition is sponsored by MDEQ’s NPS Program and the Mississippi Association of Conservation Districts and is coordinated by the Mississippi Soil and Water Conservation Commission. Meals and/or light refreshments will be served at these events.

National Conservation Foundation: North American Envirothon Competition– The annual North American competition is an environmental and natural resource problem-solving competition that is geared toward high school students. The winning teams from each state, provincial and partner nation are eligible to attend the competition to compete against top teams for thousands of dollars in scholarships and awards. This competition draws up to 500 students, volunteers and guests annually. The event will expose students to diverse environmental issues, ecosystems and topography. The 6-day international event will be held in Mississippi in July of 2026.

Environmental Teacher Workshops – Teacher workshops are a major component of MDEQ’s NPS education program each year. The teacher workshops include interactive classroom activities and field trips with some of the best environmental/natural-resource speakers in Mississippi instructing the classroom teachers and environmental educators. These workshops include sessions on water quality, NPS pollution prevention, green infrastructure, low-impact development, water chemistry, benthic macroinvertebrate community measures, and hands-on, water related activities. Educators can use all the information provided in these workshops to teach students about natural-resource stewardship. In addition, the NPS program assists with workshop support for the following curricula: *Project Learning Tree*; *Project WET*; *Project WILD*; *Project Aquatic WILD*; *Project Food, Land and People*; *Private Eye*; and others. Meals and/or light refreshments will be served at these events.

Make-A-Splash Event – The *Make-A-Splash, A Water Education Event* is held each September at the Mississippi Museum of Natural Science in Jackson, Mississippi where students visit water-related interactive booths and guided museum exhibits to learn about polluted runoff, wildlife, water use, groundwater, surface water, macroinvertebrates, and other water quality and ecosystem indicators.

Water Model Demonstration Talks and Field Days – MDEQ and other entities conduct water-model demonstration speeches at student and adult events/activities each year.

Sponsorships – NPS Program sponsorships are essential for effective education and outreach efforts. These sponsorships enable targeted campaigns to raise awareness about the sources and impacts of nonpoint source pollution, empowering communities to adopt sustainable practices. Investing in education initiatives equips individuals with the knowledge and tools to make informed decisions that

reduce pollution at its source. Sponsorships can support workshops, educational materials, and outreach events that engage diverse audiences, fostering a culture of environmental stewardship and collective action. Through these initiatives, the NPS Program can amplify the reach and impact of these crucial educational efforts, ultimately protecting Mississippi's waterways and ecosystems for future generations.

Mississippi Statewide Forestry Water Quality Protection Program - The Mississippi Forestry Commission (MFC) evaluates the implementation and use of voluntary Best Management Practices for forestry activities throughout the state of Mississippi. By monitoring these voluntary practices on a continuous cycle and widely distributing the results, best management practice implementation rates will increase. The MFC works with other forestry related groups in promoting water quality within the State and implements monitoring of Best Management Practices, conducts educational workshops, and distributes outreach materials.

Onsite Wastewater Disposal System Installation and Maintenance Education - MDEQ will continue to collaborate with the MSDH to reduce adverse impacts from individual on-site wastewater disposal systems (OSDS) through homeowner and installer education, regulation of system installation and repair, and decommissioning of failing systems.

Agricultural NPS Implementation Assistance – The Mississippi Soil and Water Conservation Commission (MSWCC) supports the NPS program by providing assistance to conservation districts to implement educational and demonstration projects. Funds are used to support staff time. These projects will improve water quality through the reduction of nonpoint source pollution from agricultural and urban sources by promoting the use of best management practices.

Coastal Zone Act Reauthorization Amendments (CZARA) - Section 6217 of the Coastal Zone Act Reauthorization Amendments (CZARA) of 1990 requires states and territories with approved coastal zone management programs that receive funding under Section 306 of the Coastal Zone Management Act (CZMA) to establish and implement Coastal Nonpoint Pollution Control Programs (CNPCP). The intent is for these programs to address nonpoint source pollution sources that could contribute to water quality concerns in coastal waters. To provide direction on the scope of nonpoint source issues that should be addressed in the CNPCP, EPA developed guidance under Section 6217(g) in the form of Management Measures (MMs) for each category of coastal nonpoint source pollution. Management Measures are best explained as those actions or activities that are economically feasible, can mitigate or alleviate nonpoint source pollution, and achieve the maximum amount of reduction through implementation of the best available nonpoint source management practices. The use of CZARA set-aside funds will be used for coastal project(s) and/or activities that will address the established management measures.

Waste Pesticide Disposal Program - The Mississippi Legislature passed a law in 1993 directing that pesticide registration fees, or a portion of the fees, be used to fund the waste-pesticide disposal program. This law went into effect on July 1, 1993, and was repealed on July 1, 1998 (Miss. Code Ann. § 69-23-301). During the time this law was enacted, MSU's Extension Service worked in conjunction with the Mississippi Department of Agriculture and Commerce (MDAC) Bureau of Plant Industry to run the program and conduct numerous pesticide disposal events. After the law was repealed in 1998, there was no waste pesticide disposal program until MDEQ allocated funding through the Nonpoint Source (NPS) Program under §319 of the Clean Water Act. The program began again in 2000 and is implemented by the MSU Department of Agricultural and Biological Engineering and the MSU Extension Service. Each

event is publicized in the surrounding counties and thus usually attracts farmers from nearby areas. Chemicals are weighed on-site on collection day, and the contractor bases their disposal costs on a “per pound basis”, in addition to a “base-setup fee.” The primary goal of this project is to help Mississippi farmers and property owners minimize the environmental risks associated with the disposal of waste-pesticide products by disposing of products in a safe and efficient manner. Events will be held as long as funding is available for the disposal of products. Events will be targeted in areas of high agricultural productivity throughout the Mississippi Delta region and in priority watersheds.

To assist with the implementation of the NPS Program, track projects, and meet federal reporting requirements, grant funding is used to support programmatic data management needs.

