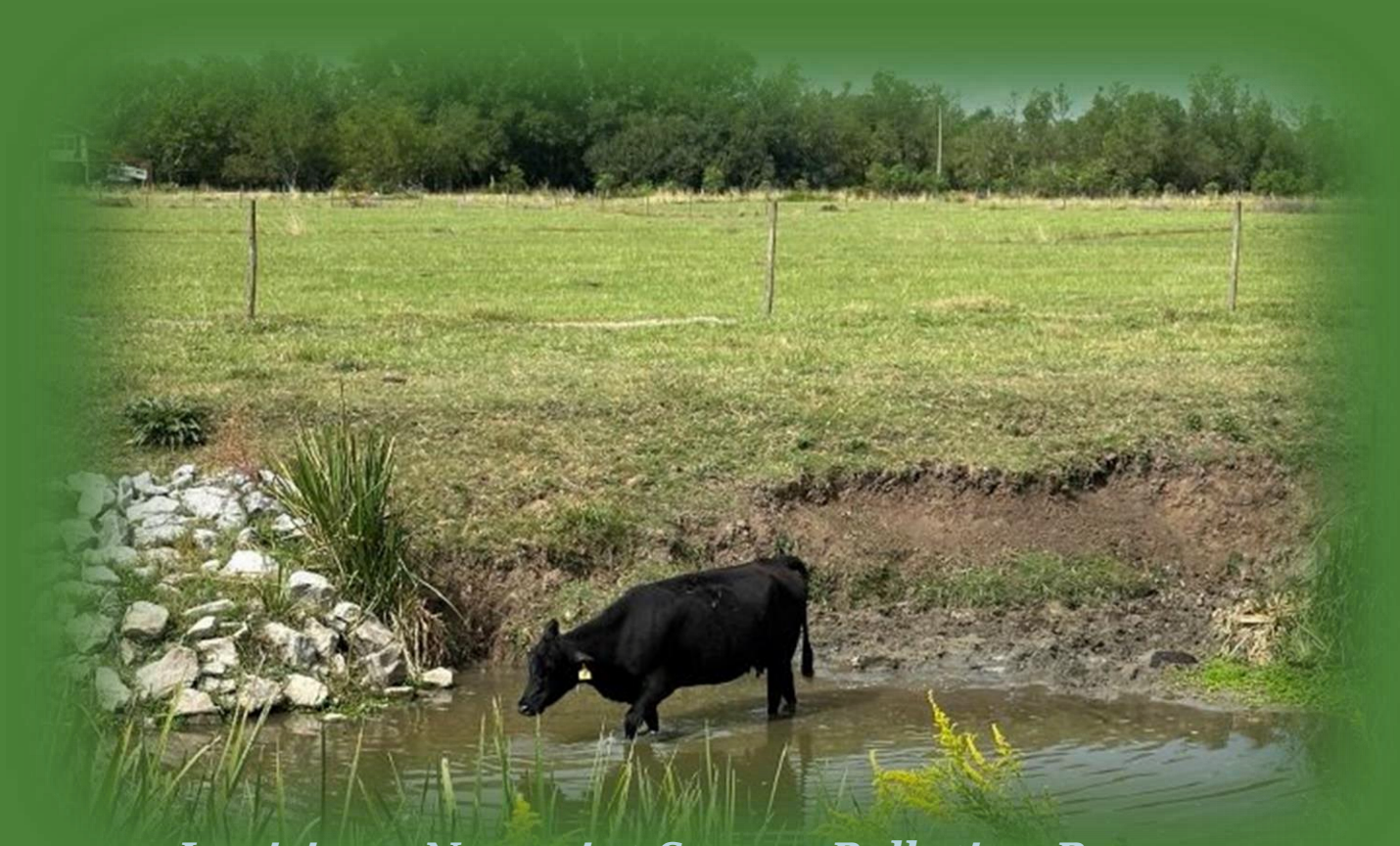

Louisiana Nonpoint Source Pollution Program

Annual Report

Federal Fiscal Year (FFY) 2024

DEQ
LOUISIANA

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1.0 EXECUTIVE SUMMARY

Nonpoint source (NPS) pollution is an identified pollutant where the origin of contamination is unknown following rainfall or snowmelt events. Examples could include pet waste in a dog park; when the waste is washed away and into a nearby body of water, the waste, once identified, would be known as fecal coliform bacteria, however the origin for the waste would be unknown. Common types of NPS pollution include oil, fertilizers, bacteria, sediment, and pesticides.

Clean Water Act (CWA) Section 319 provides funding for states to develop and implement a NPS Program. Louisiana Revised Statute 30:2011, signed by the Governor in 1987 as Act 272, instructed Louisiana Department of Environmental Quality (LDEQ), designated as the Lead Agency for the state's Nonpoint Source Program, to develop and implement a NPS Management Program.

LDEQ administers Louisiana's NPS Program and collaborates with the Louisiana Department of Agriculture and Forestry (LDAF) and other agencies and organizations to implement the statewide program to improve water quality across the state. The Program also focuses at the watershed scale to address agriculture-induced impairments identified in LDEQ ambient water monitoring program. In concert with LDAF, the United States Department of Agriculture – National Resources Conservation Service (USDA-NRCS), local Soil & Water Conservation Districts, and other stakeholders, LDEQ prioritizes watersheds for appropriate water quality projects tailored to watershed size, pollutants to be addressed, project funding, participating partners, and goals. Activities may be statewide, in the coastal zone, or on a watershed scale.

Roadmaps to address each of these elements at the watershed scale are built into Watershed Implementation Plans (WIPs). WIPs are used to characterize watersheds, outlining watershed-based project areas, strategies to minimize the impact of NPS pollution, objectives for attaining project goals, and sustaining load reductions over time and across land use transitions.

Activities undertaken through these partnerships include prioritization of watershed planning and implementation, evaluating progress, and reporting program activities. This interagency coordination is the strength of Louisiana's NPS Program, resulting in water quality restoration and improvement, as well as success stories for the state. Louisiana's federal fiscal year (FFY) 2024 NPS Annual Report has been prepared in compliance with Section 319 of the CWA. This report outlines progress made in reducing NPS pollution and improving water quality within Louisiana.

Statewide, bacteria is a significant cause of impairment of both primary and secondary contact recreation uses in Louisiana waters. Onsite disposal system (OSDS) maintenance issues continue to be a concern in Louisiana; therefore, LDEQ-NPS continues to place emphasis on water quality problems associated with OSDS. Several partners remain actively involved in inspecting systems and educating homeowners on the importance of protecting Louisiana's waterways by properly maintaining sewage systems. Partners engaged in this effort include Capital Resource Conservation & Development Council (RC&D), Louisiana Rural Water Association (LRWA), Bayou Vermilion District (BVD), and Barataria-Terrebonne National Estuary Program (BTNEP). Additionally, Lafayette and St. Martin Soil and Water Conservation Districts (SWCD) participated in OSDS pump outs.

In 2024, the NPS Program and its partners participated in watershed restoration activities and education and outreach across the state. These activities led to substantial progress in reducing NPS pollution, improving water quality, and therefore will continue to be implemented in watersheds in need of restoration. 2024 NPS Program highlights are as follows:

- LDEQ participated in 20 outreach and educational events;
- LDAF participated in over 30 outreach and educational events;
- Partner organizations participated in numerous additional outreach events;

- LDAF provided technical and financial assistance to 49 cooperators, in a total of 7 priority watersheds, including Bayou Chene, Bayou Mallet, Bayou des Cannes, Bayou du Portage, Bayou Maringouin, Bayou Grosse Tete, and Vermilion River;
- LDEQ and LDAF managed approximately $3.5 million of Section 319 grant funds in order to implement projects to reduce NPS pollution and improve water quality;
- LDEQ continued watershed planning and implementation activities with one watershed coordinator (WSC) and three watershed groups that are located in various parts of the state;
- LDEQ completed a watershed plan addendum incorporating two additional HUC12s into the implementation plan within the Ouachita Basin, which was subsequently approved by EPA; an additional watershed plan located in the Ouachita Basin was also submitted and is pending EPA approval;
- LDEQ, LDAF, and (USDA-NRCS) continue partnering in watersheds prioritized through the National Water Quality Initiative (NWQI);
- LDEQ's NPS and Total Maximum Daily Load (TMDL) staff worked together on the New Vision Initiative;
- LDEQ Water Surveys (WS) staff provided water quality sampling for the NPS program in 14 watersheds; several partners provided water quality sampling for the NPS program in four watersheds;
- Louisiana continues to focus on watershed planning, assessment, monitoring and implementation in 20 watersheds;
- LDEQ's Drinking Water Protection Program (DWPP) implemented activities in the Lake Pontchartrain Basin, the Mississippi River Basin, the Pearl River Basin and the Vermilion-Teche Basin;
- LDEQ published monitoring data in EQuIS and through the EPA Water Quality Exchange for active watersheds;
- LDEQ developed maps and spatial data analysis for active watersheds to assist in watershed planning, implementation, and monitoring.

LDEQ's DWPP staff engaged in source water protection (SWP) activities in various parishes, which included educating local businesses identified as potential sources of contamination to drinking water sources, conducting public community meetings and school presentations, developing eight contingency plans with water systems, as well as updating source water assessment data.

LDEQ, LDAF, the USDA-NRCS, and other partners continue to work together to improve the process of restoring and protecting watersheds. The success of LDEQ's NPS program is attributed to proficient collaboration of federal, state, and local governments, collaborating with universities, non-profit organizations, and the public. These alliances will continue to be the basis for watershed and statewide efforts during 2025.

2.0 SECTION 319 FUNDING

2.1 LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY NONPOINT SOURCE POLLUTION PROGRAM

Louisiana's NPS program receives funding through CWA Section 319, prioritized to fund projects in coordination with USDA's Farm Bill, to implement its water quality goals and objectives. LDEQ continued collaborating with partners to conduct education/outreach, water quality monitoring, inspect OSDS systems, and to assist in developing WIPs to be implemented by LDAF and USDA-NRCS in NPS priority watersheds.

LDEQ utilized approximately $2.7 million in CWA Section 319 funds and matching contributions to support the NPS and Source Water Protection Program (SWPP), watershed coordination, NPS monitoring, watershed planning, and LDAF activities, to protect and/or restore recreational waters and drinking water supplies. Table 1 illustrates LDEQ Section 319 grant expenditures.

Grant Year	LDEQ (Federal)	Match
FFY20	$398,900.00	$265,933.00
FFY21	$409,600.00	$273,067.00
FFY22	$409,600.00	$273,067.00
FFY23	$411,870.00	$274,580.00
TOTAL	**$1,629,970.00**	**$1,086,647.00**

Table 1. LDEQ Section 319 Grant Expenditures

2.2 LOUISIANA DEPARTMENT OF AGRICULTURE AND FORESTRY

To provide technical assistance and best management practices (BMPs) through cost-share and incentive payments, LDAF expended approximately $1,876,756.58 in fiscal Year 2024 on watershed implementation within multiple watersheds around the state. Implementation, planning and/or technical assistance was conducted on approximately 8,175.48 acres of private farmland to restore or partially restore surface water quality in seven priority watersheds within the Ouachita River, Mermentau River, Terrebonne, and Vermilion-Teche Basins. Table 2 illustrates LDAF Section 319 grant expenditures.

Grant Year	LDAF (Federal)
2019	$1,700,761.36
2020	$55,687.16
2021	$120,308.06
2022	$0
2023	$0
TOTAL	$1,876,756.58

Table 2. LDAF Section 319 Grant Expenditures

*** Full drawdown of grant, $1,913,500, by LDAF on December 27, 2024**

3.0 WATER QUALITY MONITORING AND IMPLEMENTATION

3.1 LDEQ NONPOINT SOURCE POLLUTION PROGRAM

In FFY 2024, water quality monitoring continued in 18 watersheds (Table 3). The data collected assists LDEQ and its partners in making valuable decisions. Pre-BMP monitoring assists in identifying critical areas contributing to NPS pollutant loads. This aids in the selection of the appropriate types of BMPs needed in the most suitable locations. Post-BMP monitoring assists LDEQ and partners in determining if water quality is improving.

Watershed	Subsegment	Basin
Comite River	040103	Lake Pontchartrain
Middle Amite River	040302	
Yellow Water River	040504	
Bayou des Cannes	050101	Mermentau River
Bayou Mallet	050103	
Bayou Queue de Tortue	050501	
Bayou Chene	050603	
Bayou Courtableau	060204	Vermilion-Teche River
Bayou du Portage	060703	
Vermilion River	060801	
Thompson Creek	070502	Mississippi River
Bayou Bartholomew	080401	Ouachita
Big Creek (North)	080903	
Lake St. Joseph	081202	
Hemphill Creek	081609	
Bayou Grosse Tete	120104	Terrebonne
Bayou Maringouin	120111	
Bayou Folse	120305	

Table 3. Watersheds in which water quality monitoring was conducted in FFY2024

LDEQ's NPS staff developed WIPs indicated in Table 4. WIPs developed for other priority watersheds are updated as necessary, as water quality data becomes available, and projects identified in the plan are implemented. In FFY 2024, LDEQ-NPS completed WIPs and submitted to EPA R6 for review. Watersheds are indicated in Table 4.

Watershed	Subsegment	Basin
Bayou Bartholomew	080401	Ouachita
Big Creek (Addendum)	080903	Ouachita

Table 4. Draft WIPs submitted in August 2024

Watershed planning for the watersheds indicated in Table 5 began in FFY 2024 and will still be in progress during FFY 2025.

Watershed	Subsegment	Basin
Bayou Courtableau	060204	Vermilion Teche
Bayou Teche (initiating)	060301, 060401, 060501	Vermilion Teche

Table 5. Watershed planning in progress FFY 2025

3.2 LOUISIANA DEPARTMENT OF AGRICULTURE AND FORESTRY

LDAF provided technical assistance and BMP implementation on 8,175.48 acres in seven watersheds, see Table 6.

Watershed	Acres Implemented / Technical Assistance	Basin
Bayou Chene	125.15	Mermentau
Bayou Des Cannes	44.7	Mermentau River
Bayou Mallet	36	Mermentau River
Vermilion River	20.7	Vermilion Teche
Bayou Marinqouin	182.6	Terrebonne
Bayou Grosse Tete	179	Terrebonne
Bayou Du Portage	10,506.71	Vermilion Teche
TOTAL	11,094.86	

Table 6. Technical Assistance and BMP implementation

Watershed	Subsegment	Basin	Special Equipment Purchased
Hemphill Creek	081609	Ouachita	One no-till grain drill
Big Creek	080903	Ouachita	One no-till grain drill

Table 7. Special Projects in Hemphill Creek and Big Creek

No-till grain drills are currently being used in these watersheds to significantly reduce soil erosion, nutrient loading, pesticide runoff and overall improve water quality by directly seeding in areas that currently have vegetative cover on the ground.

