



Nonpoint Source Program Annual Report 2024

Indiana Department of Environmental Management

Office of Water Quality

Table of Contents

Introduction to the Nonpoint Source Pollution Management Program	1
Indiana’s Nonpoint Source Program Management Plan	3
Nonpoint Source Management Goals and Progress (State Fiscal Year 2024)	4
GOAL 1: UTILIZE PARTNERSHIPS TO LEVERAGE RESOURCES AVAILABLE FOR NONPOINT SOURCE MANAGEMENT	4
Indiana Conservation Partnership	4
U.S. Department of Agriculture - Natural Resources Conservation Service	6
Indiana Association of Soil and Water Conservation Districts	8
Indiana State Department of Agriculture-Division of Soil Conservation ³	10
Indiana Department of Natural Resources	15
Indiana State Revolving Fund Loan Program	17
GOAL 2: MONITOR AND ASSESS INDIANA WATERS FOR NONPOINT SOURCE IMPAIRMENTS AND IMPROVEMENTS.....	18
IDEM Surface Water Quality Monitoring Strategy	18
Additional Water Quality Monitoring.....	22
GOAL 3: DEVELOP AND CONDUCT A STRATEGIC OUTREACH AND EDUCATION PROGRAM	27
Web-based Products	27
Watershed Specialists.....	27
Indiana Watershed Leadership Academy	28
Indiana Conservation Partnership Training and Certification Program.....	28
Revision of the State NPS Program Management Plan 2025-2029	28
Watershed Group Recognition	29
GOAL 4: IMPROVE INDIANA’S WATER QUALITY, INCLUDING SURFACE AND GROUND WATER, BY REDUCING NONPOINT SOURCE POLLUTANTS SUCH AS NUTRIENTS, SEDIMENT, AND BACTERIA; RESTORING AQUATIC HABITATS; AND ESTABLISHING FLOW REGIMES THAT MIMIC NATURAL CONDITIONS.....	29
Section 319 Grant Program	29
Best Management Practices and Pollutant Load Reductions	32
Nonpoint Source Success Story	36
Section 205(j) Grant Program.....	38
Integrating the Nonpoint Source Pollution Program with the 303(d) Vision	38
GOAL 5: PROTECT SENSITIVE, VULNERABLE, AND HIGH QUALITY WATERS OF THE STATE SO THAT THEY MAY CONTINUE TO MEET THEIR DESIGNATED USES.....	39
Adaptive Management	40
Appendix A - Reportable Activities for 2024	41
Appendix B – Open and Pending 319 Projects	52
Appendix C – 319 Implementation Projects in FY 2024	57
Appendix D – Summary of Closed 319 Projects	58
Appendix E – Open and Pending 205(j) Projects.....	62

Table of Figures

Figure 1. Indiana 8-digit HUC Watersheds	2
Figure 2. Major basins in Indiana that are monitored for surface water quality on a nine-year rotating cycle.	18
Figure 3. Performance monitoring watersheds in 2023 and 2024.....	21
Figure 4. Major river basins in Indiana.	34
Figure 5. Load Reductions by Basin in State FY 2024.	35
Figure 6. Southeastern Indiana’s greater Hogan Creek watershed includes the Little Hogan Creek, South Hogan Creek, and Goose Run subwatersheds.	36
Figure 7. Indiana's TMDL priority framework under the Vision.....	39

Table of Tables

Table 1. A summary of the best management practices implemented in Indiana during State Fiscal Years 2022-2024.	32
Table 2. A summary of the estimated load reductions reported in State Fiscal Years 2022-2024.	33
Table 3. A summary of the cumulative total estimated load reductions in Indiana since FFY 1999.	34

Introduction to the Nonpoint Source Pollution Management Program

Nonpoint source water pollution does not originate at single point sources, such as industrial or municipal wastewater discharge pipes, but comes from many diffuse sources in the environment. When rain falls or snow melts, water flowing over streets, parking lots, lawns, and agricultural fields carries pollutants such as motor oil, sediment, fertilizer (nutrients), bacteria, and pesticides. These pollutants are then deposited in the nearest stream, lake, wetland, or ground waters. Untreated runoff is a significant source of water pollution in Indiana, and sediment, nutrients, and bacteria are the leading pollutants of concern in the state. [Indiana's 2024 Integrated Water Monitoring and Assessment Report](#) estimates that nonpoint sources impact 13,616 miles of streams and unknown sources impact 11,649 miles of streams. While some nonpoint source pollution is naturally occurring (e.g., atmospheric deposition), most is a result of human activities such as bacteria from pet waste and faulty septic systems, fertilizers and herbicides from residential lawns and agricultural lands, and oil and toxic chemicals from energy production.

The federal Clean Water Act (CWA) was amended in 1987 to establish the Section 319 (§319) Nonpoint Source Pollution Management Programs to control nonpoint sources of water pollution. Section 319(h) provides the U.S. Environmental Protection Agency (U.S. EPA) with the authority to grant federal dollars to states to mitigate and prevent nonpoint source pollution in accordance with an approved state nonpoint source management program. The [Indiana State Nonpoint Source Program management plan](#) guides the usage of CWA §319 funds, which are administered by the Indiana Department of Environmental Management (IDEM), Office of Water Quality (OWQ), Watershed Assessment and Planning Branch (WAPB).

Indiana uses a watershed approach for nonpoint source pollution management to achieve and sustain water quality in the state. Watersheds are hydrologically defined geographic areas that drain into a specific waterbody. These hydrologic units have been delineated by the U.S. Geological Survey (USGS) using a national standard hierarchical system and are indicated by the number of digits in the hydrologic unit code (HUC). The HUC consists of two to twelve digits based on the level of classification (the more digits, the smaller the division of land area). Indiana has thirty-eight cataloguing units (HUC 8; Figure 1), which can be further subdivided into watersheds (HUC 10) and subwatersheds (HUC 12). For the purposes of this report, all local level hydrologic units (HUC 8-12) will be referred to as watersheds.

A watershed approach is necessary for environmental problems like nonpoint source pollution which results from various land use practices and interactions between air, land, and water. Pollution from runoff is a problem that spans political boundaries and affects resources that public and private sectors depend upon, concerning a multitude of programs, agencies, and citizens. The watershed approach allows for local governments and watershed groups to target their own priorities and develop implementation plans specific to their locality.

The watershed approach is based on four basic principles:

1. Geographic focus, based on hydrological rather than political boundaries.
2. Water quality objectives based on scientific data.
3. Coordinated priorities and integrated solutions.
4. Diverse, well-integrated partnerships.

IDEM's ongoing effort to implement the watershed approach includes:

- Ensuring that internal resources continue to be focused on addressing the most significant water quality issues facing Indiana by conducting a periodic review of OWQ activities and making any necessary adjustments.
- Improving internal coordination between water quality assessment and watershed planning and implementation programs to facilitate an integrated watershed management approach to restoring impaired waterways.
- Coordinating with local watershed groups, community groups, and other state and federal agencies to better leverage efforts in ways that will achieve greater improvements in water quality.