Strategies, Tools, and Knowledge Transfer

As the landscape continually changes and evolves, so does our knowledge of how activities on the landscape affect water management. This constant state of change requires management programs to continually update their strategies for managing NPS impacts. Strategies can be developed to address types of pollutants like nutrients, or they can be broader in scope to address entire categories of NPS pollution like stormwater management in urban settings. By continuing to produce and update management strategies, it helps the NPS Management Program address water resource concerns in a consistent, transparent way while also allowing for results to be communicated back to stakeholders. The ability to develop strategies to address either the continuing impact of NPS pollution or emerging sources helps the program adapt to a constantly changing and evolving future landscape. Funding from this grant may be used, as needed to continue the support and update of MS’s nutrient reduction strategies as well as the continued development and enhancement of the decision support tools that provide a foundation for the program.

Nutrient Reduction Strategies - In recent years, §319 NPS funding has been used increasingly to support nutrient reductions in large watersheds. The strategy behind this approach is to use the committed §319 resources to attract additional leveraging opportunities. Combining these funds together creates a greater potential to achieve quantifiable reductions in nutrient concentrations/loadings. The Mississippi NPS Program incorporates the [Mississippi Coastal Nutrient Reduction Strategy](#), [Mississippi Delta Nutrient Reduction Strategy](#), the [Mississippi Uplands Nutrient Reduction Strategy](#), and the statewide strategy [Mississippi’s Strategies to Reduce Nutrients and Associated Pollutants](#), in the development and implementation of NPS projects. The integration of these three regional strategies into the combined statewide strategy permits consistent, compatible, and coordinated watershed management plans to be developed and implemented statewide while addressing the distinct regional differences that exist for nutrient sources across the state. In implementing these strategies, Mississippi continues to work in conjunction with the Mississippi River Gulf of Mexico Watershed Nutrient Task Force to achieve nutrient reductions and work collaboratively to reduce the size of the hypoxic zone in gulf waters. Work under this grant will continue to support implementation and refinement of these nutrient reduction strategies as well as leverage resources in support of Hypoxia Task Force and Gulf Hypoxia Program initiatives.

Decision Management Tools - The key to good management decisions is having a solid foundation upon which to make those decisions. Across the landscape of MDEQ, decision support tools are used to steer programs and make key water management decisions. These tools can take the form of water quality models, decision trees, data and information management systems, biological indices, and

assessment analysis support tools just to name a few. Within the Mississippi NPS Management Program, there are a few key decision support tools and systems that are used to guide program decisions, facilitate reporting, and prioritize watersheds for implementation projects. The program uses these tools in-house to help inform where §319 funds are directed, track expenditures, report outcomes, store data, and provide information to federal data systems. The program also maintains tools that are used by our partners to help inform management decisions for their respective organizations. The Mississippi Watershed Characterization and Ranking Tool (MWCRT) and the Basin Management Planning Application are fundamental components of Mississippi’s NPS Management Program decision making process. Work under this grant will continue to support the implementation, refinement, and enhancement of these information systems and tools.

Knowledge Transfer - A large part of successfully managing NPS impacts to receiving waters is helping individuals understand what they can do to mitigate those impacts. In today’s society, people often turn to the internet to research a problem before picking up a phone and trying to contact a person who may know the answer or who can, eventually, get them in contact with someone who knows the answer. This scenario is why knowledge transfer is critical to successful NPS management. Knowledge transfer can be realized in many forms: training courses, seminars, online tools and guidance documents/materials. It can also be realized through the use of social media platforms like Twitter and Facebook and media campaigns. To be truly successful, all of these mechanisms should be utilized to provide the right information, in the right format, providing the needed amount of detail for the targeted audience. For these reasons, knowledge transfer remains a critical component of Mississippi’s NPS management program. Work under this grant will continue to support the implementation, refinement, and enhancement of mechanisms and methods to support knowledge transfer.

Schedule: The overall completion date is consistent with the end of the grant period which is August 31, 2029. Outcomes, outputs, milestones, and deliverable for the work completed under Element 2: Program Implementation are provided in the table below:

Table 3: Element 2: Program Implementation – Outcomes, Outputs, Milestones, & Deliverables

Program Implementation – Element 2		
Outcome 1: Effectively implement the Mississippi NPS Management Program.		
Outputs	Milestones	Deliverables
Annual Success Stories (WQ-10) of NPS restoration activities that have been effectively implemented.	Number of Success Stories prepared.	Update of Appendix A Table in NPS Annual Report
Maintaining MOAs with federal and state agency partners and Mississippi educational institutions.	Number of active MOAs in place during the reporting FY.	Update of Appendix A Table in NPS Annual Report
Tracking and reporting on §319 sub-grant funds and any match (or in-kind services) reported.	Federal Financial Reports Annual Project Progress Reports	Federal Financial Reports GRTS: Progress Reports
Supporting implementation of nutrient reduction strategies.	Active projects with nutrient reduction.	Update of Appendix A Table in NPS Annual Report
Utilization of MWCRT and Watershed Planning App to assist partners with NPS planning and implementation activities.	Evaluate & Update MWCRT as needed; Routinely update layers in Watershed Planning Map and	Update of Appendix A Table in NPS Annual Report