These BMPs were carried out through the traditional conservation partnership cooperation between the USDA-NRCS, the LDAF, and participating Soil and Water Conservation Districts (SWCDs). These local SWCDs included Acadia, St. Martin, Lafayette, Northeast, St. Landry, LaSalle, Iberia, Evangeline, Jefferson Davis, Upper Delta, and Lower Delta. Signed contracts establish the participant's BMP payment schedules and implementation requirements, defining the relationship between themselves and the federal-state-local conservation delivery team. To attain water quality objectives, an array of proven conservation practices such as grade stabilization, conservation, prescribed grazing, heavy use area protection, critical area planting, irrigation land leveling, tillage and residue management, and others, were cost-shared through this program. Participants are required to implement a conservation plan through which additional BMPs are prescribed. These additional BMPs further ensure reduction of water quality impairments and exceed the participants required matching funds. To ensure effective delivery of these necessary BMPs, LDEQ provides water quality data, watershed modeling, planning, targeted sampling, mapping, and other critical logistical assistance to ensure maximum effectiveness for our collective efforts in restoring water quality in agricultural settings.

Bayou Chene	**Subsegment 50603**
Active conservation plans (CPs) (all, including those created before 10/1/2023)	14
CPs created in **FFY 2024** (10/1/23-9/30/24)	14
Applications received in **FFY 2024**	15
CPs completed in **FFY 2024** (all, including those created before 10/1/23)	0
Participating producers (all, including those who signed up before FFY 24)	13
Acres in CPs (total acres in CPs (including those created before FFY24)	1,696
Total agricultural acres in watershed	91,839
Active completion dates range (dates for earliest to expire contract to latest to expire)	9/30/24-9/30/26

Best Management Practices	**Units/Acres Obligated**	**Units/Acres Completed in FFY 24**
Irrigation land leveling (ac)	1705.10	125.15

Table 8. Activity and BMP implementation in Bayou Chene

Bayou des Cannes	Subsegment 050101
Active conservation plans (CPs) (all, including those created before 10/1/2023)	9
CPs created in **FFY 2024** (10/1/23-9/30/24)	9
Applications received in **FFY 2024**	12
CPs completed in **FFY 2024** (all, including those created before 10/1/23)	0
Participating producers (all, including those who signed up before FFY 24)	10
Acres in CPs (total acres in CPs (including those created before FFY24)	960
Total agricultural acres in watershed	116,597
Active completion dates range (dates for earliest to expire contract to latest to expire)	11/24-9/26

Best Management Practices	Units/Acres Obligated	Units/Acres Completed in FY 24
Irrigation land leveling (ac)	224	0
Irrigation Pipeline (ft)	6,631	0
Grade Stabilization Structure (No./acres)	10	3/44.7

Table 9. Activity and BMP implementation in Bayou des Cannes

Bayou Maringouin/Grosse Tete	Subsegments 120104 & 120111
Active conservation plans (CPs) (all, including those created before 10/1/2023)	0
CPs created in **FFY 2024** (10/1/23-9/30/24)	1
Applications received in **FFY 2024**	1
CPs completed in **FFY 2024** (all, including those created before 10/1/23)	1
Participating producers (all, including those who signed up before FFY 24)	1
Acres in CPs (total acres in CPs (including those created before FFY24)	361.6
Total agricultural acres in watershed	93,820
Active completion dates range (dates for earliest to expire contract to latest to expire)	9/31/2024

Best Management Practices	Units/Acres Obligated	Units/Acres Completed in FY 24
Cover Crops (ac)	361.6	361.6

Table 10. Activity and BMP implementation in Bayou Maringouin/Grosse Tete

Bayou du Portage	Subsegment 060703
Active conservation plans (CPs) (all, including those created before 10/1/2023)	0
CPs created in **FFY 2024** (10/1/23-9/30/24)	12
Applications received in **FFY 2024**	12
CPs completed in **FFY 2024** (all, including those created before 10/1/23)	16
Participating producers (all, including those who signed up before FFY 24)	17
Acres in CPs (total acres in CPs (including those created before FFY24)	8,641
Total agricultural acres in watershed	61,923
Active completion dates range (dates for earliest to expire contract to latest to expire)	3/1/21-9/30/24

Best Management Practices	Units/Acres Obligated	Units/Acres Completed in FY 24
Irrigation land leveling (ac)	282.94	169.65
Grade stabilization structure (No./ac)	39/748.69	20/168.29
Irrigation pipeline	0	0
Precision land forming	446.56	172.36
Heavy use area protection	6/92.97	0
Cover crops	579.62	0
Nutrient management	6100.31	6,326.4
Residue and tillage Management	0	16.1
Conservation crop rotation	312.18	0
Water well	1/13.53	0
Livestock pipeline	3520/106.50	0
Fence	8350/92.97	0
Watering facility	4/92.97	0
Pest management		1,293.90
Reduced Till	0	737.89
No Till	0	420.01
Crop rotation	0	909.60
Irrigation water management	0	292.51

Table 11. Activity and BMP implementation in Bayou du Portage

Vermilion River	Subsegment 060801
Active conservation plans (CPs) (all, including those created before 10/1/2023)	0
CPs created in **FFY 2024** (10/1/23-9/30/24)	1
Applications received in **FFY 2024**	1
CPs completed in **FFY 2024** (all, including those created before 10/1/23)	2
Participating producers (all, including those who signed up before FFY 24)	2
Acres in CPs (total acres in CPs (including those created before FFY24)	37
Total agricultural acres in watershed	103,438
Active completion dates range (dates for earliest to expire contract to latest to expire)	12/12/22-9/30/24

Best Management Practices	Units/Acres Obligated	Units/Acres Completed in FY 24
Grade Stabilization Structure (No.)	3	3
Precision Land Forming (ac)	20.7	20.7

Table 12. Activity and BMP implementation in Vermilion River

Bayou Mallet	Subsegment 050103
Active conservation plans (CPs) (all, including those created before 10/1/2023)	10
CPs created in **FFY 2024** (10/1/23-9/30/24)	6
Applications received in **FFY 2024**	8
CPs completed in **FFY 2024** (all, including those created before 10/1/23)	0
Participating producers (all, including those who signed up before FFY 24)	10
Acres in CPs (total acres in CPs (including those created before FFY24)	566
Total agricultural acres in watershed	67,130
Active completion dates range (dates for earliest to expire contract to latest to expire)	9/30/24-9/30/26

Best Management Practices	Units/Acres Obligated	Units/Acres Completed in FY 24
Grade Stabilization Structure (No.)	1	1
Irrigation Land Leveling (ac)	566	36
Irrigation Pipeline (ft)	3,411'	1,400'

Table 13. Activity and BMP implementation in Bayou Mallet

4.0 COORDINATION WITH PARTNERS

4.1 LOUISIANA DEPARTMENT OF AGRICULTURE AND FORESTRY

The following partners work with the LDAF OSWC to ensure planning, BMP implementation, and delivery of outreach for each project are fully completed.

LDAF Communications Department – Tasked with engaging with the media and communicating with the public, on behalf of the LDAF.

Soil and Water Conservation Districts (SWCDs) – local units of state government that develop and carry out the states and local soil and water conservation program. The LDAF OSWC coordinates with each of Louisiana's forty-four SWCDs, by providing technical and financial assistance, administrative support, and centralized coordination to ensure efficient conservation planning to local participants.

4.2 LDEQ WATER SURVEYS

The LDEQ WS staff fundamentally serves the Department as an intrinsic element of sampling efforts. WS successfully monitored 14 NPS watersheds (refer to Table 12). The data collected helps establish current water quality conditions in the watersheds, identifying geographic areas for targeting BMPs and OSDS inspection locations; and tracks changes in water quality over time from BMP implementation and OSDS inspections in the watersheds.

WS also collaborates with the LDEQ Water Permits Division, Standards and Assessment, and the TMDL group under the long-term vision projects for assessment, restoration and protection under the Clean Water Action Section 303 (d) Program.

Basin	Water Body	WS Monitoring Supports
Lake Pontchartrain Basin	Comite River (040103)	OSDS Inspections
Mermentau River Basin	Bayou des Cannes (050101)	LDAF BMPs
	Bayou Mallet (050103)	LDAF BMPs
	Bayou Queue de Tortue (050501)	LDAF BMPs
	Bayou Chene (050603)	LDAF BMPs
Vermilion-Teche River Basin	Bayou Courtableau (060204)	LDAF BMPs (*TBD upon WIP-acceptance, in development status)*
	Bayou du Portage (060703)	LDAF BMPs
	Vermilion River (060801)	OSDS Inspections / LDAF BMPs
Ouachita River Basin	Bayou Bartholomew (080401)	LDAF BMPs (*TBD upon WIP-acceptance, submitted 8/15/2024)*
	Big Creek (North) (080903)	LDAF BMPs
	[1]Lake St. Joseph (081202)	LDAF BMPs IIJA BIL Funding / WIP NA
	Hemphill Creek (081609)	LDAF BMPs
Terrebonne Basin	Bayou Grosse Tete (120104)	LDAF BMPs

	Bayou Maringouin (120111)	LDAF BMPs
[1]Lake St. Joseph (081202) monitoring will support the Louisiana Nutrient Loading Reduction through the Bipartisan Infrastructure Law (BIL) Gulf Hypoxia Program (GHP) to conduct targeted agricultural BMPs implemented on prioritized tracts within the Lake St. Joseph and Cypress Bayou watersheds to reduce agriculture-induced nutrient loading in the Tensas River Basin.		

Table 14. Monitored NPS watersheds

New Vision Activity		
Water Planning and Assessment Division / TMDLS	New River (040404) Monitoring	NPS OSDS Inspections beginning 10/01/23
	Natalbany River (040503) Monitoring	NPS OSDS Inspections

Table 15. New Vision Watersheds

WS brings a multifaceted qualitative approach to characterizing and observing the size and appearance of these waterbodies and their surroundings to gain perspective and understanding of the watersheds. This approach along with the quantitative research using sampling data analysis can assist in determining the causes and effects of watershed impairments by tracking water quality changes from BMP implementation and OSDS inspections.

4.3 WATER STANDARDS AND ASSESSMENT

The Water Quality Standards and Assessment Section conducts work to support appropriate water quality standards and to routinely assess their degree of support in state waters. The Section also curates water quality data collected by regional field staff. Activities performed by the section during the fiscal year include:

- Performed data evaluation procedures to review data packages (703 lab datasets and 4 DOCM datasets) used for water quality standards, assessment, special projects, and/or modeling projects;
- Evaluated 49 dissolved oxygen criterion failure notifications for the possibility of deployment of dissolved oxygen continuous monitors (DOCM);
- Developed a Quality Assurance Project Plan (QAPP) for Monitoring for Escherichia coli and Enterococci to Support Water Quality Standards Review;
- Revised the QAPP for Monitoring to Support Biotic Ligand Model (BLM) Methodology and Selenium Freshwater Aquatic Life Criteria and continued review of data to evaluate models;
- Revised the QAPP for Trace Metals Monitoring for Assessment in Louisiana Surface Waters Using Clean Sampling and Analysis Techniques and continued review of data;
- Revised the QAPP for Pesticides Sampling and Analysis and completed review of data;
- Revised the QAPP for Development of Numeric Turbidity Criteria in Louisiana Waterbodies and continued drafting report of methods for developing appropriate numeric turbidity criteria for select waterbodies;
- Developing a QAPP for chloride and sulfate criteria refinement;
- Initiated the latest cycle of triennial review;
- Continued to monitor progress and develop annual reports for the Hypoxia Task Force (HTF) Bipartisan Infrastructure Law (BIL) Gulf Hypoxia Program (GHP) projects: Pilot Transition to Autonomous Monitoring from Inshore to Offshore in Coastal Louisiana; and Lake St. Joseph, Louisiana, Nutrient Loading Reduction;
- Continued to review data in preparation of development of draft approach of translators of narrative nutrient criteria for assessment purposes for inland lakes and reservoirs;

- Continued to review data in preparation of development of coastal dissolved oxygen criteria;
- Continued work on clarifying methodology of aquatic life criteria calculations not explicitly expressed in 1985 Guidelines;
- Continued maintenance and updates of the LEAU Web Portal to facilitate public access to water quality data (https://waterdata.deq.louisiana.gov);
- Continued participation in updating fish consumption advisories in Louisiana and maintenance of the Fishing Consumption and Swimming Advisories web map and application for smartphones (www.deq.louisiana.gov/page/fishing-consumption-and-swimming-advisories);
- Continued reviewing 316(b) (cooling water intake structure studies and reports) plans for Water Permits Division;
- Continued review of the Water Quality Trading program credit application;
- Completed development process and submitted the 2024 Integrated Report [EPA Approved];
- Completed management of contract for Microplastics Sources and Types study in Toledo Bend;
- Completed review of ambient water quality monitoring site station types;
- Completed review of data for the CyanoHAB Pilot Study;
- Participated in LDEQ's Basic Fluvial Geomorphology training;
- Participated in LDEQ Monthly Water Program Workgroup meetings;
- Participated in LDEQ and EPA R6 conference calls on 303(d), TMDL, and water quality standards activities;
- Participated in ammonia criteria stakeholder meetings;
- Participated in meetings/calls with various groups interested in credit generation for the Louisiana Water Quality Trading Program (https://deq.louisiana.gov/page/water-quality-trading);
- Participated in the Seafood Safety Task Force meetings as LDEQ committee designee;
- Participated in the Louisiana Joint Service Team Meeting; and the Louisiana Military Environmental Alliance (LEMA) Summit;
- Participated in the National Nonpoint Source Workshop;
- Participated in statistical software functionality demonstration meetings for SAS®;
- Participated in the EPA Region 6 Environmental Restoration Partnership meeting;
- Participated in the Great Lakes PFAS Summit;
- Participated in EPA's development of TADA R Package workgroup;
- Participated in EPA's Exchange Network Forum meetings; and attended the 2024 Environmental Information & Innovation Meeting in Kansas City, MO.;
- Participated on the ACWA Watersheds Committee, Monitoring, Standards and Assessment Committee, Nutrients Policy Committee, and Executive Committee; and ACWA hosted EPA Briefing for States meetings;
- Participated in the ACWA Annual Meeting in New Orleans, LA.; and the 2024 Water Quality Standards Workshop;
- Participated in monthly to quarterly calls for Gulf of Mexico Alliance (GOMA) Water Resources and Data & Monitoring Teams, represented Team-Lead for Water Resources, which additionally includes monthly Alliance Coordination Team meetings and team internal meetings; and attended the 2024 Gulf of Mexico Conference (GoMCon) in Tampa, FL;
- Participated in monthly Louisiana GIS Council Meetings;
- Participated in the 36th Annual Louisiana Remote Sensing & GIS Workshop in Mandeville, LA;
- Participated in Lower Mississippi River Conservation Committee calls as Water Quality chairperson; attended the Science Symposium at Tulane University; and attended the 2024 annual meeting in Vicksburg, MS;
- Participated in Mississippi River/Gulf of Mexico Hypoxia Task Force Coordinating Committee meetings every other month; and attended in-person meeting in Fayetteville, AR;
- Participated in Louisiana State Interagency Nutrient Strategy Team coordination efforts;
- Participated in USGS National Hydrography Technical Exchange, Hydrography Community, and National Hydrography Stewards groups;
- Participated in the 2024 National Mitigation & Environmental Markets Conference in Pittsburgh, PA.;
- Participated in EPA's December 2023 Water Quality Standards Academy Session;

- Participated in the Louisiana Envirothon, attended monthly meetings, developed and graded student exams in line with national curriculum;
- Participated in the Louisiana Chapter of the American Fisheries Society annual meeting;
- Participated in ELI's National Training Workshop on Water Quality Assessment and Plans as well as the ACWA Cross-Program Workshop in Shepherdstown, WV.;
- Participated in PFOA/PFOS Aquatic Life Criteria Implementation Workgroup meetings;
- Participated in Lake Pontchartrain Basin Restoration Program Meetings;
- Presented the Walnut Bayou river model at the annual Ocean Commotion; the USFW's 'Wild Things 2023' in LaCombe, LA; and for the Amite River Basin Drainage and Conservation District (ARBC) in Gonzales, LA;
- Presented on LDEQ's Integrated Report during the Barataria-Terrebonne National Estuary Program Watershed Workshop Series; and LDEQ's LPDES Inspector/Enforcement Writer Training in Many, LA.