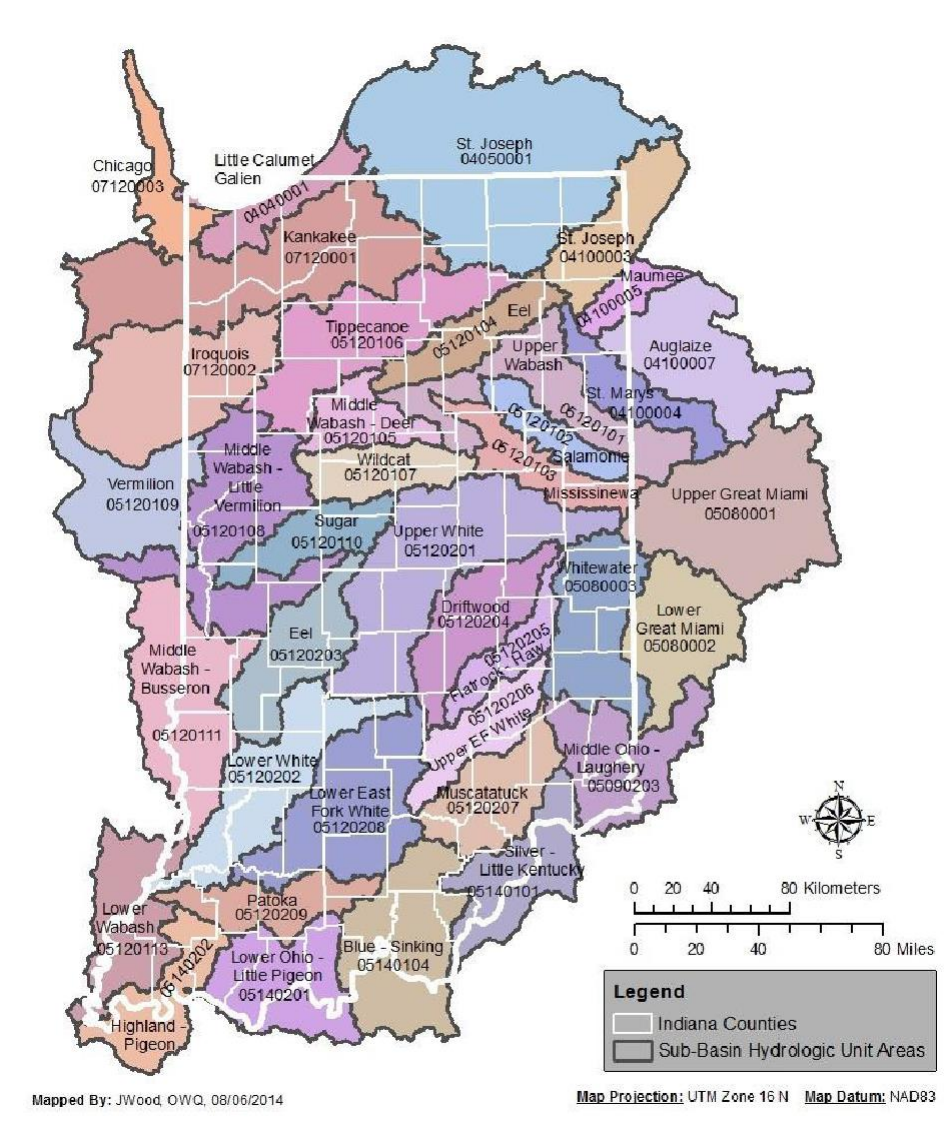


Figure 1. Indiana 8-digit HUC Watersheds

Project summaries reported in the fiscal year (FY) 2024 Nonpoint Source Program Annual Report were awarded between federal fiscal years (FFY) 2020 and 2024. The state FY 2024 began 1 July 2023 and ended 30 June 2024. This report was created in compliance with the grant agreement between Indiana’s Nonpoint Source Program and the U.S. EPA to describe how the federal Clean Water Act Section 319 funds were used in the state. It describes the progress that the Nonpoint Source Management Program has made towards meeting the goals, objectives, and milestones of the [Nonpoint Source Program management plan](#) and how \$319 grant funds were utilized to help accomplish these goals. Further, it recognizes the efforts and achievements of the many agencies, groups, and individuals¹ working at the state and local level to address nonpoint source pollution in Indiana and describes how \$319 grant funds were awarded to projects.

Indiana’s Nonpoint Source Program Management Plan

The Indiana State *Nonpoint Source Program management plan* (“Plan”) guides the usage of CWA Section 319 funds received by IDEM from U.S. EPA. The Plan outlines IDEM’s goals and objectives of nonpoint source water pollution management, while seeking to credit and provide synergy with other state, local, and federal nonpoint source efforts in Indiana.

Current U.S. EPA policy requires states to update their Plans every five years. Indiana completed an update of its Plan in 2019. The 2019 revision of the Plan is the most recent in a series of Plans that were completed in 2014, 2008, and 1999. In 2019, Indiana chose to provide its revised Plan in the form of an addendum to its [2014-2018 Plan](#). This 2019 Plan will be reviewed annually by program staff to assess its continued validity. The next full revision of this program plan will be completed in FFY 2024, covering 2025-2029. Indiana was granted a one-year extension to update the next revision due to delays in staff-turnover and awaiting the new 319 guidelines from the EPA. The current NPS Annual Report refers to the goals set in the 2019 Plan.

IDEM’s approved 2019 *Indiana State Nonpoint Source Program management plan* is a vision and mission-driven strategy to address nonpoint source pollution in Indiana. All goals, objectives, milestones, and measures of success are based upon the following two statements:

Program Vision:

The vision of Indiana’s Nonpoint Source Pollution Program is to restore waters impaired by nonpoint source pollution and maintain water quality in healthy watersheds through locally-led partnerships.

Mission:

To work with our partners to make measurable improvements in, and prevent degradation of, water quality by addressing nonpoint source pollution through education, planning, and implementation.

The five goals in the Indiana *Nonpoint Source Program management plan* relate to: 1) utilizing partnerships to define and address nonpoint source pollution issues; 2) monitoring the status of those issues; 3) providing outreach and education to citizens of the state to raise awareness of nonpoint source pollution issues; 4) remediating the causes and sources of nonpoint source pollution; and 5) protecting areas already meeting water quality standards and those areas threatened by nonpoint source pollution. The 2019 update of the Plan was approved by the U.S. EPA on May 22, 2019 and will cover FFYs 2019-2023 with an EPA approved extension into 2024. This report is made in accordance with the grant agreement between Indiana Nonpoint Source Program and the EPA and will summarize the accomplishments toward meeting the goals and objectives of the 2019 revision of the Plan.

Nonpoint Source Management Goals and Progress (State Fiscal Year 2024)

GOAL 1: UTILIZE PARTNERSHIPS TO LEVERAGE RESOURCES AVAILABLE FOR NONPOINT SOURCE MANAGEMENT

Cooperation with state, federal, local, and private partners is critical to Indiana’s Nonpoint Source Pollution Program’s success. Coordinating with these partners optimizes the funds, staff, physical resources, and political capital available to work on nonpoint source pollution issues in the state. IDEM’s Nonpoint Source Pollution Program utilizes multiple partnerships to reach diverse stakeholder groups and further nonpoint source management goals in Indiana. Some of these partners and their achievements from this year are highlighted below. A full accounting of progress made during FFY 2024 toward the objectives of Goal 1 outlined in Indiana’s *State Nonpoint Source Program management plan* can be found in Appendix A.

Indiana Conservation Partnership

The Indiana Conservation Partnership (ICP) is comprised of eight Indiana agencies and organizations¹ who share a common goal of promoting natural resource conservation. To that end, the mission of the Indiana Conservation Partnership is to provide technical, financial, and educational assistance needed to implement economically and environmentally compatible land and water stewardship decisions, practices, and technologies. The ICP’s soil health and nutrient management philosophies underpin its conservation initiatives in addressing the state’s primary natural resource concerns. The principles of soil health are to minimize disturbance, optimize soil cover, optimize biodiversity, and provide continuous living roots. Nutrient management is best described by the “4 Rs”—applying the right nutrient source at the right rate at the right time in the right place. Each ICP initiative has at least an element of it rooted in promoting the soil health philosophy and most have a direct effect on nonpoint source pollution management in Indiana.

The ICP prepares an annual work plan that defines objectives for up to four conservation focus areas and includes the actions, responsible entities, and deadlines for achieving them. Additionally, the ICP meets bimonthly for partner updates and to collaborate, where possible, to optimize its resources for achieving water quality objectives. Particular emphasis is on delivering technical training to ICP staff and coordinating the various cost-share and grant programs.