	provide to Basin Teams to set planning priorities for FY.	
Providing reports and other documents online for public access.	Uploads to GRTS, MDEQ Website	Update of Appendix A Table in NPS Annual Report
Developing centralized NPS database to assist with tracking and reporting §319 grant activities.	Status provided through NPS Annual Report.	Update of Appendix A Table in NPS Annual Report
Providing all required information/data entry into EPA's GRTS data system for Section 319 funded projects.	Mandated Elements entered into GRTS.	Update of Appendix A Table in NPS Annual Report; GRTS Mandated Elements Report
Georeferencing all best management practices installed through §319 grant program.	All §319 funded BMPs georeferenced.	Update of Appendix A Table in NPS Annual Report
Conducting site visits to each project to ensure work is on track or completed.	Number of site visits conducted annually.	Update of Appendix A Table in NPS Annual Report
Developing standardized NPS pollutant reductions associated with implementing agricultural BMPs using the EPA Hypoxia Task Force measurement reduction framework to track NPS load reductions statewide.	Report on progress to develop database and model.	Update of Appendix A Table in NPS Annual Report
Outcome 2: Implement a strategic Awareness, Outreach, and Education Program.		
Outputs	Milestones	Deliverables
Conducting 4 Area and 1 State Envirothon Competition(s) annually.	Number of competitions conducted annually.	Update of Appendix A Table in NPS Annual Report
Conducting at least 4 stream stewardship outreach/education workshops annually.	Number of outreach/education events conducted	Update of Appendix A Table in NPS Annual Report
Conducting at least 10 environmental education teacher workshops annually.	Number of teacher workshops conducted	Update of Appendix A Table in NPS Annual Report
Conducting at least 10 Project Learning Tree Workshops annually.	Number of events and people reached through PLT annually.	Update of Appendix A Table in NPS Annual Report
Conducting at least 10 Environmental Education and Outreach Mobile Classroom events annually.	Number of events and people reached through 'Mobile Classroom' annually.	Update of Appendix A Table in NPS Annual Report
Conducting outreach meetings and/or field days to promote awareness and educate local stakeholders about NPS pollution prevention.	Number of outreach meetings/field days conducted annually.	Update of Appendix A Table in NPS Annual Report

Supporting the annual Make-A-Splash Event and other environmental education programs in cooperation with local museums.	Number of students attended	Update of Appendix A Table in NPS Annual Report
At least annually, reviewing printed and electronic materials for updates and replenishing as needed.	Status of outreach material available.	Update of Appendix A Table in NPS Annual Report
Increasing public understanding of water resources, watershed management issues, and actions individuals can take to protect and restore water quality and aquatic habitats.	Number of Meetings/Conferences/Events attended annually.	Update of Appendix A Table in NPS Annual Report

Element 3: Planning

Water Management Process

The Planning element of the Mississippi NPS Program is the work area under which collaborative decisions are made about where in the state to focus NPS pollution management efforts, what those efforts will be, identify opportunities to leverage resources (either technical or financial), and, ultimately, prepare watershed plans for those priority watersheds where management efforts will be implemented. In order to make sound, scientific decisions, the Mississippi NPS Program uses products or outcomes from the state's overall water management process. This process is designed to be iterative and adaptive. Programs within MDEQ along with resource agency partners, both federal and state, non-profits, institutions, and local stakeholders work collectively to ensure Mississippi has healthy, productive waters now and into the future. The water management process crosses multiple program areas and includes water quality criteria development and refinement; monitoring; assessment; planning for protections and/or restoration; and implementation. Much of the work done in support of the water management process fits under planning activities supported by the NPS Program. In order to make informed management decisions and direct project funding to areas where there is the most need and the best opportunities for success, grant funds may be used to support planning activities that strengthen the water management process. Funds may be used to support the following activities that are included in the water management process:

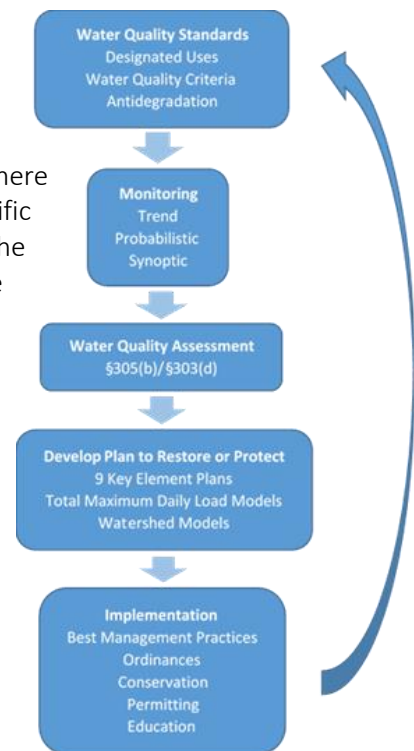


Figure 2: Water Management Process

Water Quality Standards - One of the tools used to evaluate the health and safety of Mississippi water resources is [water quality standards \(MDEQ, 2021\)](#). Water quality standards outline numeric (or narrative) thresholds for individual water quality parameters used to measure water quality. The state identifies water quality standards that are necessary to support how the water is used, otherwise referred to as designated uses. NPS pollution management may be used to improve water quality in water bodies that do not meet water quality standards so these uses may be attained. Therefore, the Mississippi NPS Program supports development and revision of state water quality standards.

Water Quality Monitoring - There is a saying, “measure what matters.” Since improving and/or protecting water quality is the focus of the Mississippi NPS Program, water quality monitoring is a necessary part of the program. The Mississippi NPS Program supports the water quality monitoring programs of MDEQ and its partners. Water quality monitoring supported by the Mississippi NPS Program includes collecting measurements of physical and chemical characteristics of water samples, conducting surveys of aquatic communities, and collecting information about water resources.

All MDEQ monitoring funded by EPA grants is carried out under QAPPs prepared using *EPA QAPP Guidelines*. Monitoring activities conducted by MDEQ for parameters that are under the *Mississippi Water Quality Standards* are conducted in accordance with the *Mississippi Consolidated Assessment and Listing Methodology (CALM)* when possible. Laboratory procedures and data management are covered under approved MDEQ SOPs. Data collected in conjunction with the USGS is entered into the NWIS data system and is publicly available via their website. The MDEQ maintains a quality management plan (QMP) for data management and prescribed procedures within the organization and the NPS Program will continue to work within QMP guidelines.