4.4 TOTAL MAXIMUM DAILY LOAD SECTION: A STATE PLAN FOR PRIORITIZING WATERSHEDS FOR RESTORATION AND PROTECTION IN LOUISIANA

The CWA Section 303(d) Program provides effective integration for implementation of activities to restore and protect the nation's aquatic resources where the waters have been assessed. The primary goals of the "New Vision" approach to the TMDL program include prioritization, assessment, protection, alternatives, engagement, and integration. Restoration and protection objectives have been systematically prioritized, and TMDLs and alternative approaches are being adaptively implemented to achieve water quality targets with the collaboration of states, federal agencies, tribes, stakeholders, and the public, from 2016-2022. The EPA worked together with states to develop the New Vision and six goal statements to help coordinate and focus efforts in advancing the effectiveness of the program. The vision and goals are neither regulation nor policy guidance but provide a mechanism for EPA and states to better manage the program to achieve water quality goals. EPA encouraged each state to embrace the vision concept and develop a strategy that outlines a comprehensive, integrated, and iterative approach to addressing the challenge of achieving and communicating water quality improvements.

In 2021 and 2022, EPA and the states worked together to update this "New Vision" approach for 2023-2032. While the wording may have changed slightly, all the concepts and functionalities of the original vision remain.

Initially, LDEQ identified seven priority watersheds under this New Vision approach in the 2016 Integrated Report. They were Tunica Bayou (070505), Bayou Sara (070501), Turkey Creek (080905), Yellow Water River (040504), Natalbany River (040503, 040507), Blind River (040401, 040403), and New River (040404). In an effort to optimize limited resources, LDEQ removed subsegment 080905 Turkey Creek from the list of priority watersheds in 2017 due to the limited access to the waterbody and uncertainties regarding potential loading sources and causes.

EPA accepted the final restoration plan for the first priority watershed, Tunica Bayou, on October 5, 2020. LDEQ completed 19 months of monitoring in Yellow Water River by September 2019. Except for one site being monitored to guide restoration activities, monitoring for the Natalbany River was completed in March 2021. Watershed investigations of point and nonpoint sources as well as outreach and engagement activities are ongoing for both watersheds. A draft New Vision plan for Yellow Water River is currently under development. Watershed investigations for Bayou Sara were conducted in 2017 and 2018 and a draft New Vision plan is currently under development. LDEQ began monitoring New River in July 2021 and Blind River in February 2022. Monitoring in both watersheds is ongoing and New Vision plans are expected in 2024.

There has been a long-term connection between the Section 319 NPS program and the CWA 303(d) programs. LDEQ remains committed to integrating across federal and state water programs, engaging the public and stakeholders, and adaptively developing, evaluating, and implementing TMDLs and TMDL

alternatives to ensure strategic use of available resources to achieve water quality goals.

4.5 USDA-NRCS INITIATIVES

During FY 2024, LDEQ, LDAF and USDA-NRCS continued to coordinate efforts in watersheds prioritized through USDA's Mississippi River Basin Initiative (MRBI), NWQI, and Gulf Spill Restoration Nutrient Reduction Projects (see Tables 9-13). Through the funding acquired from the USDA Farm Bill and Section 319, USDA and LDAF work with landowners and producers to implement agricultural BMPs through cost share agreements. LDEQ utilizes Section 319 grant funds for several contracts to aid in monitoring and assistance from partners. WS performs watershed assessment and characterization, pre-BMP sampling to collect baseline data used to determine critical areas for BMP implementation, and post-BMP sampling to determine the changes in water quality. Monitoring data is shared with NRCS. The following is a summary of NRCS work in Louisiana in the last fiscal year.

4.5.1 Mississippi River Basin Initiative (MRBI)

The overall goals of the MRBI include reducing fall tillage and keeping the soil covered by increasing the use of cover crops and/or increasing residue to reduce soil loss. NRCS assists producers in improving nutrient management techniques above their current level to increase nutrient utilization. NRCS, SWCDs, and other partners develop targeted outreach plans to reach every producer within the watershed. Conservation planning and technical assistance are offered at no charge to help producers address the watershed goals and to improve water quality. In FY 2024, $103,827 dollars were obligated on 770 acres for MRBI in Louisiana (See Table 14). This watershed will have a 5-year project life.

Watershed	12-Digit HUC	FY24 Funds Obligated	FY24 Acres Obligated
Tiger Bayou (Franklin Parish)	080402070301	$103,827	770
Total		$103,827	770 Acres

Table 16. USDA – FY2024 Mississippi River Basin Initiative watersheds. Franklin, Parish.

4.5.2 National Water Quality Initiative (NWQI)

The National Water Quality Initiative provides a way to accelerate voluntary, on-farm conservation investments and focused water quality monitoring and assessment resources where they can deliver the greatest benefits for clean water. NWQI has been extended through Fiscal Year (FY) 2024, with some updates to strengthen program delivery. Updates include a focus on watershed assessment and planning and including multi-year budgets to demonstrate long-term commitment in assisting water quality efforts. Louisiana implemented the NWQI project in the watershed below (See Table 15).

Watershed	12-Digit HUC	FY24 Funds Obligated	FY24 Acres Obligated
Bayou Plaquemine Brule-Estherwood (Acadia Parish)	080802010206	$50,571	73.5
Total		$50,571	73.5 Acres

Table 17. USDA – FY2024 NWQI watersheds approved for FY2024 implementation. Acadia Parish.

Louisiana is approved to begin Implementation Phase for FY24 for the following NWQI watershed in Morehouse Parish (see Table 16).

Watershed	HUC 12	FY24 Funds Obligated	FY24 Acres Obligated
Outlet Chemin-a-Haut Creek	080402050905	$319,431	890
Total		$319,431	890 Acres

Table 18. USDA – FY2024 NWQI watersheds approved for implementation Phase. Morehouse Parish.

4.5.3 Natural Resource Damage Assessment Trustees – Nutrient Reduction (Nonpoint Source) Projects

Louisiana NRCS was awarded four Nutrient Reduction Projects from the Gulf Spill Restoration funding. The primary goal of these project themes is to improve water quality through nutrient reduction on agricultural lands. This includes targeting efforts for measurable impact by clustering projects at the HUC 12 watershed scale that directly impact coastal wetlands.

Landowners will participate on a voluntary basis in developing and implementing conservation plans to reduce nutrient and sediment runoff to improve water quality. Participants will receive technical and financial assistance to implement conservation practices according to NRCS standards and specifications. A monitoring and adaptive management plan will be implemented to document the relationship between implementation and load reduction.

Project 1 – USDA – FY2024 Nutrient Reduction on Dairy Farms in St. Helena and Tangipahoa Parishes.

No new obligations in FY24 for Project 1 in St. Helena and Tangipahoa Parishes.

Project 2 - USDA – FY2024 Nutrient Reduction on Dairy Farms in St. Helena, Orleans, Tangipahoa, and Washington Parishes.

Watershed	HUC 12	FY24 Funds Obligated ($)	FY24 Acres Obligated
Big Creek, (Tangipahoa Parish)	080702050203	$8,309	116
Bayou Saint John – Metairie Canal Number Two (Orleans Parish)	080902030103	$34,029	84
West Hog Branch (St. Helena Parish)	080702030202	$79,983	10
Lawrence Creek, (Washington Parish)	031800050602	$32,115	76.9
Total		$154,436	287

Table 19. USDA – FY2024 Project 2. Nutrient reduction on dairy farms in Orleans, St. Helena, Tangipahoa, and Washington Parishes.

Project 3 - USDA – FY2024 Nutrient Reduction on Cropland and Grazing Lands in Bayou Folse.

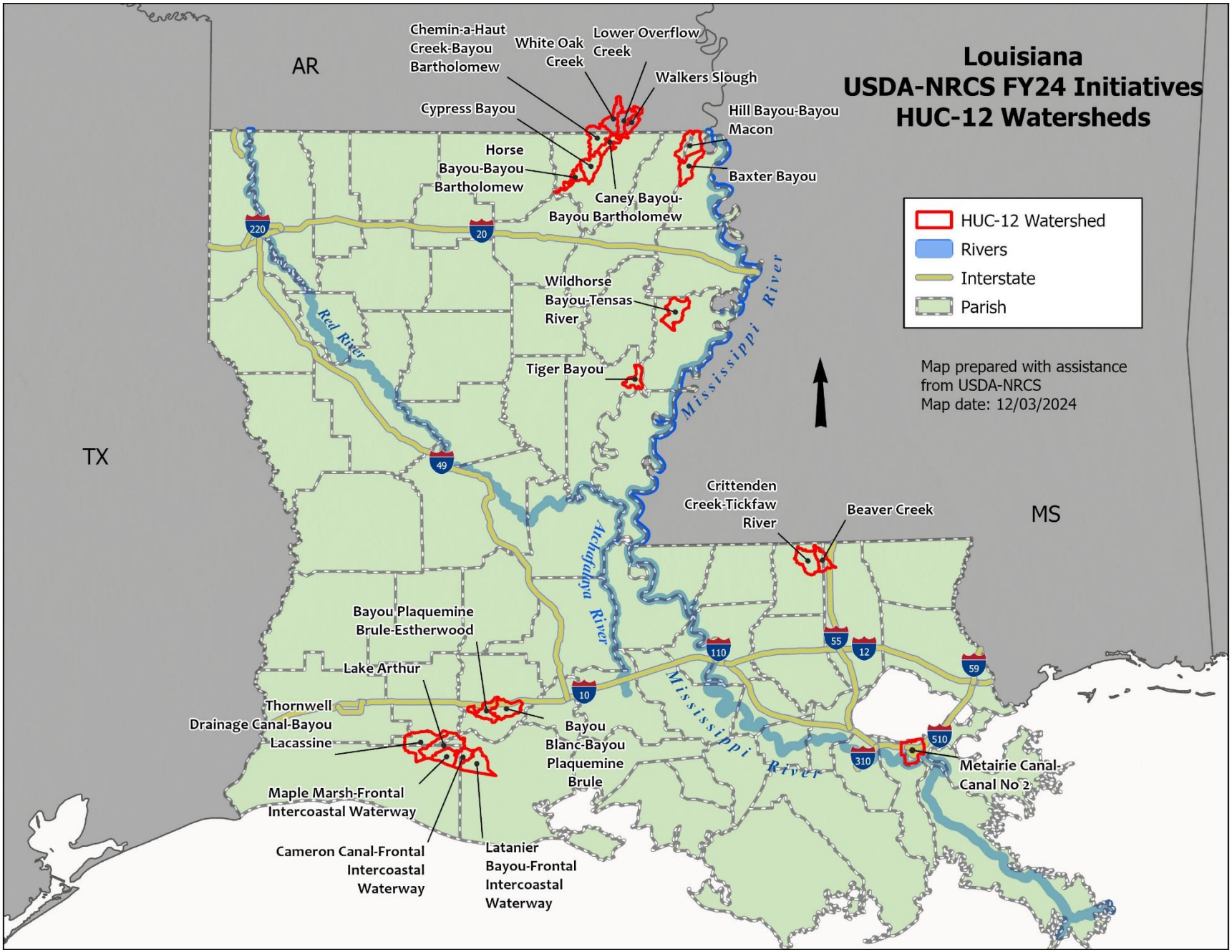
No change in obligated funds of acres for FY24.

Project 4 - USDA – FY2024 Nutrient Reduction on Cropland and Grazing Lands in Vermilion, and Cameron Parishes.

Watershed	HUC12	FY24 Funds Obligated ($)	FY24 Acres Obligated
Cameron Frontal Canal (Cameron & Vermilion Parishes)	080802020602	$90,302	120.8
Total		$ 90,032	120.8

Table 20. USDA – FY2024 Project 4 - Winter water holding on cropland in Vermilion and Cameron Parishes, and agricultural BMPs.

Figure 1 USDA-NRCS FY24 Initiatives Map



4.6 WATERSHED COORDINATORS AND WATERSHED GROUPS

Watershed groups and WSCs continue to serve as valuable partners in implementing Louisiana's NPS program. In FFY 2024, LDEQ continued to collaborate with Capital RC&D, BTNEP, LRWA, and BVD. These partnerships accomplish several goals listed in Louisiana's NPS Management Plan including:

- Involving appropriate stakeholders in watershed implementation;
- Statewide and watershed-specific educational programs;
- Assisting in identifying priority areas in the watershed for BMPs implementation;
- Outreach and education to homeowners on OSDS operation and maintenance in watershed priority areas;
- Water quality monitoring and data analyses to evaluate water quality changes; and
- Assisting in preparing success stories and identifying future actions needed to achieve success.

These WSC and watershed groups are dedicated to restoring and preserving the water quality in the areas where they live and serve.

4.6.1 Capital RC&D

Capital RC&D completed its "Nonpoint Source (NPS) Pollution Reduction through On-Site Wastewater Disposal Systems (OSDS) Inspections, Educational Outreach, and Sampling" project in September 2024. The project targeted six watersheds: Yellow Water River, Comite River, Thompson Creek, Middle Amite River, Natalbany River, and New River. These watersheds were listed on Louisiana's IRs as not supporting one or more designated uses of primary contact recreation (PCR), secondary contact recreation (SCR), and fish and wildlife propagation (FWP).