Using the U.S. EPA Region 5 Model, the ICP has committed to report load reductions of sediment, nitrogen, and phosphorus achieved by the practices installed through the cost-share programs administered by the partner agencies. In 2023, landowners supported by the ICP installed more than 50,000 new conservation practices, up 3,000 from 2022. In the fall of 2022, and emerging in the spring of 2023, Hoosier farmers planted more than 1.6 million acres of living cover, which includes cover crops and winter wheat. Cover crops and no-till practices implemented with ICP’s assistance sequestered an estimated 41,000 tons of soil organic carbon, which is the equivalent to the carbon emissions of more than 30,168 cars.

¹ IDEM, the Indiana State Department of Agriculture (ISDA), the State Soil Conservation Board, the Indiana Department of Natural Resources (IDNR), the Indiana Association of Soil and Water Conservation Districts (IASWCD), Purdue University Extension, the United States Department of Agriculture-Natural Resources Conservation Service (USDA-NRCS), and the USDA-Farm Service Agency (FSA).

Conservation practices were modeled to quantify load reductions for calendar year 2023:

- Sediment- 1.6 million tons
- Nitrogen- 3.6 million pounds
- Phosphorus- 1.8 million pounds

In the fall of 2022, and emerging in the spring of 2023, Hoosier farmers planted more than 1.6 million acres of living cover, which includes cover crops and winter wheat. Cover crops and no-till practices implemented with ICP's assistance sequestered an estimated 41,000 tons of soil organic carbon, which is the equivalent to the carbon emissions of more than 30,168 cars.

Indiana's State Nutrient Reduction Strategy

Although originally developed as a result of the Hypoxia Task Force Action Plan for the Gulf of Mexico, [Indiana's State Nutrient Reduction Strategy \(SNRS\)](#) encompasses all waters of the state that drain to the Mississippi River, including the Wabash, White and Kankakee River systems, as well as those draining to Lake Michigan and to Lake Erie. Indiana surface and ground waters are adversely affected by excessive nutrients that come from many different sources. The resulting negative economic impacts include increasing the cost of treating public water supplies as well as reducing the recreational use of our treasured lakes, reservoirs, and streams.

The SNRS aims to capture present and future endeavors in Indiana that positively impact the state's waters, as well as to gauge the progress of conservation, water quality improvement, and soil health practice adoption. It represents Indiana's commitment to reduce nutrient discharges and runoff into waters from nonpoint and point sources alike.

The Indiana SNRS underscores the importance of continual outreach and education to conservation partnerships and the public regarding stewardship of Indiana's waters. The strategy acknowledges that the great potential to reduce nitrogen and phosphorus entering our waters depends on the cooperation of state, federal and local organizations, agricultural and urban programs and initiatives, as well as private sector and citizen endeavors. The strategy identifies measures such as the proper location and types of conservation practices on productive agricultural ground and at the edge-of-field, efficient nutrient management, and managed drainage. In addition, septic system maintenance, appropriate residential fertilizer applications, erosion control at construction sites, and urban best management practices such as green infrastructure will be key to controlling nutrient runoff. It recognizes a continued need for conservation efforts, education, outreach, and research in order to see progress.

Many of the efforts and initiatives taking place under the SNRS are highlighted in the Indiana State Department of Agriculture section further in this report. The SNRS, which is now on a five-year revision schedule, is due to be updated in late 2025 with a planned release date in early 2026.

Indiana's Domestic Action Plan for the Western Lake Erie Basin

[Indiana's Great Lakes Water Quality Agreement \(GLWQA\) Domestic Action Plan \(DAP\)](#) to reduce phosphorous to the Western Lake Erie Basin (WLEB) was first released February 28, 2018 and then updated in December of 2023. The DAP emphasizes using existing programs and optimizing partnerships, effecting the most change with the least cost, prioritizing resources to areas with the most phosphorus export and/or reduction potential, seeking to engage citizens who are not participating in conservation efforts, and employing adaptive management. Indiana's goal is to meet the spring- time phosphorus targets for the Maumee River as it flows across the border into Ohio. The DAP includes an Action/Milestone table that tracks current and planned activities to address the issues outlined in the DAP.

Significant actions have been taken to address nutrient inputs from both urban and rural landscapes,

including point and nonpoint sources, and to restore more natural hydrology and ecological functions. Implementation of long-term control plans for combined sewer overflow communities, such as the deep tunnel project in Fort Wayne, coupled with sewer extensions to areas with failing septic systems in Adams County, for example, will greatly reduce sewage and its nutrients from entering the waterways. Native plantings and riparian buffers along the Maumee River will enhance natural hydrology and curtail soil erosion.

U.S. Department of Agriculture - Natural Resources Conservation Service

For more than 90 years, USDA's Natural Resources Conservation Service (NRCS) has worked with farmers and landowners to help them manage natural resource concerns on their land and improve the health of their communities². Indiana NRCS continues to be one of the nation's leaders in helping people help the land by getting conservation on the ground and positively impacting acres in every corner of the state.

In 2023, Indiana NRCS staff throughout the state worked with producers to fund more than \$63 million worth of conservation practices on more than 300,000 acres of farm and privately owned forest land. The more than 1,100 contracts with producers will have a lasting positive impact on Indiana's soil, water, forestry, energy and wildlife resources while also helping to combat climate change. Following is a report of Indiana NRCS' investments and successes in fiscal year 2023.

For Federal Fiscal Year (FFY) 2023, NRCS programs in Indiana that support NPS pollution reduction/amelioration efforts included:

Agriculture Conservation Easements Program

The Agricultural Conservation Easement Program (ACEP) provides financial and technical assistance to help conserve agricultural lands and wetlands and their related benefits. Under the Wetlands Reserve Easements (WRE) component, NRCS helps to restore, protect, and enhance enrolled wetlands. During FFY 2023, NRCS helped Indiana landowners protect and restore over 2,000 acres of wetlands and invested over \$8.3 million in wetland easements.

Conservation Stewardship Program

The Conservation Stewardship Program (CSP) is a voluntary conservation program that encourages producers to address resource concerns in a comprehensive manner by undertaking additional conservation activities and improving, maintaining, and managing existing conservation activities. Indiana obligated over \$15 million in CSP funding in FFY 2023. A total of 250 new contracts received funding to treat 170,000 acres of cropland, pasture, and forest.

Environmental Quality Incentives Program

Indiana received more than \$30 million in EQIP funding in FFY 2023. A total of 866 contracts were approved that will address natural resource concerns on 124,988 acres of land over the life of the contracts. These contracts provided financial assistance to help plan and implement conservation practices that address natural resource concerns and for opportunities to improve soil, water, plant, animal, air and related resources on agricultural land and non-industrial private forestland. EQIP offered several targeted national initiatives that provided funding to specific geographic areas and/or resource concerns.

² NRCS releases each fiscal year's report in the subsequent calendar year. Thus, NRCS released FFY 2023 reports in 2023 and therefore, this section of the report shares activities that took place in FFY 2023.