Water Quality Assessment - Section 319 requires that states identify water bodies where NPS pollution causes impairment of water quality. This is done as part of the biennial assessment of the water quality of state water resources. The biennial assessment of water quality of state water resources is required by Clean Water Action Section 305(b). This biennial water quality assessment has three purposes: identify those waters where water quality does not support their designated uses, identify the cause(s) of the poor water quality (i.e., pollutant), and identify the pollutant source(s). In order to determine the status of waters, work must also be done to develop tools and other activities to support those assessments. In Mississippi, an index of biotic integrity has been developed to assess stream health. This tool is also used to help measure incremental improvement and ultimate attainment of stream health after implementation of conservation measures in watersheds. Another assessment tool used is the stressor identification process. This process helps to determine the environmental stressor that is contributing to the impairment in biologically impaired streams thereby helping to target implementation strategies for watershed improvement.

Water Quality Modeling - There are a variety of computer models available to help in the management of NPS pollution. These models can be used to estimate pollution load reductions once best management practices and conservation measures are implemented. Some can even provide estimates of NPS pollutant loads in watersheds before conservation is implemented and then provide an estimate of how much of the pollutant can be removed (load reduction) once BMPs are implemented. These models are very helpful because they can provide estimates of pollutant loads before and after implementation and can be used to show how successful implementation of NPS conservation practices can be.

This work is consistent with and supplements, but does not duplicate, commitments in the *FY 2024 Section 106 grant Work Plan for TMDL, Monitoring, and Assessment Program Elements*. MDEQ has a proven record of successfully managing and implementing water quality monitoring and assessment projects. MDEQ works to ensure that tasks are carried out as outlined in project work plans and carefully manages grant funds to make certain that cost effective measures are implemented.

The Basin Management Approach

The key strategy used in the Mississippi NPS Program for collaboration among agencies, organizations, institutions, and stakeholders, is the MDEQ Basin Management Approach (BMA). The mission of the BMA is to foster stewardship of Mississippi's water resources through place-based, collaborative water resources planning, education, protection, and restoration initiatives. The BMA provides a vehicle for bringing people together to collaborate on identifying and addressing a variety of water resources concerns, including NPS pollution. The building blocks of the BMA are Basin Groups, Basin Teams, and Watershed Implementation Teams.



Figure 3: Basin Management Approach

To fully address water resources concerns as a state, MDEQ recognizes it's going to require working through many pathways and approaches to both protect high quality waters and restore those waters that have been impacted over time. The Basin Management Approach was designed as a way to bring representatives from all water resource management programs, both regulatory and non-regulatory; federal partners, researchers, local governments, and the public together into a single forum where these representatives can work in tandem to prioritize and address Mississippi's water resources concerns. This approach allows these groups to work within their respective authorities on common issues to achieve common goals in the same places. By focusing time, attention, and resources (where possible) as a collective group, more actual improvement can be achieved, and these achievements benefit everyone.

In concert with these team meetings, and to incentivize stakeholder participation, project funding may be used to purchase food and other refreshments along with providing support for renting facilities in which to host those events. MDEQ plans to host two Basin Team meetings per year in each basin group during the time frame these GY 2024 funds will be used. Light refreshments and/or meals/beverages will be provided for Basin Team members and/or other meeting participants (speakers/landowners/project officers/sub-grantees/subject matter experts, etc.) The purpose of these meetings is to provide coordination opportunities, collectively work to identify shared priorities, prioritize watersheds for plan development and allow members to leverage funding where available. Agenda, location, length and timing of events TBD.

Watershed Prioritization

The Basin Management Approach brings together different groups with shared goals of improving water resources while recognizing there are still limited financial resources available to implement conservation

practices and other activities to improve water quality. Because of this challenge, a process was developed to help prioritize watersheds and target where resources and work efforts are implemented in order to obtain maximum benefits. Working within the Basin Management Approach and with partners that participate on Basin Teams, members prioritize watersheds and target the watersheds that represent the highest priority for either restoration or protection for watershed plan development and conservation practice implementation.

Watershed Based Plans

For each watershed identified as a priority for NPS pollution management through the Mississippi NPS Program, a Watershed Implementation Team (WIT) is formed. This team is generally composed of local stakeholders, resource agency partners, and any other interested party located within the watershed boundaries. The first responsibility of a WIT is to help gather the necessary information and write a Watershed-based Plan (WBP) for their watershed. Information used in preparing WBPs includes analysis of the landuse, identification of environmental stressors, and the results of water quality assessments, stressor identification studies, water quality modeling, and TMDLs. This information guides WIT decisions on the types and location of restoration and protection activities to plan in a watershed. In watersheds that have TMDLs, they are used to provide water quality restoration objectives and pollutant load reduction goals for the WBP.

During this grant period watershed protection plan will be submitted to EPA for the Beaverdam Creek-Big Creek Watershed. In addition, funding will be allocated to continue the development of WBPs in priority watersheds to develop a pipeline of project ready plans to be funded in future grant years. These plans will be submitted to EPA for comment and approval. This allocation of funds to support the development of WBPs under this grant was done in response to EPA’s comments requesting MDEQ work to develop more implementation ready, approved watershed plans.

Schedule: The overall completion date is consistent with the end of the grant period which is August 31, 2029. Outcomes, outputs, milestones, and deliverable for the work completed under Element 3: Planning are provided in the table below:

Table 4: Element 3: Planning – Outcomes, Outputs, Milestones, & Deliverables

Planning – Element 3		
Outcome 1: Use Partnerships to leverage resources for NPS management.		
Outputs	Milestones	Deliverables
Obtaining approval of remaining conditions pursuant to Section 6217 of CZARA to receive approval of MS’s Coastal NPS Management Program.	Status update for MS CZARA 5-yr Workplan	Update of Appendix A Table in NPS Annual Report
Collaborating and contributing to NPS pollution management through participation on select Committees, Task Forces, and Work Groups.	Staff participation on Committees, Task Forces, and Work Groups	Update of Appendix A Table in NPS Annual Report
Continuing to partner with MS-USDA-NRCS by meeting at least	Routine meetings with MS-USDA-NRCS	Update of Appendix A Table in NPS Annual Report

annually to support the decision-making process and next steps on the National Water Quality Initiative and the Mississippi River Basin Initiative as long as these initiatives remain a national priority.		
Encouraging watershed planning activities in watersheds with high resource value waters.	Annual Ranking and Prioritization of watersheds	Update of Appendix A Table in NPS Annual Report
Providing technical assistance to local watershed groups by using Basin Coordinators and NPS Staff to support project development and implementation activities.	Projects developed and managed by NPS Program staff.	Update of Appendix A Table in NPS Annual Report
Supporting technical events to exchange information between government partners, researchers, watershed groups, and/or citizens.	Technical Events & Conferences Attended	Update of Appendix A Table in NPS Annual Report
Using the basin management approach and basin teams to prioritize watersheds for NPS pollution management on an annual basis.	Annual output of prioritized watersheds	Update of Appendix A Table in NPS Annual Report
Selecting 3 Targeted Watersheds for implementation through the Section 319 grant annually based on available funds, statewide distribution, and available partners.	NPS Grant Workplan	Update of Appendix A Table in NPS Annual Report
Identifying Watershed Implementation Teams in Targeted Watersheds in conjunction with local partners.	Number of watershed teams working in active project areas.	Update of Appendix A Table in NPS Annual Report
Generating guidance for developing and/or updating watershed-based plans.	Annual Status Update	Update of Appendix A Table in NPS Annual Report
Developing/updating watershed-based plans for priority watersheds.	Number of Watershed-based Plans	Update of Appendix A Table in NPS Annual Report
Number of 9 key Element Plans reviewed and accepted by EPA.	Number of 9 Key Element Plans	Update of Appendix A Table in NPS Annual Report
Outcome 2: Support the MDEQ Water Quality Management process.		
Outputs	Milestones	Deliverables
Supporting WQS Branch in developing criteria appropriate for assessing the effects of NPS pollution.	Support public outreach using established basin teams during triennial review.	MDEQ Annual Report

Coordinating Section 319 program activities and leveraging funding within MDEQ water programs to protect and restore surface and groundwater quality.	Collaborate with Basin Team member to implement NPS actions and leverage resources in priority watersheds	Update of Appendix A Table in NPS Annual Report
Working with partners to solicit water quality data to support §305(b) statewide assessment.	Utilize basin team partners to solicit data for inclusion assessment process	Update of Appendix A Table in NPS Annual Report
Developing statewide assessment for waterbodies to determine water quality status in compliance with Section 305(b) of the CWA.	Support data collection and assessment efforts	Update of Appendix A Table in NPS Annual Report
Identifying waters not meeting one or more designated use and develop the impaired waters list in compliance with Section 303(d) of the CWA.	Section 303(d) Report	Update of Appendix A Table in NPS Annual Report
Supporting Field Services Division water quality monitoring of NPS projects and NPS pollutant loadings.	Monitoring in NPS priority watersheds. Data collection.	Update of Appendix A Table in NPS Annual Report

NPS Project Fund Allocations

Element 4: Project Implementation

This element of the Mississippi NPS Program encompasses those activities undertaken when watershed plans are implemented in targeted priority watersheds. As discussed above, WBPs identify recommended NPS pollution management activities needed to achieve the NPS pollution management goals for a targeted watershed. The NPS pollution management/conservation practices, local NPS pollution awareness and education, and water quality monitoring activities that are recommended in the WBPs are implemented through projects. These NPS pollution control projects are developed and managed by agencies, organizations, or institutions active in the watershed. Through implementation of projects, NPS pollution sources are mitigated, and water resources are improved and protected. While WBPs can, and often do, deal with multiple categories of NPS pollution in order to address all of the water resources concerns in the watershed; projects usually address a single NPS pollution category such as agriculture or urban stormwater. These projects, when implemented in concert following the practices identified in the WBPs, are what ultimately work together to result in water quality improvements. Although projects may focus on one specific category, or landuse type, they can identify practices to reduce multiple pollutants.

All projects should include, as appropriate, NPS pollution management activities, water quality monitoring, and awareness and education activities. The WBPs developed for the targeted priority watersheds identify NPS pollution best management practices (BMPs) that control the NPS pollutant(s) of concern in the Targeted Watershed. Projects for demonstrating or implementing NPS pollution BMPs will usually focus on the practices identified in the WBP. However, NPS pollution BMPs not specifically named in the WBP can be included in projects funded by §319 sub-grants, as long as they are appropriate for the conditions and NPS pollution sources in the Targeted Watershed and will mitigate the pollutant(s) of concern.

Role of Watershed Implementation Teams

Once a WBP is written, and has been accepted by EPA, the role of the WIT is to facilitate implementation of that WBP through projects. In this role, WITs are a vehicle for getting NPS pollution management practices on the ground where they are needed in their Targeted Watersheds, while bringing natural resources work and federal money into local economies. The WITs provide coordination and collaboration avenues for implementation of NPS pollution management practices that were identified in the watershed plans. To this end, WITs build capacity by involving local governmental agencies, non-governmental organizations, and local citizens in the effort to implement projects. Members participating in WITs can work together to identify opportunities for pooling technical and financial resources in projects and facilitate formation of working groups within the team to focus on different aspects of WBP implementation.

Workplans and Sub-grants

Section 319 sub-grants can be used to fund a wide variety of activities, or projects, related to management of NPS pollution, and these sub-grants can be made with partnering agencies, organizations, local governments, or institutions. The work covered can include training programs, water quality studies, demonstration projects for a wide variety of practices that control NPS pollutants of interest, and cost share to individuals for implementing practices that control NPS pollution. Projects selected for §319 sub-grant funding must be implemented in a targeted priority watershed. A list of the priority watersheds can be found in Appendix B of MS’s approved [NPS Management Plan](#). Projects must also include work that is consistent with the activities identified in the approved 9 key element watershed plan for that targeted priority watershed.