The goal of this project was to reduce NPS pollution with the objectives of improving surface water quality and restoring support for CWA designated uses, and maintaining healthy waters. This goal was accomplished by monitoring water quality to determine critical areas with high fecal coliform (FC) concentrations in the watersheds. These areas then became the focus of OSDS inspections to ensure properly functioning systems. Both Capital RC&D and partners worked together to accomplish the goals of the project. At the conclusion of the project, 2,458 OSDSs had been inspected. Of the 2,458 OSDSs inspected, 663 were found to be not working and 544 OSDSs were repaired (some had been inspected during the previous project period). Capital RC&D estimated that a total load reduction of 10,336,000 colony-forming units of FC bacteria was achieved in the watersheds at the conclusion of the project.

Figure 2 – Well-maintained, properly functioning home waste system aerator

Figure 3 – – Overflow from waste tank needing to be pumped out due to aerator not functioning

Capital RC&D commented that this was a relatively normal year for the project. They experienced excessive heat and drought during the summer months and had to adjust work schedules and locations, but were able to communicate with partners and make progress in improving water quality.

4.6.2 Barataria–Terrebonne National Estuary Program

BTNEP and LDEQ continued their partnership this fiscal year in the Bayou Folse watershed restoration, through the ongoing project: "Water Quality Sampling, On-Site Waste Disposal Systems (OSDS) Inspections and Educational Outreach in the Barataria-Terrebonne Basins." This project supports the NRCS, the Bayou Lafourche Freshwater District, and other cooperative work, under the Bayou Folse watershed plan, to address water quality issues in this subsegment.

Bayou Folse is impaired for FWP due to low dissolved oxygen (DO), nutrients, and sediment. In addition, sampling results from multiple sites within the watershed show high concentrations of FC bacteria. There are more than 4,600 home sewage systems in this watershed, many are poorly functioning and not maintained. Bayou Folse also receives runoff from pastureland and row crop agriculture, which adds further loading of sediments, nutrients, and bacteria. In an effort to address these issues, the watershed implementation plan calls for reduced loading caused by malfunctioning home sewage treatment systems and from agricultural runoff.

Partners continue to target for NPS reduction measures based on past sampling and track changes in water quality over time through current monitoring data in their effort to restore water quality through education, conservation implementation, and outreach to address malfunctioning OSDS.

Over the past year, BTNEP collected water quality data at ten sampling locations within the subsegment. BTNEP conducted 12 sampling events that included measuring field parameters, such as temperature, pH and DO, and collecting grab samples for laboratory analysis of nutrients, sediment, fecal coliform bacteria. In addition, velocity measurements were taken at the ambient water quality monitoring site to estimate flow.

As part of BTNEP's continued efforts to provide education and outreach within the watershed, they hosted and participated in various education and outreach events. This included over 50 education and outreach events in addition to OSDS educational outreach. These events offer the opportunity for BTNEP to provide information and educate residents and other members of the public about water quality issues in Bayou Folse, nonpoint source pollution processes, and ways to reduce runoff pollution. Also, BTNEP distributed information through their website and social media posts.

BTNEP outreach also included informing homeowners in the region on the importance of maintaining properly functioning home sewage treatment systems. BTNEP oversaw 442 inspections of home treatment systems to determine operational status, need for repairs, and conduct homeowner education. The OSDS inspector performed 25 re-inspections as a follow-up to determine repair status. BTNEP has secured funding to implement a Bipartisan Infrastructure Law-funded, home sewage assistance program that is designed to target Justice 40 households in the Bayou Folse watershed.

4.6.3 Bayou Vermilion District

The "NPS Pollution Reduction through On-site Sewer System Inspections, Education and Outreach in Vermilion River" was created to reduce the level of FC contamination in the Vermilion River by conducting individual home sewer system inspections, educating occupants and homeowners, and conducting an outreach campaign to a point that would allow the river to support both primary and secondary contact recreation. The 2024 inspection program visited 607 addresses. At the end of the program, 78 septic systems were passing inspection, and 64 septic systems were still failing inspection. A total of 156 septic systems were inspected in 2024.

Monthly Inspections Progress 2024							
Month	Total for the Month	Total Initial Inspected	Passed	Failed	*Total times re-inspected	Re-inspected & passed	*Re-inspected & failed
January	43	4	2	2	39	17	22
February	35	14	10	4	21	4	17
March	26	7	6	1	19	5	14
April	13	11	7	4	2	1	1
May	9	0	0	0	9	4	5
June	0	0	0	0	0	0	0
July	7	1	1	0	6	4	2
August	5	3	2	1	2	2	0
September	3	0	0	0	3	3	0
October	10	6	4	2	4	2	2
November	3	1	1	0	2	1	1
December	2	0	0	0	2	2	0
Total	156	47	33	14	109	45	64
					* NA not included in tally.		

Table 21. BVD inspections in 2024

4.6.4 Louisiana Rural Water Association

The LRWA is a non-profit organization whose mission is to promote public health, assist operators of small water and wastewater systems through training, on-site technical assistance, and state operator certification necessary for promoting public health and environmental protection for the state of Louisiana. LRWA collaborated with LDEQ to conduct OSDS inspections and utilize focused/project-targeted workshops on an as-needed basis to improve water quality and restore designated uses to impaired watersheds. The LRWA conducted inspections and follow-ups in Calcasieu Parish from October 2021 through February 2024. In March and June of 2024 inspectors completed the remainder of inspections in Terrebonne Parish which interrupted due to Hurricane Ida in August 2021. In May 2024, they began inspections in Vermilion, St. Martin, and Iberia Parishes. This fiscal year, 964 initial inspections were completed in Calcasieu, 224 in Terrebonne, and 179 in Vermilion.

LRWA was able to raise awareness concerning the importance of maintaining home sewage systems and provide residents information regarding the importance of the proper operation and maintenance of their home sewer system through this door-to-door campaign. During each visit, the inspector discussed operation and maintenance practices, addressed homeowner's questions, and provided a visual inspection of the system. When the homeowner was not present, the field inspector would leave an educational/informational brochure explaining the purpose of their visit and offered the homeowner a sewer system inspection at no cost.

Public awareness of OSDS inspections and education was accomplished by distributing informational brochures at the city/town halls; notifying parish presidents by letter and/or phone calls and through public advertisements to draw interest to the local area activities and encourage participation. A summary of activities was given to the parish city/town hall once inspections were completed indicating progress made. This process could also be a means to encourage the residents who were not originally on the Louisiana Department of Health (LDH) OSDS list and those who initially refused inspections to become proactive.

The tables below detail the inspection results by parish.

Vermilion Parish Inspection Results		
466	**Total Homeowners to Inspect**	
191	**Contacted/spoke with homeowners**	
	179	sewer inspections conducted - initial
	12	homeowners refused inspection - initial
179	**Inspections conducted: results**	
	169	systems in good condition - initial
	10	systems not operating or in poor condition - initial
275	**No contact made with homeowners**	
	274	no one home/distributed flyers - initial
	1	business (not required to visit)
465	**Total flyers distributed**	
	274	no one home - initial
	179	sewer inspections conducted - initial
	12	homeowners refused inspection - initial

Table 22: LRWA inspections in Vermilion Parish

Terrebonne Parish Inspection Results	
Total Homeowners to Inspect (remaining from interruption of Hurricane Ida on August 29, 2021)	
Contacted/spoke with homeowners	
227	sewer inspections conducted - initial
7	homeowners refused inspection - initial
Inspections conducted: results	
220	systems in good condition - initial
7	systems not operating or in poor condition - initial
No contact made with homeowners	
288	no one home/distributed flyers - initial
10	businesses (not required to visit)
4	Abandoned or vacant addresses
Total flyers distributed	
288	no one home - initial
227	sewer inspections conducted - initial
7	homeowners refused inspection - initial

Table 23: LRWA inspections in Terrebonne Parish

Calcasieu Parish Inspection Results	
Contacted/spoke with homeowners	
967	sewer inspections conducted - initial
39	homeowners refused inspection - initial
150	sewer inspections conducted – follow-up
8	homeowners refused inspection - follow-up
Inspections conducted: results	
864	systems in good condition - initial
103	systems not operating or in poor condition - initial
138	systems in good condition – follow-up
12	systems not operating or in poor condition – follow-up
No contact made with homeowners	
1,269	no one home/distributed flyers - initial
56	no one home/distributed flyers – follow-up
Total flyers distributed	
1,269	no one home - initial
967	sewer inspections conducted - initial
39	homeowners refused inspection - initial
56	no one home – follow-up
150	sewer inspections conducted – follow-up
8	homeowners refused inspection – follow-up

Table 24. LRWA inspections in Calcasieu Parish

5.0 MEETING NPS MILESTONES

Louisiana's NPS Management Plan includes annual milestones. In FFY 2024, Louisiana's NPS program continued its focus on watershed planning, assessment, monitoring and implementation, in 20 waterbodies. The tables below show LDEQ's and LDAF's work towards management plan milestones.

Basin	Waterbody	Subsegment	Planning	Assessment	Monitoring	Implementation	Sampling Plan Dates	Sampling Team	BMP Implementation or OSDS Inspections	BMP Implementation /OSDS Inspection Dates	WIP
Lake Pontchartrain	Comite River	040103	X	X	X	X	01/09/23-01/09/26	LDEQ Water Surveys	Capital RC&D/ OSDS Inspections	2015 - present	
	Middle Amite River	040302	X	X	X	X	01/12/24-01/12/27	Capital RC&D	Capital RC&D/ OSDS Inspections	2017 -present	
	Yellow Water River	040504	X	X	X	X	09/26/23-09/26/26	Capital RC&D	Capital RC&D/ OSDS Inspections	2013 - present	
Mermentau River	Bayou Des Cannes	050101	X	X	X	X	07/01/24-07/01/27	LDEQ Water Surveys	LDAF	2014 - present	Approved 2017
	Bayou Mallet	050103	X	X	X	X	03/25/22-03/25/25	LDAF	USDA/ LDAF	2015- present	Approved 2017
	Bayou Queue de Tortue	050501	X	X	X	X	09/26/23-09/26/26	LDEQ Water Surveys	LDAF	2012-2023	Approved 2013
	Bayou Chene	050603	X	X	X	X	08/19/24-08/19/27	LDEQ Water Surveys	LDAF	2014-2023	Approved 2020
Vermilion-Teche River	Bayou Courtableau	060204	X	X	X		03/22/23-03/22/26	LDEQ Water Surveys	LDAF	TBD	
	Bayou du Portage	060703	X	X	X	X	05/04/23 - 05/04/26	LDEQ Water Surveys	LDAF	2019-present	Approved 2019
	Vermilion River	060801	X	X	X	X	08/19/24-08/19/27	LDEQ Water Surveys	LDAF and Bayou Vermilion District/OSDS Inspections	2021-2026	Approved 2021
	Boston Canal	060910	X	X							

Basin	Waterbody	Subsegment	Planning	Assessment	Monitoring	Implementation	Sampling Plan Dates	Sampling Team	BMP Implementation or OSDS Inspections	BMP Implementation /OSDS Inspection Dates	WIP
Ouachita	Big Creek (North)	080903	X	X	X	X	08/19/24-08/19/27	LDEQ Water Surveys	LDAF	2015-present	Approved 2018
	Lake Providence	081101	X	X							
	Hemphill Creek	081609	X	X	X	X	04/25/24-04/25/27	LDEQ Water Surveys	LDAF	2017-2023	Approved 2017
	Bayou Bartholomew	080401	X	X	X		01/06/23-01/06/26	LDEQ Water Surveys	LDAF	TBD	Submitted to EPA 8/15/24
	Lake St. Joseph	081202	X	X	X	X	03/06/23-03/06/26	LDEQ Water Surveys	LDAF		
Terrebonne	Bayou Folse	120302	X	X	X	X	03/25/22-03/25/25	BTNEP	USDA-NRCS (NWQI)/ BTNEP	2022- present	Approved 2018
	Bayou Grosse Tete	120104	X	X	X	X	08/19/24-08/19/27	LDEQ Water Surveys	LDAF	2024-present	Approved 2022
	Bayou Maringouin	120111	X	X	X	X	09/24/24-09/24/27	LDEQ Water Surveys	LDAF	2024-present	Approved 2022
Mississippi River	Thompson Creek	070502	X	X	X	X	04/25/24-04/25/27	Capital RC&D	Capital RC&D/OSDS Inspections	2017-2024	

Table 25. LDEQ and partner activity in watersheds: planning (P), assessment (A), monitoring (M) and implementation (I) in FFY2024

LDAF Progress Towards FFY 2024 Workplan Goals	
Workplan Goal 1	Increase public outreach and implement conservation Best Management Practices (BMPs) on agricultural land.
Through a multifaceted approach, LDAF was able to create and implement an Outreach and Stewardship plan, outlining the development and implementation of outreach, marketing, capacity building and educational initiatives that align with both the goals of the LDAF and 319 NPS Reduction Program.	**Project WET-** To increase outreach efforts, LDAF has continued and enhanced its partnership with Project Water Education Today (WET). Project WET offers a custom water science curriculum guide that was established to disperse educational materials, provide hands-on training to educators, students and communities, and train educators to implements water science and conservation into classroom curricula. In 2024, outreach and education events reached over 13,400 individuals. Events hosted by LDAF included facilitator trainings, educator workshops, student trainings and presentations, and educator and farmer outreach. **Locally Led Conservation Meetings** – Each of the 44 SWCDs hosts an annual locally led information gathering meeting, inviting community stakeholders within the district to identify and discuss natural resource concerns. Following the locally led meetings, local work groups meet to prioritize concerns, and conservation needs for each District, leading to the seeking of continual technical and financial funding to address these needs. In 2019, the most prioritized local resource concern was damage to public and private lands from feral hogs. Through partnerships and grant opportunities, the LDAF worked with seven SWCDs to initiate the Feral Swine Eradication Pilot Program, allowing for the purchase of trapping equipment and salaries for hired technicians to provide free assistance to landowners to trap and eradicate feral hogs. In 2022, over $325,000 dollars were allocated to LDAF for the purpose of expanding the trapping program to all SWCDs outside of the pilot districts. As of September 31, 2024, 40 of Louisiana's SWCDs continuously offer net or cage traps to cooperators for feral hog abatement, reducing or eliminating natural resources damages cause by swine, including NPS pollution. **Conservation Field Days** - Typically hosted by a local producer, in partnership with the local SWCD, educational institutions, and other conservation partners, field days can increase landowner/producer awareness through farmer-to-farmer education and support. By hosting trainings, presentations and demonstrations on-farm or on-ranch, BMPs, equipment, and research and results relative to the producers can be highlighted and discussed. Field days can be planned around specific conservation practices, new technology, cost-

	effective management approaches and to support peer-to-peer learning and support. SWCDs statewide host conservation field days for producers to learn more about new innovations and traditional conservation practices. Recent field days include the LaSalle SWCD grain drill demonstration, St. Martin SWCD sugar cane residue management modification, Vermilion and LSU AgCenter Model Farm, Acadia and Northeast cover crops, and more. **BMP Videos** – In order to build community awareness and acceptance of BMPs, promotional videos have been created to highlight specific on-farm agricultural conservation practices. These videos, while typically 3-5 minutes are created with the intent to pique the interest of the public and introduce conservation to new viewers. Conservation partners, educational institutions, and producers share insight on the partnerships, goals, and results of each practice. Through a partnership with Movee Media, LDAF has created 3 episodes of conservation videos which are now available for viewing on the LDAF website and YouTube page. The series "Good Lands" focuses on highlighting different agricultural commodities in Louisiana and conservation practices that are implemented to ensure all resource concerns are addressed accordingly. As of September 31, 2024, commodities highlighted have been rice/crawfish, silvopasture, and sugar cane. Future videos will highlight, corn, cotton, soybeans, and more! **Demonstration Models** – Water science demonstration models are utilized statewide to show how water systems and products work. Models are used at school visits, field days, and outreach events participated in by districts. To increase public awareness of nonpoint source pollution and provide water education, LDAF is purchasing and distributing water science demonstration models to, at a minimum, one SWCD in each of the five areas of Louisiana. These water science demonstration models currently include Enviroscapes, which are portable interactive watershed models intended to provide community education on issues that affect the environment, including NPS pollution. Enviroscapes purchased have been used at schools, fairs, festivals, and trainings. As of September 31, 2024, three demonstration models have been purchased and used for educational trainings and outreach, in addition to the two that were previously available through the LDAF.