1. Climate Smart: NRCS offers a variety of programs, services, resources, and tools to help farmers, ranchers, forest landowners and partners pursue voluntary conservation efforts to deliver climate solutions. In FFY 2023, this initiative had one contract encompassed 5,1657 acres and allocated \$443,830.
2. Conservation Incentives: Incentive contracts are an option available through EQIP that offers producers financial assistance to adopt conservation management practices on working landscapes. Producers may use incentive contracts as a “steppingstone” from correcting resource issues on specific land units through EQIP, to achieving sustainable stewardship on their entire operation. In FFY 2023, this incentive had 10 contracts which encompassed 3,624 acres and allocated \$1.03 million.
3. Great Lakes Restoration Initiative (GLRI): NRCS and partners work with producers and landowners to implement voluntary conservation practices that improve water quality, restore wetlands, enhance wildlife habitat, and sustain agricultural profitability in the Great Lakes. In FFY 2023, this project had 45 contracts which encompassed 13,503 acres and allocated \$2.19 million.
4. Historically Underserved Farmers: This fund category is for applicants defined as socially disadvantaged, veteran, limited resource or beginning farmer. In FFY 2023, this project had 183 contracts which encompassed 16,462 acres and allocated \$3.4 million.
5. Mississippi River Healthy Basin Initiative: Through MRBI, NRCS and its partners work with producers and landowners to implement voluntary conservation practices that improve water quality, restore wetlands, enhance wildlife habitat and sustain agricultural profitability in the Mississippi River Basin. In FFY 2023, this project had 10 contracts which encompassed 2,365 acres and allocated \$428,786.
6. Monarch Butterfly Habitat Development Initiative: The Monarch Butterfly Habitat Development Project is a multi-state effort focused on increasing monarch habitat on private lands through plantings of milkweed and nectaring farms as well as managing pesticide use in proximity to monarch habitat. In FFY 2023, this project had 14 contracts which encompassed 153 acres and allocated \$78,946.
7. National Water Quality Initiative: NWQI is a joint initiative between NRCS and the Environmental Protection Agency (EPA) to address agricultural sources of water pollution, specifically nutrients, sediment, and pathogens in priority watersheds, with a special component for source water protection. This strategic approach leverages funds and provides streamlined assistance to help individual agricultural producers take needed actions in impaired watersheds. In FFY 2023, this project had 12 contracts which encompassed 3,409 acres and allocated \$649,831.
8. Northern Bobwhite Quail: NRCS offers technical and financial assistance to help landowners manage for early successional habitat. This assistance helps producers plan and implement a variety of conservation activities, or practices, that benefit the bobwhite and many other game and non-game species. In FFY 2023, this project had 22 contracts which encompassed 1,113 acres and allocated \$563,528.
9. On-Farm Energy Initiative: NRCS provides agricultural producers with technical and financial assistance that quantifies how energy can be used more efficiently to reduce input costs, increase productivity, and reduce air pollutants and greenhouse gas emissions. This initiative only offers assistance for 128 Conservation Activity Plans-Ag Energy Management Plans and certain energy conservation practices. In FFY 2023, this project had 13 contracts which encompassed 1650 acres and allocated \$382,562.

10. Organic Transition Initiative: NRCS provides financial payments and technical assistance to help producers implement conservation measures in keeping with organic production. Limited resource and socially disadvantaged producers may obtain additional assistance. In FFY 2023, this project had three contracts which encompassed 15 acres and allocated \$75,764.
11. Specialty Crop: NRCS offers technical and financial assistance to specialty crop growers to enhance water, soil, air, and other natural resources. In FFY 2023, this project had 40 contracts which encompassed 1,280 acres and allocated \$978,578.
12. Western Lake Erie Basin Initiative (WLEB): NRCS and partners work with producers and landowners to implement voluntary conservation practices that improve water quality, restore wetlands, enhance wildlife habitat, and sustain agricultural profitability in the Western Lake Erie basin. In FFY 2023, this project had 12 contracts which encompassed 4,444 acres and allocated \$904,383.38.
13. Wildlife Habitat: The goal of this initiative is to provide technical and financial assistance to participants who voluntarily make improvements to their working lands while the US Fish and Wildlife Service (FWS) provides participants with regulatory predictability for the Endangered Species Act (ESA) when needed. This innovative approach empowers landowners with a means to make on-the-ground improvements and provides peace of mind that no matter the legal status of a species, they can keep their working lands working. In FFY 2023, this project had 68 contracts which encompassed 2,419 acres and allocated \$1.39 million.

Regional Conservation Partnership Program

The Regional Conservation Partnership Program (RCPP) promotes coordination between NRCS and its partners to deliver conservation assistance to producers and landowners. NRCS provides assistance to producers through partnership agreements and through program contracts or easement agreements. For FFY 2023, NRCS funded the following project that affected Indiana:

1. Big Pine Watershed- The Big Pine Watershed Partnership engages the power of the supply chain and the trust of agronomy retailers to further conservation in Indiana's Big Pine watershed through the targeted implementation of nutrient and sediment reducing practices to achieve watershed water quality objectives. In FFY 2023, this project had 7 contracts for \$736,259 on 3,755 acres.

Indiana Association of Soil and Water Conservation Districts

The mission of the Indiana Association of Soil and Water Conservation Districts (IASWCD) is to enable the conservation of the natural resources of Indiana. The IASWCD promotes the wise use of Indiana's natural resources by providing information and outreach in support of statewide efforts to develop and enhance Indiana's watershed programs that help address NPS pollution.

The IASWCD administers two high-impact statewide programs: Conservation Cropping Systems Initiative (CCSI) and Urban Soil Health (USH). These programs amplify state, regional, and local resources to boost support for conservation implementation on conventional, urban, and emerging farms through connecting growers and landowners to support systems and resources such as EQIP, CSP, or CREP programs, while building local capacity through supporting outreach and educational events and, in the case of USH, facilitating the development of locally led Working Groups. Both programs coordinate closely with local SWCDs as well as partner agencies.

The IASWCD provides significant resources to the Pathway to Water Quality (PWQ) Exhibit; a popular fixture at the Indiana State Fairgrounds since 1993. The exhibit is an excellent watershed demonstration site, showing how proper management practices at home, on the farm and in business can protect our

soil and water resources. The PWQ exhibit contains practical displays and information for anyone who uses the land. The PWQ exhibit is managed and maintained by the ICP. The IASWCD, through a 319 grant, USDA NRCS contribution, and matching state grants and private donations, provides a PWQ Coordinator to oversee the project and committee (\$20,000 per year). With participation from all ICP partners, in 2024 the IASWCD was able to apply for \$20,000 in additional 319 funds over four years, with a match of \$80,000 from all other ICP Partners. Additional funds have been spent on upgrades to the exhibit such as pervious pavement, a green roof gazebo and a septic system display. IDEM participates on the PWQ Advisory committee and helps staff the exhibit during the Indiana State Fair each year. In 2020, an Indiana American Water environmental grant was procured to provide updated signage and seating in an expanded area of the exhibit. What was once an adjoining exhibit space has become available, and by expanding into this area, the PWQ will be using a USDA NRCS soil health trailer and partnership staff to give live demonstrations regarding the soil benefits of conservation cropping systems. This new area was utilized for the first time at the 2021 Indiana State Fair with high attendance throughout the fair. This will continue with exhibits focused on urban soil health being added to the new area.

The IASWCD Conservation INsight, a biweekly electronic publication, communicates issues, events and resources in watershed management to statewide audiences. The Conservation INsight is an excellent tool to acknowledge successful watershed practices through the Annual River Friendly Farmer Awards and the District Showcase Awards. The Indiana State Fair Farmer's Day provides an excellent setting for the award presentations. The Indiana Conservation Farmer of the Year and Friend of Conservation awards are presented annually during the Annual Conference of Indiana Soil and Water Conservation Districts. Acknowledgment through these venues, local and statewide media, and the Conservation INsight, offer additional opportunities to increase public awareness and support successful nonpoint pollution reduction practices.

The IASWCD provides support to Women4theLand (W4L) – Women's Conservation Circles by participation on the W4L Steering Committee. Women4theLand is a partnership of agricultural and natural resource conservation agencies and organizations working together to provide information, networking, education and resources to Indiana women landowners and farmers. IASWCD helps promote and develop W4L statewide events.

The IASWCD Funding Resources web page can be accessed through the IASWCD website. The web page is updated on a continual basis and provides pertinent development and education resources for Indiana's watershed groups, SWCDs and conservation partners. The web page features funding and grant information, organizational and professional development opportunities, and a calendar of events.

Lastly, the IASWCD hosts an annual conference engaging upwards of 350 attendees from across the Indiana Conservation Partnership, especially SWCD supervisors and staff. Conference tracks range from on-the-ground technical topics, to district management, to policy, outreach, and education. Attendees come away with a diverse and strengthened network in the conservation field, a renewed commitment to the mission of conservation, as well as new tools to enact that mission at the local level.

Conservation Cropping Systems Initiative (CCSI)

CCSI provides training, outreach, and other soil health education support for partners across Indiana – contributing to the State's leadership in adoption of cover crops and other soil health practices that can help reduce nutrient and sediment loading in surface waters. Staffing includes a program director, four regional program managers, two conservation agronomists, and a digital agriculture specialist.