To implement the nutrient/pollutant reduction strategy, §319 NPS funding will be used to support projects in all regions of the state. The projects will focus on watersheds with recently developed and approved WBPs so that achievable load reductions can be quantified through pre- and post-implementation water quality monitoring. Implementation of the strategies in these watershed projects will provide additional, cost-effective information related to achievable results and costs.

FY24 Watershed Projects – Funds from this grant will be used to implement best management practices and NPS control measures along with awareness, outreach, and education activities as identified in approved 9 Key Element watershed plans. As part of the FY24 award, MDEQ will allocate \$1,578,451 to support watershed implementation activities. MDEQ has a list of watersheds with approved 9 Key Element Plans where the funds for full project implementation was more than could be allocated at the time of funding. The need for additional funding has been exacerbated due to impacts from inflation resulting in an overall increase in cost to implement BMPs. As such, to the extent possible, money from the FY24 grant will be allocated to continue work in watersheds that have approved plans where more funding is needed to address identified implementation needs. These watersheds are listed below along with a link to the approved plans. In addition, MDEQ will be allocating funds to begin work in Beaverdam Creek-Big Creek Watershed (HUC 031700060103), Bear Creek-Wasp Lake Watershed (HUC 080302060306), and McElroy Creek-Tuscumbia River Canal Watershed (HUC 080102070502). The 9 Key Element Plans for these watersheds will be submitted to EPA for review/approval prior to funding any implementation activities.

Table 5: FY24 Watershed Project Areas

Watershed (HUC12)	Total Estimated Need	Funds Allocated	Unmet Need
Bell Creek-West Prong Muddy Creek (080102070601)	\$1,919,400.00	\$500,000.00	\$1,419,400.00
Crowder Creek-Little Bogue (HUC 080302050505)	\$1,279,450.00	\$300,000.00	\$979,450.00
Platner Bayou-Tippo Bayou (080302050701)	\$2,317,865.00	\$454,424.00	\$1,863,441.00
Upper Piney Creek (080302060704)	\$1,554,211.00	\$360,000.00	\$1,194,211.00
Muddy Bayou-Opossum Bayou (080302020403)	\$2,530,188.00	\$345,705.00	\$2,184,483.00

Beaverdam Creek-Big Creek Watershed (HUC 03170006013), George County, MS

The Beaverdam Creek-Big Creek Watershed is in the northern portion of George County in southeastern Mississippi and encompasses a portion of the city of Lucedale, the county seat of George County. This watershed covers approximately 30,684 acres. According to the 2021 National Land Cover Database (NLCD), the landuse within this watershed is comprised of approximately 46.8% forest, 18.6% wetland, 13.8% pasture/grassland, 8.5% urban, 7.8% scrub/barren, 4.1% cropland and 0.4% water. The Beaverdam Creek-Big Creek watershed receives around 66 inches of precipitation per year with monthly precipitation totals ranging from 3.8" to 7.2" resulting in this watershed receiving more than double the national average of rainfall per year. The climate of the Beaverdam Creek- Big Creek watershed is classified as humid subtropical on the Köppen Climate Classification Scale. Average high temperatures range from 60 degrees in January to 93 degrees in July.

The water-use classification for all water bodies in this watershed, as established by *Regulations for Water Quality Criteria for Intrastate, Interstate, and Coastal Waters*, is for *Fish and Wildlife*. Waters with this classification are intended for fishing and propagation of fish, aquatic life, and wildlife. Waters that are classified as *Fish and Wildlife* should also be suitable for secondary contact recreation, which is defined as incidental contact with water including wading and occasional swimming.

Currently, there are no waterbodies assessed as impaired or that have TMLDs in the Beaverdam Creek-Big Creek Watershed. Big Creek ([MS417211](#)) serves as the main drainage in the watershed and is assessed as attaining the aquatic life designated use. Local stakeholders are interested in protecting the quality of the water resources. To further this goal, citizens and community leaders in this watershed are in the process of developing a watershed protection plan focusing on activities that will promote environmental stewardship and identify actions that can be implemented to protect the watershed from environmental stressors. Funding from this grant will support implementation of the actions identified by the watershed team and included in the final watershed protection plan. This plan will be submitted to EPA for review and concurrence prior to implementation of activities identified in the plan. A complete budget will be included in the watershed-based plan submitted to EPA for approval.

Bear Creek-Wasp Lake (HUC 080302060306), Humphreys & Leflore Counties, MS

The Bear Creek-Wasp Lake Watershed is located in portions of northern Humphreys County and southern Leflore County. This watershed covers approximately 25,654 acres. According to the 2021 NLCD, the landuse within this watershed is comprised of 65.4% cropland, 25.7% wetland, 5.6% water and 3.2% urban.. The climate of Bear Creek-Wasp Lake is classified as humid subtropical on the Köppen Climate Classification Scale. The average rainfall is around 56 inches per year, double the national average. The average high temperature ranges from 53 degrees in January to 92 degrees in July and August.

The water-use classification for all water bodies in this watershed, as established by *Regulations for Water Quality Criteria for Intrastate, Interstate, and Coastal Waters*, is for *Fish and Wildlife*. Waters with this classification are intended for fishing and propagation of fish, aquatic life, and wildlife. Waters that are classified as *Fish and Wildlife* should also be suitable for secondary contact recreation, which is defined as incidental contact with water including wading and occasional swimming.

This watershed is made up of a series of oxbow lakes including: Sky Lake, Four Mile Lake, and Wasp Lake. Bear Creek runs through the watershed connecting Four Mile Lake and Wasp Lake. Several TMDL's were

completed waterbodies in the for the Bear Creek- Wasp Lake watershed. Information on these TMDLs is provided below:

SEGMENT ID	WATERBODY NAME	POLLUTANTS
MS354E	Bear Creek	Pesticides, Nutrients & Organic Enrichment, and Sediment
MS354FLE	Four Mile Lake	Pesticides and Nutrients & Organic Enrichment
MS354WLM	Wasp Lake	Pesticides, Nutrients & Organic Enrichment, and Sediment
MS354SL2E	Sky Lake	Pesticides, Nutrients & Organic Enrichment, and Sediment

Nonpoint loading of nutrients and organic material in surface waters most commonly results from pollutants that are transported to receiving waters from overland surface runoff. In some instances, groundwater can contribute to nutrient loads in areas where groundwater comes into contact with surface water. In most freshwater systems, phosphorus is considered the limiting nutrient that results from nonpoint sources. However, when targeting nonpoint sources of nutrients, both nitrogen and phosphorus should be addressed. Some common nonpoint sources of nutrients include: fertilizer, stream bank failures, grazing, failing septic systems, agriculture, silviculture, urban runoff, and mass wasting areas.