Implementation of BMPs – 20 BMPs have been implemented on over 8,000 acres of land providing conservation benefits to agricultural lands. These BMPs can be found in the table below.

BMP	Row Crop/Commodity Crop Use	Pastureland Use
Comprehensive Nutrient Management Plan	X	X
Nutrient Management Plan	X	X
Soil Testing	X	X
Brush Management		X
Herbaceous Weed Treatment		X
Short Term Storage of Animal Waste and Byproducts	X	X
Conservation Cover	X	
Conservation Crop Rotation	X	
Residue and Tillage Management – No Till/Strip-Till	X	
Cover Crops	X	X
Critical Area Planting	X	X
Residue and Tillage Management – Reduced Till	X	
Fence		X
Field Border	X	
Filter Strip	X	
Grade Stabilization Structure	X	X
Irrigation Pipeline	X	
Precision Land Forming	X	
Irrigation Land Leveling	X	
Forage and Biomass Planting		X
Livestock Pipeline		X
Prescribed Grazing		X
Heavy Use Area Protection		X
Structure for Water Control	X	
Nutrient Management	X	X
Pest Management	X	X
Vegetative Barrier	X	
Watering Facility		X
Waste Transfer	X	X
Water Well		X

Workplan Goal II The Ag Solid Waste Program currently	Expand beneficial use of agricultural solid waste by cost-sharing its transport.

offers limited cost share reimbursement of all agricultural solid waste products for eligible recipients. Eligible wastes for transport include but are not limited to, poultry litter, separated dairy waste, bagasse, stable waste, and arborist & silviculture wastes / wood chips. Program requirements and rules include the following.	• Animal waste transport incentive cannot be approved for transport into nutrient impaired watersheds. • Non-animal waste transport incentive can be approved in nutrient impaired watersheds with exception upon application review. • Ag waste must be transported out of originating watershed (HUC8) • Land application must be within a reasonable time. (45-60 days) • Ag waste must be staged on headlands and away from waterways, ditches or highly erodible areas. • Land application must be excluded from areas within 100 feet of all drainageways and residences, and at least 300 feet from wells, springs, streams, and ponds. As of September 31, 2024, eight producers have transported and applied 8,377 tons of agricultural solid waste in non-impaired nutrient watersheds.
Workplan Goal III	Purchase up to three specialized no-till planting drills capable of planting commercial grains, winter forages, cover crops or native grassland vegetation of use in any active LDAF Section 319 project accepted watershed. This implement will enable significant reduction of soil erosion, nutrient loading, pesticide runoff and generally improve water quality through tillage and residue management by direct seeding on areas that are currently cropped, no-till planting of cover crops on fallow cropland areas, grazing land, and to help reestablish native grasslands on areas that have become overgrown by noxious and invasive trees/brush. As of September 31, 2024, four specialized no-till drills have been purchased for use in active 319 accepted watersheds with WIPs. These include Bayou Du Portage, Iberia SWCD; Bayou Chene, Jeff Davis, Big Creek, Northeast SWCD, and Hemphill Creek, Lasalle SWCD
Workplan Goal III (a)	Purchase at least three sugarcane harvester residue management modifications (RMMs). The RMMs incorporate cane residue into the soil following harvest, minimizing loose residue on the ground, and the burning of residue litter. The incorporation of litter in the ground prevents soil erosion, reduces horsepower requirement of harvesting equipment, prevents crop residue from floating off fields during times of significant saturation events, increases soil organic matter, reduces nutrient and soil loss, increase soil moisture retention

	and prevents equipment from carrying mud out of fields and onto roadways. As of September 31, 2024, 12 RMMs have been cost shared for producers in 319 project watersheds with accepted WIPs. The LDAF, SWCDs, and participating landowners value working with innovative local producers to generate conservation benefits that transcend decades of embedded cultural practices, first in these priority watersheds then beyond. This creates not only direct watershed-wide conservation benefits but is the genesis of an EPA-enabled “SWCD to farmer” and “farmer to farmer” information sharing and trust previously unknown in certain locales.

Table 26. LDAF Progress toward FFY 2024 Workplan Goals

LDAF and Partner Progress Toward FFY 2024 Workplan Goals (non 319 funded activities)	
Workplan Goal 1	**Marketing/Capacity Building** – LDAF OSWC, the LDAF Communications, and forty-four Louisiana SWCDs create, publish, and share publications pertaining to agricultural conservation practices implemented statewide, educational opportunities, and outreach opportunities that target the improvement of water quality and quantity. Outlets for publications include the bi-weekly LDAF newspaper (Market Bulletin), and articles and photos posted on the LDAF website and social media accounts, all in turn shared by followers. Since 2022, LDAF has created its own SWCD Spotlight article that will highlight up to four SWCDs per year, with an article in the Market Bulletin. As of September 31, 2024, LDAF has highlighted six SWCDs, with the intention of sharing one per quarter in 2025. These "Spotlights" provide viewers with the opportunity to learn about local Districts, ongoing and future conservation projects and efforts, and local resource concerns across the state. Through the Market Bulletin, LDAF is also able to share upcoming events, field days, educational opportunities, and success stories to over 6,500 subscribers. **Annual Workplans and Reports -** All 44 SWCDs create/update annual workplans that will outline district goals, strategies, and desired outcomes in carrying out there locally led conservation programs for each year. Following the end of the year, annual reports will be created and shared to stakeholders, partners, and legislative contacts, providing updates on accomplishments toward goals and objects outlined in the annual plans, and illustrating the benefits of educational, technical, and financial support provided by the district, as well as areas where additional support is needed. Annual workplans and reports are enhanced and updated yearly by each District. Following the completion of each annual report, each district creates a Grassroot Report that sums up all conservation work, funding, and outreach activities, and is provided to stakeholders, including elected officials.

Table 27. LDAF and Partner Progress toward FFY 2024 Workplan Goals (non 319 funded activities)

Producer resource leveraging by the Bayou Vermilion District and district cooperators has advanced our program tremendously.

The Bayou Vermilion District, in partnership with the Louisiana 319 NPS pollution program, works closely with the LDAF-OSWC to educate the public on on-site disposal system pump outs. Interested and eligible participants are provided cost share assistance through the LDAF-OSWC 319 NPS pollution project.

In the Acadia SWCD, one of our farmer champions has assisted at outreach events and even hosted a cover crop field day on his farm in 2022. This field day was open to all landowners/producers in the area and introduce conservation practices specific to rice and crawfish production. Following suit, in 2024, Acadia SWCD partnered with another district cooperator (non-319 participant) to host his own farm

day/field day for public awareness of conservation. This Family Farm Day was open to the public and had over 100 attendees. During the day, participants were able to tour the farm, learn about conservation practices that were currently in place, and those planned, visit partner organization booths, enjoy interactive stations, a petting zoo, live band, and free lunch.

Challenges experienced with conservation planning participation included the following:

- Competing program benefits from federal conservation programs allow producers to "shop" for the best price when it comes to receiving cost share assistance.

  LDAF has addressed this by continuing to provide the same cost share assistance while increasing conservation practices to include those not addressed by federal programs, allowing us to provide technical and financial assistance in areas that are currently unaddressed. A specific example would be the addition of the Agriculture Solid Waste Transfer Program and the cost sharing of 12 Residue Management Modifications for sugar cane harvesters.

- The current cost share list does not match the rate of inflation, leading to more expensive implementation cost for producers when implementing cost share practices.

  LDAF has addressed this by providing cooperators additional match opportunities and time extensions on a case-by-case basis. A specific example of this would be to expand the match to include additional contributions to expenses of labor and backhoe operations to install a grade stabilization structure, but also include the mobilization of equipment and materials (expenses to transport equipment and materials to and from site) along with employees time for spent on implementation, and maintenance of structure over the life of the contract.

- Commodity price fluctuations and market trends continuously change producer cropping schedules and planned BMPs, leading to modifications of conservation plans created

  LDAF has addressed this by amending conservation plans on a case-by-case basis and including additional BMPs that are not currently addressed in the USDA-NRCS Field Office Technical Guide. A specific example of this would be the implementation of the Agriculture Solid Waste Transfer Program and the cost share of 12 Residue Management Modifications for sugar cane harvesters.

- Climate ecological events and unfavorable weather have consistently been a burden to project implementation, causing delays in planting and harvesting schedules, leading to timeline adjustments in multiple conservation plans, statewide.

  LDAF continues to address this issue by maintaining flexibility with project timelines, conservation practices implemented, and using alternative strategies to spend ULOs. A specific example of this would be the purchasing of 10 Residue Management Modifications for sugarcane harvesters and 3 no-till drills.

- Coordination and communication with private landowners have associated challenges that lead to changes and cancellations of conservation plans. Specific examples of challenges we faced in 2024 include cooperators changing cropping schedules/rotations, with no notice to the 319 team. When these changes are not discussed, conservation plan timelines are not followed as expected and have led to last minutes changes and contract cancellations because obligations would not be met in time, prior to contract expiration.

To address FY 2024 as a whole and the comparison between previous years:

In FY 2024, there was an increase in cattle commodity prices, a wetter than normal spring and a summer drought. While weather conditions will continue to vary, impacts from each variance affects producer participation differently based on location and commodities produced. However, with no tropical depression/storm activity and lower commodity prices there was a higher-than-expected participation rate from producers in active workplan areas.

Fiscal Year	Acres Under Contract	Federal Funds Spent
2017	50,006.66	$2,350,925.00
2023	10,853.66	$1,632,587.35
2024	7,144.6	$1,876,765.58*

*To be completely drawn to $1,913,500, by LDAF on December 27, 2024

Table 28. Acres and Federal Funds Spent

To address BMP monitoring and how LDAF works with partners to maintain an active role in conservation management of agricultural lands:

Implementation monitoring is used to determine loading data from start to finish of each watershed project. Implementation monitoring was recently used to determine the baseline of the two highest loading HUCs in Bayou Lafourche watershed, located in Morehouse SWCD. This data was used by the district to apply for and receive funding from the Gulf of Mexico Alliance to implement agricultural conservation practices to reduce hypoxia in the Gulf of Mexico.

Bayou Queue de Tortue implementation data will be used determine ranking criteria for participants in higher loading areas and will be a factor in the ranking criteria for new applications.

5.1 WATER QUALITY IMPROVEMENTS

Louisiana's NPS Program continues to strive to make significant progress in partially or fully restoring NPS-impaired watersheds. Louisiana's NPS Management Plan's milestones include EPA water quality measure WQ-10 for water quality improvements. Measure WQ-10 requests states to report on the number of watersheds identified in 2000 or subsequent years as primarily impaired by NPS pollutants that have been partially or fully restored. Previous annual reporting was based on RUSLE for sediment reductions, and more recent reporting is based on STEP-L. Note that Management Plan goals and milestones are expected to be amended to reflect more realistic sediment reduction targets as per STEP-L estimates of reductions associated with BMP implementation at the watershed scale.

Statewide Milestones for Water Quality Improvement	2024
Number of waterbodies identified as being primarily NPS impaired that are partially or fully-restored (WQ-10): Identify fully restored water bodies in Appendix C of state's IR primarily impaired by NPS pollutants; review NPS related activities in watershed where water body was restored; write NPS success story; and identify activities to maintain water quality.	1
Estimated annual reductions in pounds of nitrogen from NPS to water bodies (from Section 319 funded projects) (WQ-9a): Annually review information from LDAF, USDA, watershed coordinators, NPS staff and stakeholders for NPS load reductions of nitrogen; and include information in NPS annual report.	26,898.1
Estimated annual reductions in pounds of phosphorus from NPS to waterbodies (from Section 319 funded projects) (WQ-9b): Annually review information from LDAF, USDA, watershed coordinators, NPS staff and stakeholders for NPS load reductions of phosphorus: and include information in NPS annual report.	5,886.9
Estimated annual reductions in tons of sediment from NPS to waterbodies (from Section 319 funded projects) (WQ-9c): Annually review information from LDAF, USDA, watershed coordinators, NPS staff and stakeholders for NPS load reductions of sediment: include information in NPS annual report.	449.5
Number of NPS impairments removed from LA's IR: Annually review state IR for NPS impairments (DO, FC, TSS, etc.) removed as a result of NPS activities and include information in NPS annual report. Compare the previous IR to the current IR.	1
Progress in reducing unliquidated obligations (ULO): Percentage of ULO funds anticipated yearly for LDEQ (total remaining funds/total awarded = percentage ULO). At the end of FFY24 LDAF's ULO was 80%. Total Joint ULO for LDEQ-LDAF = 56.97%	41 %

Table 29. Statewide milestones for water quality improvement, based on LDEQ's 2020 IR

5.2 Success Stories

A success story for Bayou Folse was written and submitted to USEPA. Bayou Folse (Subsegment 120302) has suffered impaired primary contact recreation (PCR) use support due to fecal coliform bacteria since 2010. Home sewage treatment systems were identified in the 2010 assessment as a suspected source of that impairment. LDEQ, through a partnership with BTNEP, worked to address bacterial loading in the watershed. BTNEP efforts, along with that of multiple stakeholders, led to water quality restoration and primary contact is once again a supported use in the bayou. Based on continued use support restoration since the 2020 IR, a success story for this water quality restoration was written and submitted to EPA, and final revisions are currently under review at EPA headquarters after having been accepted/approved by EPA Region 6. Future success stories are likely to occur in areas where implementation has occurred with OSDS education/outreach, and in other areas where agricultural BMPs have been implemented, as determined by use restoration in the integrated reports.