- Annual Trainings:
 - Core Soil Health Systems Training
 - Continuing Soil Health Education

- Soil Health and Sustainability for Midwestern Field Staff (3-Day Soil Health Training)
- An “Ag 101” Training was planned for early FY24 and was filled with participants from across the ICP
- Many other trainings and outreach events and materials (including the popular [Root Banners](#)) are made available throughout the year.

Urban Soil Health (USH)

The Urban Soil Health program gets conservation on the ground via collective impact through connecting urban, small, and diversified operations to technical assistance to improve their soil health and the consequential productivity and profitability of their operations. USH develops local working groups to enable locally-led conservation for these growers. USH’s model dovetails with NRCS and partner agency goals to provide conservation resources and technical assistance to underserved producers. USH’s website hosts several resources for these growers. In addition, USH staff collaborate with state and federal partners to develop new and emerging resources for small-scale growers, such as nutrient management tools, which do not currently exist for these smaller operations. Staffing includes a program director and four regional specialists. USH hosts the annual “Get the Dirt” event for growers, as well as hosts national and regional trainings for SWCD, NRCS, ISDA, and other partners who currently or will work with small-scale producers.

Resilient Indiana: Technical Assistance for SWCDs (RITA)

The Resilient Indiana program launched in January 2024 through state and local funding. RITA employs boots-on-the-ground staff to assist Districts with their TA workloads. RITA technicians have the tools producers need to build their own climate resilience. In addition to providing direct service to Districts, RITA aims to be a workforce development program to build the conservation workforce in Indiana from the ground up. In June 2024, six Conservation Technicians were hired; by June 2025, IASWCD anticipates that a total of twelve RITA technicians will be on the ground, working regionally throughout the state.

More information and metrics on each program’s impact and outcomes are available upon request.

Indiana State Department of Agriculture-Division of Soil Conservation³

The [ISDA-Division of Soil Conservation](#) (Division) works alongside the [State Soil Conservation Board](#) (SSCB) to enhance the stewardship of Indiana’s soil and water resources. This is done by providing face-to-face, on-the-land technical and financial assistance for implementing conservation practices, supporting Indiana’s 92 Soil and Water Conservation Districts (SWCDs), and promoting the opportunities and benefits associated with caring for our soil and water resources.

The Division employs Resource Specialists (RSs) throughout the state to directly assist landowners with the planning and implementation of conservation practices addressing specific soil and water resource concerns. Resource Specialists work with regional Conservation Delivery Teams (CDT) alongside staff from the NRCS and SWCDs. The ISDA Resource Specialists assist with the planning, survey, design, and construction of thousands of practices annually. The common practices that these professionals work on include but are not limited to filter strips, grassed waterways, forested, and grassed buffers, water and sediment control basins, wetland restorations, and livestock watering systems. The Resource Specialists also work with the SWCDs to help them carry out Clean Water Indiana (CWI) programs, and assist with educational events for youth, adults, and farmers/landowners. The RSs also assist with the implementation of conservation practices using IDEM 319 dollars for watershed projects.

³ ISDA releases each fiscal year’s report in the subsequent calendar year. Thus, ISDA released FFY 2023 reports in 2024 and therefore, this section of the report shares activities that took place in FFY 2023.

The Division also employs District Support Specialists (DSSs) to work cooperatively throughout the state with the local SWCDs to develop conservation priorities, goals, and business plans, as well as assist in the design of programs that reach landowners and the general public on the husbandry and management of soil and water resources.

They prepare and conduct trainings for SWCD supervisors and staff, assist SWCDs in expanding their capacity to fulfill their role in their communities, provide facilitation for strategic planning and similar sessions, and provide information, guidance, and direct on-site assistance to SWCDs in carrying out their legal and operational responsibilities. The DSSs also provide guidance and assistance to the districts in applying for competitive CWI grants for implementing multi-district sediment and nutrient reduction projects.

The Division also employs Program Managers to help carry out the Division's many programs and initiatives, such as the Conservation Reserve Enhancement Program, the Clean Water Indiana program, the Mississippi River Basin Soil Sampling Program, the Cover Crop Premium Discount Program, the Cover Crop and Tillage Transects, tracking Nutrient and Sediment Load Reductions on conservation practices, Data Analysis, and the *Indiana State Nutrient Reduction Strategy*, and.

Conservation Reserve Enhancement Program

The [Conservation Reserve Enhancement Program](#) (CREP) is designed to help alleviate some of the concerns of high nonpoint source sediment, nutrient, pesticide, and herbicide losses from agricultural lands by restoring buffers and wetlands to improve water quality, as well as protect land from frequent flooding and excessive erosion by planting hardwood trees in floodplain areas along rivers and streams. This program is possible through an agreement between the State of Indiana and the USDA-Farm Service Agency (FSA). Program participants receive both state and federal incentives to voluntarily enroll in the program and install water quality and erosion prevention practices on environmentally sensitive land directly adjacent to eligible surface waters or land located in the floodplain. ISDA administers the CREP program on behalf of the State.

The program covers 11 priority watersheds touching 65 counties with an acreage enrollment goal of 26,250 acres. The CREP watersheds include the Highland-Pigeon, Lower Wabash, Lower East Fork White, Lower White, Middle Wabash-Busseron, Middle Wabash-Deer, Middle Wabash-Little Vermillion, Tippecanoe, Upper East Fork White, Upper Wabash, and the Upper White.

Eligible practices through CREP include wetland restorations and bottomland timber establishments in the floodplain, as well as buffer practices that must be adjacent to a water body and include Native Grasses, Hardwood Tree Planting, Wildlife Habitat, and Riparian Forest Buffers.

According to the states tracking system, CREP Progress as of June 30, 2024, includes approximately 22,000 acres of conservation practices installed utilizing \$11.2 million state dollars. For every state dollar that is spent on CREP practices, the federal match is approximately \$4-\$13 depending on the practice.

Clean Water Indiana Program

The [Clean Water Indiana Program](#) (CWI) was established by the Indiana Legislature to provide financial assistance to SWCDs, landowners and conservation groups. The financial assistance supports the implementation of conservation practices that reduce nonpoint sources of water pollution through education, technical assistance, training, and cost sharing programs. The CWI fund is administered by the Division of Soil Conservation under the direction of the SSCB.

The CWI Program is responsible for providing local matching funds as well as grants for sediment and nutrient reduction projects for Indiana's SWCDs. In 2023, the CWI Program received an historic \$5

million increase in funding by the state legislature for state fiscal years 2024 and 2025. This increase allowed for more CWI grant applications to be approved and funded, as well as provided a significant increase to the Indiana CREP. For state fiscal year 2024, 26 applications were approved totaling \$2,313,287 and impacting 48 SWCDs and organizations, creating a significant increase in support to the SWCDs around the state. Information on all the approved grants is available on the CWI Program website. The CWI competitive grant program is an annual award process for SWCDs and other conservation organizations. CWI also contributes critical state matching funds for Indiana's CREP and supports other statewide initiatives such as the Indiana [Conservation Cropping Systems Initiative](#) (CCSI) and the Cover Crop Premium Discount Program.

Mississippi River Basin (MRB) Soil Sampling Program

In September 2023, the ISDA-Division of Soil Conservation launched a new soil sampling program focused on increasing the knowledge and use of soil testing as a nutrient management practice to improve nutrient use efficiency while also reducing the risk of ecological impacts to local and downstream waterways. The program provides free or reduced cost of soil testing to farmers in Indiana watersheds that drain to the Mississippi River. Program applications were accepted during a fall and spring sign-up period, which resulted in very high interest among farmers. The program has enrolled 350 farms impacting 21,000 acres, and more than 3,500 soil samples have been collected and analyzed.