Nonpoint loading from sediment is a result of material that is carried into downstream stream, creeks, rivers, lakes, and/or estuaries. These materials are generally the product of mass wasting, head cutting, gully, and sheet and rill erosion. Some common nonpoint sources of sediment include: agriculture, silviculture, rangeland, construction sites, roads, urban areas, mass wasting areas, gullies, surface mining, in-channel and instream sources, historical landuse activities, and channel alterations.

The watershed plan will identify best management practices along with education and outreach efforts that can be implemented to address the nonpoint sources contributing to impairment in the watershed. The watershed-based plan submitted to EPA for approval will also include estimated funding needs to address the identified concerns and fund work to improve water quality within the watershed.

McElroy Creek-Tuscumbia River Canal (HUC 080102070502), Alcorn County, MS

The McElroy Creek-Tuscumbia River Canal Watershed is located in Alcorn County in northern Mississippi. This watershed covers approximately 28,735 acres, which includes the City of Kossuth. According to the 2021 NLCD, the landuse within this watershed is comprised of 33% forest, 30.5% pasture/grassland, 16.9% cropland, 10.3% wetland, 7.3% urban, 1.5% scrub/barren and 0.6% water. The McElroy Creek-Tuscumbia River Canal watershed receives approximately 59 inches of precipitation per year, double the national average. This watershed is classified as humid subtropical according to the Köppen Climate Classification Scale. Temperatures range from near 49 degrees in January to 91 degrees in July.

The water-use classification for all water bodies in this watershed, as established by *Regulations for Water Quality Criteria for Intrastate, Interstate, and Coastal Waters*, is for *Fish and Wildlife*. Waters with this classification are intended for fishing and propagation of fish, aquatic life, and wildlife. Waters that are classified as *Fish and Wildlife* should also be suitable for secondary contact recreation, which is defined as incidental contact with water including wading and occasional swimming.

There are three impaired waterbodies in this watershed including Eastes Creek, McElroy Creek, and Tuscumbia River Canal. Eastes Creek and McElroy Creek drain into the Tuscumbia River Canal. They are currently on Mississippi’s Section 303(d) of Water Bodies for biological impairment. The Tuscumbia River Canal has a TMDL for nutrients and organic enrichment/low dissolved oxygen, sediment, and pathogens. Information on these water bodies is provided below:

SEGMENT ID	WATERBODY NAME	POLLUTANTS
MS203TE	Tuscumbia River Canal	Sediment, Organic Enrichment, Pathogens
301112	Eastes Creek	Biological Impairment
301113	McElroy Creek	Biological Impairment

Tuscumbia River Canal serves as the mainstem drainage for the watershed. As such the TMDLs developed for Tuscumbia River Canal will be used to set restoration goals for pathogens, nutrients/organic enrichment, and sediment in the watershed. Nonpoint loading of nutrients and organic material in surface waters most commonly results from pollutants that are transported to receiving waters from overland surface runoff. In some instances, groundwater can contribute to nutrient loads in areas where groundwater comes into contact with and surface water. In most freshwater systems, phosphorus is considered the limiting nutrient that results from nonpoint sources. However, when targeting nonpoint sources of nutrients, both nitrogen and phosphorus should be addressed. Some common nonpoint sources of nutrients include: fertilizer, stream bank failures, grazing, failing septic systems, agriculture, silviculture, urban runoff, and mass wasting areas.

Nonpoint loading from sediment is a result of material that is carried into downstream stream, creeks, rivers, lakes, and/or estuaries. These materials are generally the product of mass wasting, head cutting, gully, and sheet and rill erosion. Some common nonpoint sources of sediment include: agriculture, silviculture, rangeland, construction sites, roads, urban areas, mass wasting areas, gullies, surface mining, in-channel and instream sources, historical landuse activities, and channel alterations.

There are many nonpoint sources that can contribute to elevated bacteria in water. Some common sources include grazing animals, animals that are in consolidated animal feeding operations, land application of manure, failing septic systems, wildlife, and urban development.

The watershed plan will identify best management practices along with education and outreach efforts that can be implemented to address the nonpoint sources contributing to impairment in the watershed. The watershed-based plan submitted to EPA for approval will also include estimated funding needs to address the identified concerns and fund work to improve water quality within the watershed.

Project Reporting

Once grant funding is received and sub-grants are in place to initiate work, project details are entered into EPA’s GRTS data system. The approved watershed plans are attached as supporting documentation into GRTS along with annual reporting of progress, expenditures, and load reductions. At the end of the project, the final report is also uploaded into GRTS. In addition to meeting all of the GRTS reporting requirements, all project partners submit detailed quarterly progress reports that provide updates on completed milestones and expenditures along with any pictures of BMPs or results from any education or outreach events conducted. If anything happened that would result in a delay of the project, this is also

reported on the quarterly progress reports ensuring that project managers and our partners can work together to develop solutions and ensure the project meets goals and is completed within grant timelines. Project summaries are often included as part of the NPS annual report and the NPS Program works with partners to use Basin Team Meetings, field days, and watershed team meetings as additional opportunities to provide presentations and project updates. At the conclusion of the project, final reports are developed to address each component of the work funded, load reductions are calculated where BMPs are implemented and, when possible, project summary scorecards are developed as an easy, 1-page, summary of the work completed in the watershed.