6.0 STATEWIDE PROGRAMS

6.1 COASTAL NONPOINT POLLUTION CONTROL PROGRAM (CNPCP)

The Coastal Nonpoint Pollution Control Program (CNPCP) is a cooperative effort spearheaded by Louisiana Department of Energy and Natural Resources (LDENR) Office of Coastal Management (OCM). In May 2022 NOAA and EPA submitted a letter stating Louisiana has satisfied all conditions of approval on its coastal nonpoint program developed under Section 6217 of the Coastal Zone Act Reauthorization Amendments.

OCM participates in all of the programs described below, and LDEQ participates in many of them. These programs are generally employed statewide, although some are focused on the coastal zone.

Hydrologic Modification Impact Analysis Success Story

As part of the review process of proposed projects located within the Coastal Zone of Louisiana, the Office of Coastal Management (OCM) evaluates potential impacts to the local hydrology. OCM utilizes the Hydrologic Modification Impact Assessment (HMIA) as a tool to evaluate if a proposed use would negatively modify the existing conditions, including the runoff flow volume and distribution, and the quality of water in the immediate and downstream areas of a project's location. During this reporting period, OCM worked with an applicant to preserve water quality from nutrient runoff. The applicant initially proposed a land reclamation project along Bayou La Loutre in St. Bernard Parish, LA. During the HMIA process OCM worked with the applicant to install containment for the fill material. As a result of this process the project design now includes sufficient lateral control protecting water quality in the bayou.

Reducing Flood Risk through Stormwater Projects

The Bayou Lacombe Channel Improvements project received funding through the Louisiana Watershed Initiative (LWI). The project will harden 3,500 feet of levee along Bayou Lacombe and remove obstructions that impede the channel's flow from a three-mile section of the bayou. This project will help improve the overall water quality of the Bayou and surrounding watershed.

Louisiana Master Farmer Program 2024

The Louisiana Master Farmer Program, a Louisiana State University AgCenter-led initiative that teaches about conservation, resource management, and publishes best management practices on coastal non-point pollution. The program graduated its 2023 class in their January 2024 ceremony in Baton Rouge. Nine Master Farmers were recertified during the meeting of the Louisiana Association of Conservation Districts, and one new graduate was awarded the Master Farmer title. The program plans to continue its goal to lessen the environmental footprint left by agricultural operations, and ensure opportunities for future generations.

To become a Master Farmer, participants must attend educational sessions about environmental stewardship and develop plans for implementing conservation practices on their farms. To maintain the Master Farmer designation, they must meet continuing education requirements and periodically be recertified.

Damian Bollich, who received the Outstanding Master Farmer Award, has spent the past three decades farming rice, soybeans and grain sorghum in Morehouse Parish. This master farmer has implemented

field borders, filter strips, cover crops, and reduced tillage as well as increased his yield during the last 20 years.

BTNEP

The OCM sits on the management conference for the BTNEP. The BTNEP became recognized in 1990 as one of 28 National Estuary Programs through the United States, and it works to protect and preserve the culture and land located between the Mississippi and Atchafalaya Rivers in Southeast Louisiana. The management conference originally convened in 1990 to develop the Comprehensive Conservation and Management Plan (CCMP), and it evolved to become an arena for producing open and frank discussions about some of the most critical coastal management issues.

Litter Abatement and Beautification Task Force

The state established a Task Force on Statewide Litter Abatement and Beautification, administered by the Lieutenant Governor's Office and Keep Louisiana Beautiful (KLB). The group is made up of 26 Task Force members—representatives from various state and local government agencies, businesses, private groups, and communities. Ouachita Green, Keep Monroe Beautiful, Keep West Monroe Beautiful, Keep Ouachita Parish Beautiful, and the Town of Sterlington hosted the Ouachita Parish Water Sweep, successfully removing 8.75 tons of litter from local waterways in just three hours. A total of 366 volunteers participated from 43 different groups, including Waste Connections, Square PlanIT, Malmay & Associates, and the U.S. Army Corp of Engineers. The volunteers dispersed to 15 different locations, cleaning up litter on foot and by boat.

6.2 DRINKING WATER PROTECTION PROGRAM

Background

Congress mandated each state implement a Wellhead Protection Program (WHPP) that protects public water wells and a Source Water Assessment Program (SWAP) to assess potential susceptibility to contamination of all water sources utilized for drinking water supplies. The DWPP, which is what LDEQ calls its SWP program, combines the efforts of the WHPP and SWAP to prioritize protection activities. In accordance with Federal Register; Volume 68:205, LDEQ has included source water protection as part of its NPS program. The source water protection staff assists Louisiana's communities in protecting aquifers and surface waters (rivers, lakes, etc.) that are sources of drinking water.

The DWPP uses the State fiscal year (July 1 through June 30) for its calendar of assessment and protection activities and in all previous state fiscal years the DWPP targeted protection activities by the state's parish jurisdictional boundaries. However, in July 2020, the DWPP began prioritizing target areas by watershed drainage basins. Federal fiscal year 2020 was a transition period that included protection activities in both the targeted parishes and from targeted watershed drainage basins. Protection activities implemented in targeted watersheds are comparable to parish-based activities and are outlined under Program Element 2 of Louisiana's FFY 2022 319 CWA Nonpoint Source Work Plan.

Drinking Water Protection Activities

Target areas for this reporting period were the Lake Pontchartrain Basin and the Vermilion-Teche Basin. Protection activities include, but are not limited to, updating source water assessment information, contingency planning, introduction of a model ordinance, public education and addressing specific issues. These activities may also occur outside of targeted basins shown in Figure 4, if an opportunity to do so presents itself, or if the need arises.

Target Watersheds

All SWP information for public water supplies in the targeted watersheds will be updated according to the schedule in Table 26. The table also shows the number of wells and intakes scheduled for source water assessments. Source water assessment information is confirmed with the public water systems and, if required, updated contingency plans are prepared for each water system serving a population of 3,300 or fewer. Water systems serving populations exceeding 3,300 are required to develop or update risk assessments and emergency response plans under the American Water Infrastructure Act of 2018 and must certify completion to EPA. DEQ coordinates with the Louisiana Rural Water Association to provide assistance with these assessments and plans. The actual numbers for the source water assessment work accomplished within the watersheds for this reporting period are included under the Source Water Assessments section below. Eight contingency plans were completed during this reporting period. As this work continues, if a specific issue involving public water sources needs to be addressed or if any public education opportunities arise, the DWPP staff will respond as needed.

Louisiana Source Water Protection Area Watershed Basin Plan				
Fiscal Years	**Basin**	**Number Of: Wells**	**Intakes**	**Drinking Water Bodies**
2021 - 2025	Pontchartrain	623	0	N/A
	Pearl	101	0	N/A
	Mississippi	92	0	N/A
	3	816	0	N/A
2025-2028	Vermilion-Teche	555	3	Bayou Teche & Grand Lake
TOTAL	**4**	**1,371**	**3**	

Table 30. Louisiana Source Water Protection Area Watershed Basin Plan

Source Water Protection Program Schedule

Figure 4. Source Water Protection Program Schedule

Source Water Assessments

During implementation of the DWPP source water assessment data are updated. The staff obtains Global Positioning System (GPS) coordinates for new water wells and intakes and well photographs are taken for ease of identification. A protection area is delineated for the well or intake and GPS coordinates are obtained for all significant potential source of contamination (SPSOCs) identified within the protection area. Additionally, protection areas for wells and intakes already in the SWAP database are resurveyed to update SPSOC information and new photographs of wells are taken. Wells or intakes that are no longer in service are removed from the inventory along with their corresponding protection areas and SPSOCs. Applications developed to capture the data via mobile devices are used to update the database in real time.

During this reporting period, source water assessment data were collected for 205 public water sources and 758 SPSOCs. Updating this data is important because LDEQ and other agencies use it for pollution prevention, emergency response, and environmental investigations. The data are also used to generate source water assessment reports for public water supply systems. The Safe Drinking Water Act Consumer Confidence Report rule requires that all public water supply systems have a copy of their source water assessment report available for review by the public.

The SWAP Calculator program generates new source water assessment reports based on existing data and new data collected with mobile data collection applications. The reports contain basic well/intake information such as age, depth, aquifer/water body, delineated protection areas, SPSOCs, and a risk ranking for the water system.

Recent database and software upgrades impacted the functionality of the SWAP Calculator and during FFY2020 the program was completely redeveloped. The new SWAP Calculator program not only generates SWAP reports but also significantly improves the functionality of the program by automating data collection and report generation processes. During this reporting period 129 source water assessment reports were generated.

Public Education

Public education is one of the main elements of the DWPP and there were various opportunities to inform citizens about drinking water source protection in both targeted and non-targeted areas. DWPP staff gave presentations or worked booths at the following locations/events; West Feliciana Middle School, Cat Island National Wildlife Refuge, Louisiana Delta Crops Podcast, Oak Grove Source Water Protection Workshop, Louisiana Aquifers Seminar, LRWA Annual Conference, and Ground Water Protection Council Annual Forum.

Hurricane Assessments

The DWPP staff routinely participates in LDEQ's environmental damage assessment response to catastrophic storms such as hurricanes. DWPP staff conducted damage assessments in source water protection areas impacted by Hurricane Francine in September 2024 to insure chemical or petroleum releases were promptly addressed if discovered. The team assessed each significant potential source of contamination (SPSOC) previously identified under the SWAP that, if damaged, could cause an environmental impact or negatively affect a public water source. Anything else that was observed that could have an environmental impact was assessed as well. Assessments were provided to LDEQ's Incident Command so that any sites requiring further investigation could be routed to the appropriate personnel. Forty sites in Houma, Morgan City, Berwick, Manchac, and Killian were assessed. While some facilities sustained storm damage there was no evidence of releases or environmental impacts identified.

6.3 STATEWIDE ONSITE DISPOSAL SYSTEM PROGRAM

Many of Louisiana's watershed impairments are caused by high concentrations of FC bacteria. The state's numerical criteria for FC for designated uses can be found in Table 27.

Designated Use	Louisiana numerical criteria
Primary Contact Recreation	FC: 400 CFUs/100 mL (May – Oct)
Secondary Contact Recreation	FC: 2,000 CFUs/100 mL
Public Water Supply	FC: 2,000 CFUs/100 mL
Oyster Propagation	FC: 14 CFUs/100 mL

Table 31. The State's numerical criteria for FC for designated uses

LDEQ, WSCs, and watershed support groups continued to partner with LDH and the parish and/or local governments in developing education and outreach programs and assist in inspecting OSDSs located in priority watersheds. Table (28) depicts the watersheds and partners involved in OSDS inspection projects.

Watershed	Project Summary
Comite River (040103)	In FFY2024, Capital RC&D conducted individual home sewage inspections. Monitoring was conducted by LDEQ Water Surveys personnel. Monitoring and inspections will continue into 2025.
Yellow Water River (040504)	In FFY2024, Capital RC&D conducted monitoring and individual home sewage inspections. Monitoring and inspections will continue into 2025.
Middle Amite River (040302)	In FFY2024, Capital RC&D conducted monitoring and individual home sewage inspections. Monitoring and inspections will continue into 2025.
Natalbany River (040503)	In FFY2024, Capital RC&D conducted individual home sewage inspections. Monitoring was conducted by LDEQ Water Surveys personnel. Monitoring and inspections will continue into 2025.
New River (040404)	In FFY2024, Capital RC&D conducted individual home sewage inspections. Monitoring was conducted by LDEQ Water Surveys personnel. Monitoring and inspections will continue into 2025.
Thompson Creek (070502)	In FFY2024, Capital RC&D conducted monitoring and individual home sewage inspections. Inspections ended in January 2024 and monitoring will continue through January 2025.
Vermilion River (060801)	In FFY 2024, BVD and LDAF continued education and outreach and home sewage inspections. LDEQ Water Surveys will continue conducting monitoring in 2025.
Bayou Folse (120302)	In 2024, BTNEP continued water quality monitoring and education-outreach. Through local partnership, in August 2020 BTNEP began inspecting home sewage treatment systems to assure proper functioning. This effort will continue into 2025.
6217 Coastal Management Area in Coastal Louisiana	In FFY2024, LDEQ-NPS continued its partnership with LRWA and conducted OSDS inspections; and utilized focused/project-targeted workshops on an as-needed basis. This effort will continue into 2025.

Table 32. OSDS Inspection Activity

Evaluation of continuing inspections in the watersheds will be made based on water quality data obtained from the ambient water quality network sites in each subsegment. Criteria for the designated uses will be used to determine whether NPS bacteria are being reduced and progress is being made towards meeting water quality standards in each subsegment.

7.0 OUTREACH AND EDUCATION ACTIVITIES

LDEQ, LDAF, partners, and WSCs, all worked together to conduct education and outreach across the state. Each department realizes the importance of sharing our findings and continued education of the public to promote watershed restoration. LDEQ participated in 20 outreach and educational events across the state this fiscal year, and LDAF participated in 32 events. These events targeted people of all ages. The Enviroscape model/video allows viewers to see how water moves through an array of landscapes, from urban to agricultural, illustrating the interconnectedness of our waterways and the transportation of NPS pollution. In FFY 2024, LDEQ reached over 5,000 adults and students through the following events:

LDEQ's Outreach Activities:

October 28, 2023 – STEM Café Walker

The Nonpoint Source group took the Enviroscape to the STEM (Science, Technology, Engineering, and Math) Café held in Walker, Louisiana at Walker High School Saturday October 28, 2023. There were opportunities for elementary, middle, and high school students to participate in different types of hands-on STEM activities ranging from environmental topics to robotics. Approximately 88 people attended the event.

Figure 5. Environmental Scientist, India Ambeau, presents at STEM event in Walker, LA

January 20, 2024 – VIPS Jefferson Terrace Elementary

LDEQ Environmental Scientist Staff presented the Enviroscape model to147 students at Jefferson Terrace Academy 3rd, 4th, and 5th graders. This was the first in a series of planned outreaches to students in East Baton Rouge Parish in partnership with volunteers in public schools. The Enviroscape model is a portable interactive environmental education model that showcases point source and non-point source pollution and best management practices for protecting water quality.

January 26, 2024 - St. Martinville Primary School

LDEQ Small Business Environmental Assistance Program (SBEAP) Environmental Scientist Perry Fontenot, III presented the Enviroscape model to over 120 students at St. Martinville Primary School. Ms. Nichole Airhart, 5th Grade Science Lead/Robotics Coach, solicited the assistance of the LDEQ Outreach team to present her students with an introduction to point source and nonpoint source pollution. In addition to the Enviroscape model, students were simultaneously presented a digital version of St. Martinville via Google Earth Studio software, which allowed students to make a direct correlation to what the Enviroscape model presented and realistic landmarks within their city. Students were then challenged to do their part in preserving the integrity of St. Martinville, because their actions could have a lasting impact on not only St. Martinville and St. Martin Parish, but ultimately the entire State of Louisiana. Students were informed of the opportunities that LDEQ has for employment. They were most intrigued by the working of the drones and their contributions to air quality detection. The presentation concluded with an in-depth question-and-answer dialogue that further engaged the students in the field of environmental science.