Cover Crop Premium Discount Program

The [Cover Crop Premium Discount Program](#) is a partnership between ISDA, The Nature Conservancy, and the USDA Risk Management Agency (RMA). The goal of the program is to expand cover crop use among farmers in several counties in the state to expand awareness and the adoption of cover crops as a tool to improve farm resiliency. The focus is to target first-time cover crop users but others are eligible as well. Eligible growers can receive a \$5.00/acre premium discount on the following year's crop insurance invoice for verified acres. The program is available in the following counties: Bartholomew, Brown, Clark, Crawford, Daviess, Dearborn, Decatur, Floyd, Greene, Harrison, Jackson, Jefferson, Jennings, Johnson, Lawrence, Martin, Monroe, Ohio, Orange, Ripley, Scott, Shelby, Switzerland, and Washington. In its first year in 2020, the program achieved an enrollment of just over 7,000 acres with that number doubling to 15,000 acres enrolled the second year. In 2024, the goal was to enroll 30,000 acres which was reached in 36 days. Each year the program continues to see high interest.

Cover Crop and Tillage Transects

The tillage transect is a visual cropland survey conducted late winter to early spring in each county by Indiana Conservation Partnership (ICP) personnel and Earth Team volunteers. Using a predetermined route, staff look at farm fields in their county collecting data on cover crops, tillage methods, plant cover, residue, etc., in order to estimate the adoption of these conservation practices by private landowner efforts in Indiana. The survey uses GPS technology and provides a statistically reliable method for estimating the amount of adoption of these conservation practices at the county and state scale, and annual trends.

According to the 2024 survey, transect results revealed that Indiana farmers planted an estimated 1.7 million acres of living covers in all crops. Overwintering living covers (i.e. – cover crops and small grains, like wheat) are known for their environmental benefits. They are typically planted in the fall after harvest and keep living roots in the ground throughout the winter helping to increase organic matter in the soil, improve soil health, and help filter water off of the farm. Although the conservation transect does not differentiate between cover crops and small grains, Indiana farmers typically plant fewer than 200,000 acres of small grains annually, so cover crops vastly dominate the 1.7 million estimated acres. The conservation survey also showed that about 69% of row crop acres were not tilled and 17% had reduced tillage after the 2023 harvest.

Estimates from the 2024 transect are available on the Conservation Transect website here:

<https://www.in.gov/isda/divisions/soil-conservation/conservation-transect/>

The tillage transect in Indiana counties has been conducted since 1990. To see trends in the use of no-till and conservation tillage, as well as trends in cover crops since 2011, visit the ISDA website at <https://www.in.gov/isda/divisions/soil-conservation/conservation-transect/>.

Nutrient Load Reduction Modeling and Mapping

The Indiana Conservation Partnership (ICP) measures and tracks sediment, nitrogen, and phosphorus load reductions from individual conservation practices implemented on agricultural land to determine the impact of assisted conservation efforts statewide from all the ICP staff by using the EPA Region 5.

Sediment and Nutrient Load Reduction Model. The model is used to analyze the sediment and nutrient load reductions achieved by conservation practices funded by state programs such as the CWI, CREP, IDNR's Lake and River Enhancement Program, as well as federally funded programs through § 319 administered by IDEM and the USDA's Farm Bill Programs like EQIP and CRP. Through this process of data collection and analysis, we can see the collective impact of the number of conservation practices that are implemented annually across several programs. The ICP utilizes the end products of this process to help measure load reduction trends by watershed for each calendar year and in cumulative years, and serves as a tangible component of the [*Indiana State Nutrient Reduction Strategy \(SNRS\)*](#).

Load reductions estimated by the model for Indiana each year are published in annual accomplishments reports, including watershed maps showing the nitrogen, phosphorus, and sediment reductions. To see these reports, visit <https://www.in.gov/isda/divisions/soil-conservation/indiana-state-nutrient-reduction-strategy/>. The estimates, paired with monitoring by state and federal partner agencies, as well as continued assessments of Indiana's CWA 303(d) list of impaired waters, will inform watershed prioritization and conservation resource management for the ICP's efforts and Indiana's SNRS.

Indiana Science Assessment

The [Indiana Science Assessment](#) is an effort under the SNRS and was born out of the desire of the ICP wanting to strengthen and improve the existing method of how sediment and nutrient load reductions are captured by the Region 5 model, so that dissolved nutrients and other practices not tied to sediment can be captured. However, quantifying the nutrient load reductions and water quality improvement from individual practices is scientifically challenging, and the current Indiana method for determining nutrient load reductions would benefit from using the most recent research and by including more parameters such as dissolved nutrients. This will allow for more accurate reductions to be tracked and better assess the progress being made on improving water quality. In addition, knowing the historic and ongoing trends of nutrient loads in the watersheds of the state is important in order to know where more conservation work is needed.

In 2019, the Indiana Science Assessment strategy was developed by a Core Team of representatives from different conservation agencies around the state who worked together to determine the scope of and components needed within the Science Assessment. The Core Team is made up of partners from ISDA, NRCS, the Indiana Chapter of The Nature Conservancy (TNC), the Indiana Agriculture Nutrient Alliance (IANA), IDEM, and the Purdue University College of Agriculture.

The Indiana Science Assessment addresses two components to move the State Nutrient Reduction Strategy forward.

Component 1: Determine historic and ongoing nutrients loads leaving the state, and also by watershed basins used in the State Nutrient Reduction Strategy.

Component 1 of the Indiana Science Assessment determines water quality trends statewide at state borders and by major watershed basins by inputting water quality monitoring data from the IDEM Fixed Station Network and the United States Geological Survey's (USGS) stream gage network into the USGS

model known as [Weighted Regressions on Time, Discharge, and Season](#) (WRTDS). Data was analyzed and run through the model to determine water quality trends of sediment, nitrogen and phosphorus loads and concentrations. To view the report on the results of this analysis, see [Trends of Sediment and Nutrient Loads in Indiana Watersheds](#) or visit the ISDA Indiana Science Assessment website. Analyzing water quality monitoring information to determine loads and concentrations within each of the basins in the state will further help in prioritizing watersheds for more targeted conservation efforts in the future. ISDA has developed a web tool to display the results of the water quality trends report and to make the results more accessible to conservation partners and the public. This web tool visualizes data and water quality trends for nitrogen, phosphorus, and sediment loads (also known as flux) for Indiana's major river basins. To see this tool, visit the ISDA Indiana Science Assessment website.

Component 2: Improve the method to quantify nutrient reductions from conservation practices, including dissolved nutrients, and determine efficiency of practices in reducing loads.

Component 2 of the Indiana Science Assessment is the component that focuses on improving the existing method used by the ICP to calculate and quantify sediment, nitrogen and phosphorus load reductions from implemented conservation practices as discussed above.

A Research Associate is working at Purdue University to compile, review, and analyze research data to identify and develop a standardized tool and procedures for estimating nutrient load reductions from conservation practices, and be used in determining the percent efficiency of certain conservation practices on reducing the nitrogen and phosphorus loads. A science committee made up of researchers and experts from five academic institutions in Indiana and two federal research agencies (USDA, Agricultural Research Service (ARS) and the USGS) provides experience and guidance on the data analysis and practice criteria, as well as provides scientific input and evaluation of the process.

The project is currently analyzing 25 conservation practices selected by the Core Team and Science Committee to be researched and analyzed. Fact sheets sharing results for several of the practices will soon be available on the website. Progress reports for Year 1 and Year 2 are available on the Indiana Science Assessment website, as well as a definitions document providing the definitions of the conservation practices assessed in the Science Assessment. To continue and expand upon the work of the Indiana Science Assessment that started in 2019, ISDA and Purdue created the Indiana Nutrient Research and Education Program (INREP), which is funded through the Gulf Hypoxia Program dollars.

Gulf Hypoxia Program

Through funding provided by the Bipartisan Infrastructure Law in 2022, funding was awarded to each of the Gulf of Mexico Hypoxia Task Force states, including Indiana. To manage these funds and resulting projects, the EPA Office of Water formed the Gulf Hypoxia Program (GHP).