Schedule: The overall completion date is consistent with the end of the grant period which is August 31, 2029. Outcomes, outputs, milestones, and deliverable for the work completed under Element 4: Project Implementation are provided in the table below:

Table 6: Element 4: Project Implementation – Outcomes, Outputs, Milestones, & Deliverables

Project Implementation – Element 4		
Outcome 1: Promote Implementation of restoration (or protection) for priority watersheds.		
Outputs	Milestones	Deliverables
Awarding 319 sub-grants to implement management practices to reduce NPS pollution based on an accepted EPA watershed-based plan.	Number of active project subgrants	Update of Appendix A Table in NPS Annual Report
Awarding Section 319 grant funds to implement projects in priority watersheds.	Percentage of project implementation funds allocated in priority watersheds	Update of Appendix A Table in NPS Annual Report
Pursuing full approval of the MS Coastal NPS program pursuant to Section 6217 of CZARA to restore and protect coastal waters.	Status of actions identified in MS CZARA 5-yr Workplan	Update of Appendix A Table in NPS Annual Report
Outcome 2: Implement applicable practices that control and reduce NPS pollution.		
Outputs	Milestones	Deliverables
Requiring Operation and Maintenance agreements for BMP implementation projects to ensure continued performance and useful life of BMPs.	Percentage of BMPs with Operation and Maintenance Agreements	Update of Appendix A Table in NPS Annual Report
Calculating estimated annual Total Nitrogen reductions achieved in priority watersheds.	Annual Load Reductions Update in GRTS	Update of Appendix A Table in NPS Annual Report
Calculating estimated annual Total Phosphorus reductions achieved in priority watersheds.	Annual Load Reductions Update in GRTS	Update of Appendix A Table in NPS Annual Report
Calculating estimated annual Sediment reductions achieved in priority watersheds.	Annual Load Reductions Update in GRTS	Update of Appendix A Table in NPS Annual Report

Element 5: Project Implementation Support

This element encompasses those activities of the Mississippi NPS Program that support implementation projects in targeted priority watersheds. The Mississippi NPS Program has established partnerships with multiple agencies, organizations, and institutions at the state or basin level as part of Program Implementation. Technical and financial support of the local, project-specific activities of these partners is considered part of Mississippi NPS Program Support for Project Implementation. Funding under this element can be used to support a range of activities as long as the outcomes ultimately address work needed to support project goals; including providing staff support for project management activities associated with watershed plan implementation. Often, this funding ensures technical assistance is available at the local watershed level from partner agencies, organizations, and institutions. Some activities supported include partnership and support from local soil and water conservation district staff as well as NRCS technical assistance to design and implement NPS best management practices. These funds ensure these subject matter experts can participate in watershed implementation team meetings. This element also includes activities associated with monitoring to evaluate the effects of local projects on water quality.

Funding is also used to support partnership agreements with the USGS to subsidize on-going monitoring in watersheds where NPS pollution demonstration projects are either on-going or where implementation is complete and follow-up monitoring is needed to measure water quality benefits achieved as a result of BMP implementation. The partnership between the Mississippi NPS Program and the USGS is unique in that the USGS leverages staff time to support monitoring as well as assessment and data analysis efforts that support shared water resource management goals with the NPS program. As part of these efforts, USGS staff participate in watershed monitoring and data analysis efforts that can be used to measure the success of NPS conservation practice implementation. This work can also be used to further the scientific understanding of different systems, determine new ways to establish monitoring protocols and load reductions, and collect data to refine individual BMP effectiveness/efficiency estimates for practices implemented on Mississippi soils, watersheds, and unique drainage systems like are found in the Mississippi River Alluvial Plain.

All water quality data collected using §319 funds is conducted in accordance with EPA-approved QAPPs and the results are uploaded into EPA national data systems as per the requirements of grant. Data collected in collaboration with the USGS are made available in the USGS's National Water Information System (NWIS). All data available in NWIS can also be obtained from the National Water Quality Monitoring Council's [Water Quality Portal](#). This portal allows the public to access water quality data from both the EPA and USGS water quality data systems.

Schedule: The overall completion date is consistent with the end of the grant period which is August 31, 2029. Outcomes, outputs, milestones, and deliverable for the work completed under Element 5: Project Implementation Support are provided in the table below:

Table 7: Element 5: Project Implementation Support – Outcomes, Outputs, Milestones, & Deliverables

Project Implementation Support – Element 5		
Outcome 1: Collect and analyze data related to NPS pollution control and reduction.		
Outputs	Milestones	Deliverables
Using MDEQ monitoring resources to monitor waters in National Water Quality Initiative watershed.	Active monitoring in NWQI watershed	Update of Appendix A Table in NPS Annual Report; EPA’s annual NWQI Survey
Using additional resources (e.g. staff, funds, and technical support) to monitor water quality in watersheds where NPS restoration activities have occurred.	Annual Data Upload via WQX; USGS data via Water Quality Portal	NPS Annual Report
Outcome 2: Collaborate with key partners to provide technical assistance in priority watersheds.		
Outputs	Milestones	Deliverables
Working with respected members of the agricultural community (e.g. MSWCC, NRCS, Delta F.A.R.M., Farm Bureau, etc.) to educate stakeholders and design, fund, and/or implement conservation measures to mitigate NPS pollution.	Routine Partner Meetings; Basin Team Meetings	NPS Annual Report
Working with respected members of the forestry community (e.g. MS Forestry Commission, Urban Forestry Council, MS Forestry Assoc., etc.) to educate stakeholders and design, fund, and/or implement conservation measures to mitigate NPS pollution.	Routine Partner Meetings; Basin Team Meetings	NPS Annual Report
Working with trusted partners (e.g. land trusts, NGO’s, IHL, etc.) in targeted priority watersheds to educate stakeholders and design, fund, and/or implement conservation measures to mitigate NPS pollution.	Routine Partner Meetings; Basin Team Meetings	NPS Annual Report