Figure 6. Environmental Scientist, Perry Fontenot, III, presents at St. Martinville Primary School

March 6, 2024 – Envirothon

The Envirothon is an international environmental and natural resource problem-solving competition that builds leadership experience for high school students (grades 9-12 or ages 14-19). Incorporating STEM principles, hands-on learning, and outdoor field experiences, Envirothon encourages students to expand their knowledge and explore environmental education and natural resource conservation through the study of Aquatic Ecology, Forestry, Soils and Land Use, Wildlife, and Current Environmental Issues.

Emphasizing hands-on learning and real-world application of concepts, Envirothon students can be found getting their hands dirty in a soil pit, measuring the basal area of a forest, collecting macroinvertebrates in a stream to determine water quality, identifying wildlife tracks and signs, and many other skills and activities used by environmental and natural resource conservation professionals. Students learn directly from these environmental and natural resource professionals, introducing the students to a wide array of higher academic studies and careers in the environment, natural resources, and conservation. Approximately 130 people attended the event.

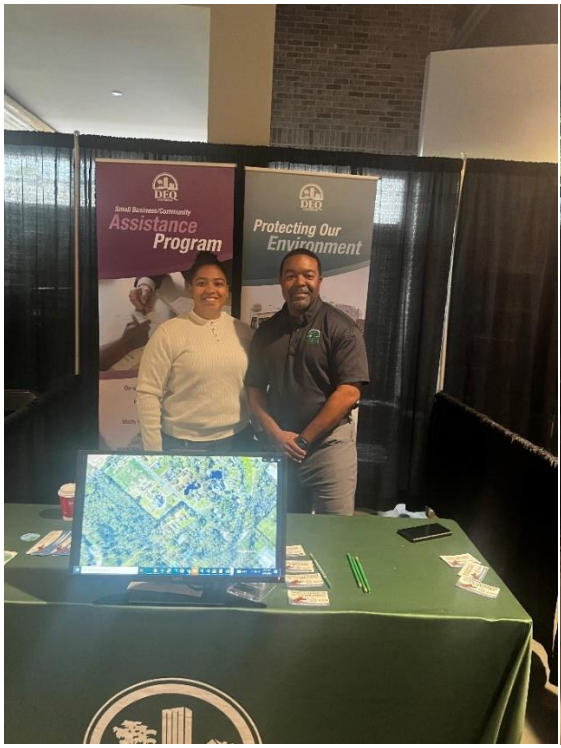
March 6, 2024 – STEM Day Woodlawn Middle School

LDEQ NPS Unit participated in STEM Day at Woodlawn Middle School. The Enviroscape Model was used to show over 700 students the causes and sources of nonpoint source pollution.

Figure 7. Environmental Scientist, India Ambeau, presents at STEM Day at Woodlawn Middle School

March 21, 2024 - St. Landry Parish Youth B.L.A.S.T.

LDEQ exhibited at the St. Landry Parish B.L.A.S.T (Boldly Living As Smart Teens), showing a digital environmental presentation and handing out Envirothon literature to over 1,200 7th grade students from all St. Landry Parish Schools. The St. Landry Proud Coalition solicited the assistance of the LDEQ Outreach team to present these 7th grade students with information that could assist them in making better decisions as teens. Students were taught how point source and nonpoint source pollution affected their day-to-day lives. The presentation concluded with various speakers and performers encouraging the students to make positive choices and ultimately strive to replace each person in the room so that the program will continue to grow and remain beneficial to all of the students in the future.



Figures 8 & 9. Environmental Scientist, Perry Fontenot, III, and Environmental Chemical Specialist, Alyssa Auzenne, at the St. Landry Parish B.L.A.S.T.

March 26, 2024 – Holy Family School STEM Family Night

This family night emphasizes interactive activity for the students to engage with and learn further how to use the STEM principles and items on exhibit. Approximately 100 students/parents attended the event.

Figure 10. Environmental Scientist, India Ambeau, demonstrates Enviroscape model at Holy Family STEM Night event

April 8, 2024 - Park Vista Elementary School

LDEQ presented the Enviroscape, a digital environmental presentation of the City of Opelousas, and literature on keeping the environment clean to 13 kindergarten students at Park Vista Elementary in Opelousas, LA. The kindergarten teacher prepared her students for the presentation; and her teachings were reinforced through visual aids. Students were taught the importance of recycling and how littering not only affects them, but citizens around them. They were shown the school's recycling center and how they can assist the school in that effort. The students were also given information materials on where to recycle in Opelousas (St. Landry Parish Recycling Center) to give to their parents. The presentation concluded with a question and answer session.

Figure 11. Environmental Scientist Perry Fontenot, III, and Environmental Chemical Specialist, Alyssa Auzenne, presented the Enviroscape model at Park Vista Elementary School

April 17, 2024 – Environmental Science Day BRCC

The goal of the event was to promote the importance of studying environmental science, environmental issues, and what environmental science looks like in the workforce. Approximately 100 people attended the event.

April 24, 2024 – Exxon Mobil's Earth Day Event

Approximately 25 people attended Exxon Mobil's Earth Day and participated in different activities such as clean-ups, planting, and building birdhouses.

April 26, 2024 - Environmental Symposium at The University of Louisiana Monroe

The Environmental Symposium at the University of Louisiana at Monroe was held as part of the University's Environmental Education Grant. Local high school science students attended the event where their environmental research projects were highlighted and shared. Various speakers then presented

information from their respective organizations. LDEQ sent a representative to speak, and had an information booth for the students to learn what LDEQ does day-to-day. Around 150 people attended this event.

Figure 12. Environmental Scientists, Faith Stephens, speaks at an information booth

April 27, 2024 – CACRC Earth Day

Capital Area Corporate Recycling Council held its first Earth Day/collection drive this year to bring together other community agencies/partners to celebrate Earth Day. Approximately 25 people attended the event.

Figure 13. Environmental Scientists, Melonie Ward, Bahareh Kokabian, and Amy Mack at Capital Area Corporate Recycling Council Earth Day

April 30, 2024 – First Baptist Christian School

LDEQ NPS staff visited First Baptist Christian School presented the Enviroscape model to 27 students.

Figure 14. First Baptist Christian School 2nd graders

June 5, 2024– LSU Rural Life Museum Outreach

LDEQ staff participated in an outreach event at the LSU's Rural Life Museum summer camp. Approximately 28 students attended the event.

June 11, 2024 – ARBC Outreach

LDEQ environmental staff scientists attended the Amite River Basin Drainage and Water Conservation District (ARBC) June commission meeting to present LDEQ's table top streamulator model, also known as "Walnut Bayou" to approximately 20 people. This model was used to demonstrate a natural meandering stream and erosional issues that may be caused by channel alterations to the ARBC board members and attendees of the commission meeting.

Figure 15. LDEQ Environmental Scientists, John Grosch and Amanda Marshall, demonstrate Walnut Bayou at the ARBC event.

July 10, 2024 - 4-H Youth Camp

LDEQ staff presented the Enviroscape model and literature on keeping the environment clean to almost 60 students from grades 4th grade and above. The students were a part of the Acadia Parish 4-H club. Students were taught the importance of recycling and how littering not only affects them, but citizens around them. Additionally students were taught the difference between point source and nonpoint source water pollution. The presentation concluded with a question and answer session.

Figure 16 (left) and 17 (above) Environmental Scientist Perry Fontenot, III, and Environmental Chemical Specialist Alyssa Auzenne, present Enviroscape at Acadia Parish 4-H club

June 27, 2024 – Mosaic St. James STEM Festival

Mosaic partnered with STEM Global Action and St. James Parish Schools to host a STEM Festival on Thursday, June 27th at Lutcher High School. Students in grades K-12 will had the opportunity to design, build, and engage with 60 different STEM activities. Throughout the morning, the students learned about wind energy, solar energy, coding, designing, and programming robots. Participants were able to build and test their own battery-powered cars. Approximately 366 people attended the event.

Figure 18. Environmental Scientist, Madison Pigott, demonstrates Enviroscape model at Mosaic St. James STEM Festival

September 17, 2024 - Ascension Career and College Expo

DEQ Employees spoke to the students about the Envirothon competition as well as educated students on careers at DEQ. There were approximately 200 participants.

September 28, 2024 – National Hunting and Fishing Day

National Hunting and Fishing Day was hosted by the Department of Wildlife and Fisheries (LDWF) on September 28, 2024, at Waddill Outdoor Education Center. Louisiana's National Hunting and Fishing Day includes exhibits on LDWF's research and conservation efforts, shooting and fishing demonstrations, and exhibits from local chapters of Ducks Unlimited, the Safari Club, and the Coastal Conservation Association, as well as local businesses. LDEQ facilitated a water quality trivia game for adults and kids. There were over 1,300 participants.

Figure 19. LDEQ Scientist, Melanie Bauder, discusses methods to reduce NPS runoff at the National Hunting and Fishing Day

September 28, 2024 - National Hunting and Fishing Day (Monroe, LA)

LDEQ joined many other organizations for the National Hunting & Fishing Day at the Black Bayou Lake National Wildlife Refuge in Monroe. The event is held each year to highlight Louisiana's natural resources and wildlife activities, and is open to the public. LDEQ had a booth at the event where information was shared with participants. Over 300 people attended this event.

Figure 20. LDEQ Scientist, Faith Stephens, represents LDEQ at the National Hunting and Fishing Day

Figure 21. Attendees at National Hunting and Fishing Day in Monroe

LDAF, in partnership with the 44 Louisiana SWCDs, attended 32 outreach and educational events and reached over 15,000 adults and students in FFY 2024. Audiences targeted included all Louisiana citizens, from children to adults. Outreach provided included community outreach programs, workshops, trainings, field days, school visits, social media exposure, and more. Documented outreach efforts below reflect those attended by LDAF staff. During these events, attendees were immersed in water science activities that highlighted the importance of our water quantity and quality, as well as conservation measures to ensure a sustainable future for our water. In addition to LDAF events, SWCDs hosted multiple field days, discussion forums, locally led meetings, and monthly board meetings to discuss, provide, and disseminate outreach to local communities. Many of the LDAF outreach events and other instances of conservation education assistance was at the request of partnering entities, whether at the grade school, university, community, municipal, interagency or farmer/landowner level and are as follows:

LDAF's Outreach Activities:

October 25, 2023 – Ocean Commotion

LDAF and Capital SWCD Staff joined the Louisiana Sea Grant team at this event to address four strategic initiatives - healthy coastal ecosystems, sustainable fisheries and aquaculture, resilient communities and economies, and environmental literacy and workforce development. With an interactive booth demonstrating water runoff, over 1,700 upper elementary students and volunteers were educated on the importance of keeping our soils covered and protected.

November 2, 2023 – LATM/LSTA Annual Conference

LDAF staff attended the Louisiana Teachers of Mathematics and Science Teachers Association joint conference in Baton Rouge to represent Louisiana Project Water Education Today (WET) to the 800 attendees. Teachers were provided with brochures and sample curricula promoting water science education.

November 8, 2023 – Franklin Parish Co-Op Homeschool Group Visit

LDAF assisted Northeast SWCD to present a NPS watershed model to a local homeschool co-op. Students were taught about watersheds, point and nonpoint source pollution, and common agricultural conservation practices used to address water quality concerns in their parish/district. Thirty middle school students attended the presentations.

November 15, 2023 – Harrisonburg Elementary School Visit

LDAF staff assisted the Catahoula SWCD to teach 140 K-5th grade students about water science and conservation. Students participated in age-appropriate, hands-on activities while discovering the importance of water. Fourth and fifth grade students traveled through the water cycle, identifying the different states of water as it moves, and creating map of their travels, in the activity, The Incredible Journey. Second and third grade students learned about point and nonpoint source pollution by creating their dream waterfront real estate properties, and watching their pollutants travel downstream in the activity, Sum of the Parts. Kindergartner and 1st grade students learned the importance of recycling, while recycling used items for future use.

December 7, 2023 – NOLA STEM Library Educators Training

Formal educators from Metairie joined LDAF staff as they were presented with a 5-hour Project WET educators training at the STEM Library. Educators reviewed Project WET standards, curriculum, and guidance while participating in hands-on activities that can be incorporated into their classrooms. Thirteen educators were certified to implement Project WET curriculum in their classes and were presented with their own Project WET Guidebooks.

January 12-13, 2024 – Ag Expo, Monroe

LDAF staff manned a booth at the Monroe Ag Expo, providing attendees with information about LDAF programs, SWCDs, Project WET, and upcoming outreach opportunities. An estimated 10,000 attendees visited the expo.

January 30, 2024 – International School of Louisiana Visit

LDAF Staff presented Project WET materials to 30 – 3rd grade students, through the activity, The Incredible Journey. Students travels through the water cycle, learning how water changes states as it moves, and creating a map of their travels to be shared with the class.

February 8, 2024 – STEM Day, Woodlawn Middle Magnet School

LDAF staff assisted the Capital SWCD to assist in educating 750 6th-8th grade students on the difference of point and nonpoint source pollution. Students rotated in small groups as the staff used an Enviroscape model for demonstration.

March 6, 2024 – Envirothon

LDAF staff hosted the Soils and Land Use station at the annual Envirothon Competition at the LSU Burden Gardens in Baton Rouge. Staff assisted students as they rotated to the station to take the test relating to soil health, type, texture, and more. Approximately 60 high school students attended.

March 8, 2024 – LaSalle Career Day

LDAF staff assisted the LaSalle SWCD to provide insight of job opportunities and responsibilities in the agriculture sector to 150 high school students. Students were shown presentations from LDAF, the district, and NRCS representatives.

March 19, 2024 – STEAM Day/Night Tom Benson Middle School

LDAF staff presented Project WET materials to 120 Pre-K-12th grade students. Younger students participated in H2O Olympics, where students demonstrated the adhesive and cohesive properties of water and related adhesion and cohesion to daily activities, while older students built wetland models to simulate the movement of water from bodies of water to land. Students learned the importance of having a barrier to serve as flood control, decrease erosion, and how to help with filtering pollutants out of water.

April 2-3, 2024 – Louisiana Forestry Educators Tour

Thirteen Louisiana educators joined together to learn about Louisiana's forestry industry and the inter-relations of forest health and water availability. Educators were presented with Project WET Guidebooks following participating in activities and learning about the standards and curriculum.

May 29, 2024 – Avoyelles 4-H Fishing Clinic

LDAF staff assisted the Avoyelles Parish 4-H to present a water science activity to 20 middle school aged students. Students learned about the water cycle through the Incredible Journey and the importance of water conservation through activity The Long Haul.

May 30, 2024- St. Martin SWCD Sugarcane Best Management Practice Field Day

LDAF participated in a sugarcane outreach event with representatives from LSUAgCenter, NRCS, and the St. Martin Parish SWCD. Speakers from each partner agency provided updates on BMP cost-share opportunities, current soil fertility research soil health analysis methods and the use of cane filter press mud as a soil amendment within agricultural operations as well as an on-site demonstration of a cane harvester modification device. Around 50 people attended the event.