In Indiana, current funding provided through the GHP is focused in three areas: staff capacity, soil sampling, and the Indiana Science Assessment. ISDA has hired a staff person to help manage the new GHP dollars and to provide support with the [SNRS](#) efforts. The staff person also manages and coordinates the soil sampling program that ISDA developed to increase the frequency in which farmers/landowners sample soil and therefore improve nutrient use efficiency on agricultural land. This program was discussed above.

The Indiana Nutrient Research & Education Program (INREP) was created to continue and expand the work of the [Indiana Science Assessment](#). This program will allow for continued management and research analysis under Indiana's Science Assessment to determine efficiency of conservation practices on improving water quality.

ISDA will be developing a second workplan to utilize more of the GHP funding in the spring of 2025.

GIS Basin Story Maps of the Ten Major River and Lake Basins in Indiana

The GIS Story Map of the major river and lake basins in Indiana, developed by ISDA, can be found on the SNRS website. The story map is an interactive web application highlighting each of Indiana's 10 major river and lake basins to help tell the story of conservation and showcase Indiana's efforts to enhance water quality within those basins. The Story Map features maps which allow users to learn detailed information about each basin, and view water monitoring locations along with links to water quality data. The Story Map also contains information about local, state, and federal cost-share programs, the number of conservation practices in specific watersheds, nutrient load reductions from installed conservation practices, tillage and cover crop trends, information on local watershed groups and organizations, and resources related to agricultural initiatives, urban programs, point-source information, and the Ground Water Monitoring Network. The GIS story map makes Indiana's SNRS more interactive. [Learn more](#)

Indiana Department of Natural Resources

The Indiana Department of Natural Resources (IDNR) supports several programs that impact nonpoint source pollution in the state. These programs include the Lake and River Enhancement Program, the Indiana Lake Michigan Coastal Program, and the Healthy Rivers Initiative.

Lake and River Enhancement Program

The Indiana Department of Natural Resources (IDNR) oversees the Lake and River Enhancement (LARE) program, as authorized by Indiana Code (IC 14-22-3.5). Administered by the Division of Fish & Wildlife, the LARE program awards financial grants to sponsors. These grants help reduce sediment and nutrient inflow into Indiana's lakes and rivers, enhance aquatic and terrestrial habitats, and improve water quality.

Funding for the LARE program comes from the annual lake and river enhancement fee paid by boat owners when registering their boats with the Bureau of Motor Vehicles. This fee ensures the LARE program's focus on maintaining the health and usability of Indiana's public lakes and streams for various recreational activities, including boating, fishing, and paddling. A portion of the LARE grant funds are allocated to the IDNR Division of Law Enforcement for conducting aquatic safety programs and maritime patrols.

Since 1989, the LARE program has offered technical and financial assistance to local and county agencies, as well as non-governmental organizations (NGOs) like lake and homeowner associations, for qualifying projects. The program features two funding cycles: spring and summer. In summer 2023, 17 grants totaling \$1,143,000 were awarded for biological-engineering and watershed land treatment projects. During the spring 2024 cycle, an additional 51 grants totaling \$1,104,840 funded projects to control invasive aquatic species, remove logjams from streams, and remove sediment from public lakes.

Several LARE-funded projects feature active measures to improve aquatic habitat, including aquatic invasive species treatments, bioengineering streambank and shoreline stabilization, lowhead dam removal, and various in-stream enhancement practices to benefit fish and other aquatic organisms. LARE projects also feature installation of filter strips, water and sediment control basins, wetland restoration projects and other practices to reduce erosion and sedimentation in targeted watersheds.

The LARE program strives to produce end-products that result in healthier ecosystems and enhanced recreational opportunities for boating, fishing, and paddling activities. They also often result in increased economic value for businesses, communities, and individuals living near LARE-funded project sites.

Indiana Lake Michigan Coastal Program

In March 2024, NOAA and EPA found that Indiana had satisfied all required conditions for meeting management measures and the State's Coastal Nonpoint Pollution Control Program received full approval. The purpose of the Indiana Lake Michigan Coastal Program (LMCP), funded primarily through the National Oceanic and Atmospheric Administration (NOAA), is to enhance the state's role in planning for and managing natural and cultural resources in the coastal region and to support partnerships between federal, state, and local agencies and organizations. The DNR is the lead agency implementing the LMCP and the program houses a full-time Coastal Special Projects Coordinator who provides technical assistance, education and outreach, and coordinates efforts toward the achievement of management measures that combat sources of NPS pollution.

The LMCP makes available approximately \$600,000 annually through the Coastal Grants Program for projects to protect and restore natural, cultural, and historic resources in Indiana's Lake Michigan coastal region. Project categories include land acquisition (example: riparian corridors), low-cost construction (example: natural area restoration and BMP installation), education and outreach, and planning/coordination/management (example: land use planning and ordinance development).

As part of the Coastal Zone Act Reauthorization Amendments of 1990 (CZARA), Congress created a stand-alone provision, Section 6217, which requires that states and territories with approved coastal zone management programs develop a Coastal NPS Pollution Control Program to address water quality impairment of coastal waters. The purpose of the program is to develop and implement management measures for NPS pollution to restore and protect coastal waters. The DNR LMCP and IDEM §319 Program staff work together to coordinate with other state and federal agencies such as state and local health departments, DNR, NRCS, local SWCDs, and not-for-profit organizations to meet the requirements of this program. The LMCP Special Projects Coordinator is responsible for 6217 development and implementation through collaboration with federal, state, and local partners. Only one 6217 Coastal Nonpoint Pollution Control Program measure, Operating Onsite Disposal Systems (OSDS) remained to be approved. To meet this measure the state must ensure that operating septic systems within the Coastal Region are inspected at a frequency adequate to ascertain whether septic systems are failing components of the measure include partnering with Purdue University Illinois Indiana SeaGrant in the creation of education modules and ordinance assistance, realtor associations for training and material dissemination, and partner agencies for targeted legislative action. A tracking module is also being developed through Purdue University.

The LMCP continues to lead the NW Indiana Septic System Coordination Work Group meetings to discuss septic nonpoint source pollution issues and solutions in NW Indiana.

Healthy Rivers Initiative (HRI)

The Healthy Rivers Initiative, led by the DNR, is the largest conservation initiative to be undertaken in Indiana. The initiative includes a partnership of resource agencies and organizations who are working with willing landowners to permanently protect 43,000 acres located in the floodplain of the Wabash River and Sugar Creek in west-central Indiana and another 26,000 acres of the Muscatatuck River bottomlands in southeast Indiana. HRI partners include the DNR, U.S. Fish & Wildlife Service, Natural Resources Conservation Service, and The Nature Conservancy in Indiana.

These projects involve the protection, restoration, and enhancement of riparian and aquatic habitats and the species that use them, particularly threatened, endangered, and/or migratory birds and waterfowl. This initiative will also be beneficial to the public and surrounding communities by providing flood protection to riparian landowners, increasing public access to recreational opportunities, and leaving a legacy for future generations by providing a major conservation destination for tourists.

Since HRI was launched in June of 2010, 38,309 acres of land are now permanently protected, over halfway to the goal of 70,000 protected acres. The DNR has acquired 12,173 acres in the Wabash River and Sugar Creek Conservation Areas, and 4,490 acres in the Austin Bottoms Conservation Area along the Muscatatuck River. Natural Resources Conservation Service has enrolled a total of 6,435 acres in easements (not owned by DNR) within the project boundary, to complement the prior existing 12,723 acres of state-owned land. To date, a total of 16,663 **new acres** are now open to the public for wildlife-based recreation through HRI.