June 10, 2024 – Coushatta Tribe Day Camp

LDAF staff assisted the Coushatta Tribe of Elton by educating campers on water science and conservation. Six students attended and learned about the water cycle, water properties and the four elements essential to life. Activities included The Incredible Journey, H2O Olympics, and The Life Box.

June 24, 2024 – Coushatta Tribe Day Camp

LDAF staff assisted the Coushatta Tribe of Elton at their second camp, presenting water science and conservation activities to 4 students. Students learned about the water cycle, water properties, and how multiple users of water can affect water quality and quantity. Activities taught included The Incredible Journey, H2O Olympics, and Common Water.

June 25, 2024 – H. Rousse Caffery Rice Research Station Annual Field Day

LDAF staff participated in the 115th Research Station Annual Field Day. A booth was set up to promote and educate attendees about the Bayou Mallet EPA 319 Program in the region. 300 attendees were shown maps of the watershed boundary and LDAF/OSWC promotional items were given away.

June 27, 2024 – JagCation Summer Camp

LDAF staff assisted Southern University by attending the JagCation Summer Camp to present water science activities to 25 9–11-year-old students. Students learned about the water cycle and different water qualities in activities The Incredible Journey and H2O Olympics.

June 27-28, 2024 – Louisiana Farm Bureau Annual Meeting

LDAF staff attended the annual Farm Bureau Meeting in New Orleans and presented program and outreach materials to attendees. An estimated 750 attendees visited the expo.

July 8, 2024 – Mississippi River Delta Institute

LDAF staff assisted the Crescent SWCD and Docville Farms by presenting Project WET curriculum to 30 educators attending the program. Educators were provided with the guidelines and standards for Project WET and participated in Sum of the Parts and the A-Mazing Race, learning more about point and nonpoint source water pollution as well as storm water pollution.

July 10, 2024 – Acadia Parish 4-H Day Camp

LDAF staff assisted the Acadia SWCD and Acadia Parish 4-H by presenting a water science activity to the 73 campers attending the Save and Explore our Natural Resources Day Camp. Campers learned about the water cycle as they participated in the activity, The Incredible Journey.

July 17, 2024 – JagCation Summer Camp

LDAF staff assisted Southern University by attending the JagCation Summer Camp to present water science activities to 23 11–15-year-old students. Students learned about the water cycle, different qualities of water, and the 8 common water users in activities, The Incredible Journey, H2O Olympics, and 8-4-1, One for All.

July 22, 2024 – Envirothon Training

LDAF and partner, NRCS, assisted the state-winning Envirothon team to present a final training prior to the team's departure for the national competition in New York. Four of the five teammates participated in the training, and the team placed in the top 15 schools in the nation.

July 24, 2024 – LSU-Ag Sugarcane Field Day

LDAF staff attended the New Iberia LSU AgCenter Sugarcane Field Day. A booth was set up to promote awareness of the Bayou du Portage EPA 319 Program. Forty local producers were shown maps of watershed boundary and educated on what BMP's were covered through the program. LDAF/OSWC promotional items were given away.

July 26, 2024- LSU-Ag Sugarcane Field Day

LDAF staff attended the St. Martin LSU-Ag Sugarcane Field Day held at the LASUCA barn in St. Martinville. A booth was set up to promote awareness of the Bayou du Portage EPA CWA 319 Program. Forty producers were shown maps of the watershed boundary and were educated as to which BMP's are available through the program. LDAF/OSWC promotional items were given away.

July 31, 2024 – Good Lands filming, Episode 1

LDAF staff met with Acadia SWCD Chairman, Glenn Simon and St. Martin SWCD Chairman, Jeff Durand, to film episode 1 of the new series "Good Lands." In this episode, Simon and Durand showcased conservation practices used in their rice/crawfish crop rotations. Resource concerns such as erosion, soil health, water quality, and water quantity were addressed by both farmers, partners from LDAF 319 NPS team members, NRCS, and Ducks Unlimited.

August 8, 2024 – STEAM Alliance Meeting

LDAF Staff attended the quarterly STEAM (Science, Technology, Engineering, Arts and Math) Alliance meeting, along with twelve conservation outreach educators in Louisiana. The STEAM Alliance is working to build a network of educators, gathering quarterly to discuss growth, goals, and partnerships.

August 19, 2024 – Good Lands filming, Episode 2

LDAF staff met with Calcasieu SWCD Chairman, David Daigle, to film episode 2. In this episode, Daigle explained the conservation practices used in his silvopasture production system. Through the integration of forage, livestock, and timber production, Daigle maintains a low-cost, low-input production system that provides timber products and cattle. Partners joining the episode include NRCS and LDAF 319 NPS staff.

August 23, 2024 – Good Lands filming, Episode 3

LDAF staff met with Iberia and St. Martin SWCD cooperator, Buddy Oubre, creator of the sugar cane harvester Residue Management Modification (RMM) to explain the idea behind the creation and benefits of using the RMM. Partners joining us in the video include LSU AgCenter, American Sugar Cane League, NRCS, Chitimacha Tribe of Louisiana, and the Iberia SWCD.

September 4-5, 2024 – Calcasieu SWCD Water Festival

LDAF staff assisted the Calcasieu SWCD during the District's 1st annual Water Festival. In partnership with the 319 NPS program and Project WET, 700 students were educated by volunteers from the LSU AgCenter, NRCS, 4-H Youth Wetland Ambassadors, LDAF, and Calcasieu SWCD. All activities were interactive and geared towards water science and education.

September 24, 2024 – Wetland Field Tour

LDAF staff assisted the U.S. Forest Service and Project Learning Tree (PLT) to develop and lead an interactive station for 75 5th grade students and explained the importance of water quality and quantity. Students competed in a friendly relay race, then discussed the importance of all water users on earth.

September 26, 2024- Bayou Vermilion Preservation Association, State of the River

LDAF staff assisted the Lafyette/St. Martin SWCD to participate in BVPA's yearly State of the River function. A booth was set up alongside other state/local government agencies. 35 attendees were educated about EPA 319 Programs in the region as well as local Septic System Programs. LDAF/OSWC promotional items were given away.

Links to outreach materials or BMP documents can be found below.

Louisiana Department of Agriculture and Forestry – www.ldaf.la.gov

Facebook - https://www.facebook.com/LaAgandForestry/

Facebook - https://www.facebook.com/LouisianaSWCDs/

YouTube - https://www.youtube.com/channel/UCK6AJX9eDoaNXSzm_0nyA9Q/videos

X (Twitter) - x.com/laagandforestry

Instagram - https://www.instagram.com/laagandforestry/?hl=en

Press Releases

YouTube – David Daigle - https://www.youtube.com/watch?v=_Id-wHvOaIM&t=5s

Rice/Crawfish - https://www.youtube.com/watch?v=FlxfSx_XBfY

Acadia SWCD 2023 "Save and Explore our Natural Resources Day Camp"

https://www.facebook.com/acadia4h/posts/660618236111519

Calcasieu 1st Annual Water Festival, Vernon Parish

https://www.facebook.com/permalink.php?story_fbid=1038083224777284&id=100057268495500

Louisiana Department of Agriculture & Forestry, Good Lands, David Daigle

https://www.facebook.com/LaAgandForestry/posts/922130799942075

LaSalle SWCD, No-Til Drill/Soil Health Field Day

https://www.facebook.com/permalink.php?story_fbid=914924004000508&id=100064487510596

Louisiana Department of Agriculture & Forestry, Good Lands, Sugar Cane

https://www.facebook.com/LaAgandForestry/posts/925164449638710

Sabine SWCD, Educational Day

https://www.facebook.com/sabine.swcd/posts/1134770581769727

Rice BMP Video (Good Lands Eps. 1)

https://www.nacdnet.org/2024/08/28/louisiana-department-of-agriculture-and-forestry-learn-about-water-quality-on-two-rice-farms/

Silvopasture BMP Video (Good Lands Eps. 2)

https://www.youtube.com/watch?v=_Id-wHvOaIM&t=17s

8.0 TRAINING

Continued training and education is essential to the success of the NPS program. Staff are encouraged to attend trainings that can add value to the program and increase knowledge of NPS practices and EPA methods. The following describes selected training events attended by NPS staff.

NONPOINT SOURCE POLLUTION TRAINING

Workshops and Conferences

2023 National Nonpoint Source Workshop. This workshop featured presentations from states and tribal nations, EPA, and other partners showing program updates, goals, implementation, innovative tools, projects, and methods. Subject matter experts spoke on NPS topics, provided hands-on training sessions, information on success stories, watershed planning, and more. EPA and NEIWPCC. November 6-9, 2023.

Source Water Protection Program Workshop. The Louisiana Rural Water Association (LRWA) held this annual workshop with various state and federal agencies, as well as some public water systems, where strategies and the focus of the state's source water protection efforts were discussed. November 14, 2023.

Louisiana Association of Conservation Districts (LACD) meeting. LACD's annual conference includes educational sessions covering topics such as soil health, conservation, water quality and quantity, BMPs, national policies and initiatives, and the Louisiana Master Farmer program. January 8-10, 2024.

Policy Forum on Nature-based Solutions. Policymakers, designers, engineers, academics, and others discuss potential of nature-based solutions for infrastructure development, community revitalization, permitting, obstacles, and other issues. Network for Engineering with Nature and the National Academy of Science's Gulf Research Program. February 7-8, 2024.

Esri Developer Summit. Presentations and technical sessions on developing geospatial software, applications, data, analysis, and mapping. Esri. March 12-15, 2024.

Louisiana Remote Sensing & GIS Workshop This annual workshop brings together GIS and remote sensing professionals from state government, academia, and the private sector to share dataset development, tools, practices, and other information related to mapping and spatial data analysis. April 9-11, 2024.

Annual Disaster Response/Data Mining Geospatial Workshop USGS and the University of Louisiana at Lafayette Regional Applications Center host this annual workshop to cover new GIS data resources, tools, and applications relevant to Louisiana. USGS. June 6, 2024

R6 State-EPA NPS workshop. EPA's Region 6/states' workshop provided discussion of new EPA NPS guidelines, updates on success stories, opportunities under the Bipartisan Infrastructure Law and State Revolving Fund programs, FEMA opportunities for natural hazard mitigation and recovery, and state program updates. June 11-14, 2024.

Esri User Conference. Presentations and technical sessions on geospatial software, applications, data, analysis, and mapping. Esri. July 15-18, 2024.

Louisiana Rural Water Association Conference. Staff attended this annual conference to promote source water protection to water and wastewater operators. July 15-18, 2024.

Ground Water Protection Conference Annual Forum. Staff presented LDEQ's ground water sampling program. September 10-12, 2024.

Association of Clean Water Administrators (ACWA) Water Quality Modeling Workshop. This workshop provided hands-on experience with the QSWAT+ water quality model, editor, project setup, calibration, sensitivity analysis, scenarios, and additional model functions and resources. September 16-20, 2024.

Training Series

USGS and NSGIC 3DHP/3DEP Information Forum

- Transferring deep learning knowledge for scaling up hydrographic feature extraction. October 24, 2023.
- Strategies for improving the Washington State Hydrography Dataset (WASHD). November 28, 2023.
- USACE Huntington Use of USGS Data and Services. January 30, 2024.
- Development of a Geographic Information Systems Methodology for the Public Drinking Water Source Water Assessment Program in Tennessee. February 27, 2024.

US EPA Harmful Algal Blooms, Hypoxia, and Nutrients Research Webinar Series:

- Development and Application of HABS Forecasting Science. January 31, 2024.
- Genetic Science Applications in Predicting Cyanobacterial Blooms. March 27, 2024.
- Using Wetlands to Reduce Nutrient Loadings to Rivers and the Coast. May 22, 2024.
- Climate Change. Nutrient and Sediment Interactions. July 31, 2024.
- Coastal Dissolved Oxygen Dynamics and A Brief Introduction to the Hypoxia Task Force. September 25, 2024.

American Farmland Trust Outcomes Estimation Tools Training Webinar Series

- The Social Indicator Planning & Evaluation System (SIPES) Method Social Indicators Data Management and Analysis (SIDMA) Tool. January 10, 2024.
- Critical Source Area Identification and Management. April 3, 2024.

EPA Tools & Resources Webinar Series:

- Equitable Resilience Builder. December 13, 2023.
- EPA Tools & Resources Webinar: Nutrient Explorer. March 13, 2024.
- EnviroAtlas – Connecting People, Nature, Health, and the Economy. June 6, 2024.
- Tools for Adaptation Planning - LASSO and ICLUS. August 1, 2024.
- Assessing Community Vulnerabilities to Potential Contaminant Releases from Extreme Events. September 18, 2024.

EPA Watershed Academy Training

- **Nature-Based Solutions for Climate Resilience.** Discussion of nature-based projects to promote climate resilience and work related to restoration, protection, and management of ecosystems. March 26, 2024.
- Leveraging Participatory Science to Advance Water Quality Reporting and Partnership-Building Part 1. May 23, 2024.

Internal LDEQ Training

- Basic Fluvial Geomorphology. October 24, 2023.
- LEAU Database access through SAS VIYA. October 25, 2023.

The Network for Engineering with Nature Knowledge Series

- Streamlining Carbon Measurement, Reporting, and Verification in Vegetation and Soil. April 18, 2024.
- The Proposed Future of Planning for USACE Water Resources Investments. July 18, 2024.

Individual Training Sessions

NPS: EPA Briefing to States on Updated Sec. 319 Guidelines (and subsequent office hours meetings). EPA and ACWA. November 2, 2023.

Migrating to ArcGIS Pro. This webinar presented functionality differences between ArcMap and ArcPro, including data analysis and mapping functions, improvements, and moving to the new platform. Louisiana Urban and Regional Information Systems Association. December 6, 2023.

BABA update for NPS programs. EPA presentation on BABA and potential impacts for states' NPS Programs. February 22, 2024.

Effectiveness of Nutrient Management on Reducing Nutrient Losses from Agricultural Fields. EPA. February 28, 2024

2024 Success Story Training. EPA presentation on success story elements and new GRTS format, forms, and processes. EPA. June 25, 2024.

Welcome to VELMA. EPA Water Quality Modeling Workgroup introduces the Visualizing Ecosystem Land Management Assessments (VELMA) watershed simulator, linking hydrologic, ecologic, and other processes to soil, water, vegetation, and other ecological responses to help inform best practices. July 29, 2024.

Upper Barataria-Terrebonne Watershed Workshops I and II. LDEQ staff participated in a discussion hosted by the Barataria-Terrebonne National Estuary Program of water quality issues and activities in the upper Barataria-Terrebonne basins. July 24 and August 14, 2024.

Brownfields, Gentrification, and Environmental Justice Research: Learning from Past Experiences. EPA. September 10, 2024.