Indiana State Revolving Fund Loan Program

In addition to providing low interest loans to Indiana communities for projects that improve wastewater and drinking water infrastructure, the Indiana Clean Water State Revolving Fund (SRF) Loan Program finances projects that abate or prevent NPS pollution of Indiana's waters that meet the objectives in the State NPS Management Plan. The money loaned to these NPS projects is documented as match, when applicable, for the state §319 Grant Program. Eligible NPS projects must provide water quality benefits to their respective communities and may include one or more of the following:

- Wetland restoration/protection;
- Erosion control measures;
- Ground water remediation;
- Storm water BMPs;
- Source water and wellhead protection;
- Failing septic system - repair, replacement or connection to sewer;
- Brownfield remediation;
- Conservation easements; and
- Agricultural and waste management BMPs.

This reporting period, State Fiscal Year 2024 (July 1, 2023- June 30, 2024), the SRF Program loaned \$46.1 million to nine communities for projects to reduce NPS pollution by extending sanitary sewers to areas with septic systems, thereby eliminating this potential source of pollution. Approximately 1,774 septic systems will be eliminated through these projects. Throughout the life of the SRF NPS Program, \$553 million has been loaned for NPS purposes. Approximately 23,200 septic systems have been removed from service, 12 Brownfield sites have been remediated, and 11 projects were completed to improve stormwater infrastructure.

The NPS Program has also made a specific effort to coordinate with the Clean Water SRF (CWSRF) Program to link loan applicants with local watershed groups. Each quarter, when the CWSRF's Project Priority List is made available, the NPS program identifies those applications that fall within an area covered by a watershed management plan (WMP) or a Total Maximum Daily Load (TMDL) report. The NPS program then determines, with the help of CWSRF staff, whether or not those applicants have taken advantage of the 0.5% interest break available for projects that include an NPS or green infrastructure project. If no such project has been identified, and a WMP includes a project that may help the applicant qualify for the reduced interest rate, the application is flagged for contact. Interest rates are adjusted quarterly on the first of January, April, July, and October.

GOAL 2: MONITOR AND ASSESS INDIANA WATERS FOR NONPOINT SOURCE IMPAIRMENTS AND IMPROVEMENTS

Without monitoring and assessment, it would be difficult to quantify the magnitude of the nonpoint source pollution problem and improvements made in water quality through nonpoint source pollution abatement actions. In order to grasp the extent and impacts of nonpoint source pollution in the state, IDEM uses several water quality monitoring approaches, including targeted and probabilistic monitoring designs, as outlined in the [2022-2026 Indiana Water Quality Monitoring Strategy](#). Assessment of the data obtained through monitoring follows protocols outlined in [Indiana's 2022 Consolidated Assessment and Listing Methodology \(CALM\)](#). Highlights of significant progress in monitoring and assessment of Indiana's waters for nonpoint source pollution during FY 2024 are included below. A full accounting of progress made this year toward the objectives of Goal 2 in the [Indiana Nonpoint Source Program management plan](#) can be found in Appendix A.

IDEM Surface Water Quality Monitoring Strategy

The Office of Water Quality conducts probability-based aquatic resource surveys using a random, stratified sampling design to statistically determine the degree to which waters within a basin support aquatic life, human health, and recreational uses. The OWQ collects surface water quality, biological, and habitat data to support watershed planning and restoration activities of the nonpoint source program. These efforts also support other programs in the state including public health advisories, development of water quality standards, and identification of water quality issues.

Water quality monitoring is conducted in a different basin each year using a nine-year rotating cycle. The first cycle began in 2011 and was completed in 2019 in the Lower Ohio River Basin. In FY 2024, monitoring was ongoing in the Upper Wabash River (05120101). The results of this monitoring effort will be used to:

1. Provide data to base statistically comprehensive assessments of state waters (305(b)).
2. Provide data on which site-specific assessments can be made for the waterbodies' attainment of Indiana's designated uses (303(d)). Identify impairments for which TMDLs should be created for nonpoint source pollution and point sources.
3. Provide baseline data for watershed management decisions.

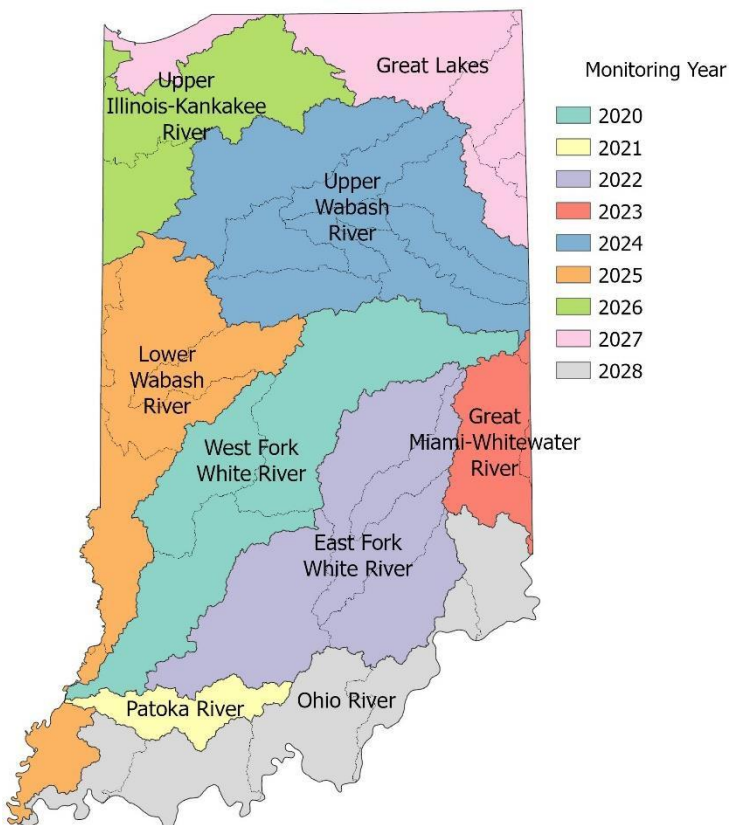


Figure 2. Major basins in Indiana that are monitored for surface water quality on a nine-year rotating cycle.

IDEM's nonpoint source monitoring also includes two types of targeted monitoring: watershed characterization monitoring and performance measure monitoring (monitoring for success, under the U.S. EPA's WQ-10(a) measure).

Watershed Characterization Studies

The main objective of the watershed characterization project is to use an intensive targeted watershed design to characterize the current condition of the watershed. IDEM uses a modified geometric site selection and targeted site selection process to get the necessary spatial representation of the entire study area. Sites within a watershed are selected based on a geometric progression of drainage areas starting with the area at the mouth of the mainstem stream and working upstream through the tributaries to the headwaters (sites ≥ 5 square miles). Monitoring sites are then located at the nearest bridge with additional sites located at *pour points* (the lowest point in the basin through which all water flows) and, to the extent possible, sites of concern to the stakeholders.

Study areas are selected based upon TMDL development needs and where there is a local group ready to complete watershed planning and begin implementation. Physical, chemical, and bacteriological data are collected monthly for twelve months at the pour points. The remaining sites are sampled monthly from April through October, which constitutes the recreation season. Biological data are collected once per year at each of the sites. These data are used to identify the sources and extent of impairment for TMDL development and for local watershed groups to designate critical areas and management decisions for their watershed management plans. The rigor of this monitoring design supports future performance measures monitoring to determine if improvements in water quality have occurred due to management and Best Management Practice (BMP) implementation.

The following is an update of all closed, ongoing, and planned watershed characterization studies in FY 2024.

- Big Raccoon Creek (HUC 0512010815) - Water quality monitoring in the Big Raccoon Creek watershed was completed in October 2023.
- Indian Creek (HUC 05120201170) – Water quality monitoring in the Indian Creek watershed began in November 2023 and is to be complete by October 2024.
- Indian Creek-Monroe (0512020809) – Water quality monitoring in the Indian Creek-Monroe watershed will begin in November 2024 and is to be complete by October 2025.

Performance Measures/Monitoring for Success (Success Stories/WQ-10(a))

Part of U.S. EPA's strategy for showing improvement in nonpoint source pollution impairment is through Success Story submissions by the states. To show improvement, states must show that one or more of the waterbodies /impairment combinations primarily caused by nonpoint source pollution and identified on any state 303(d) list are removed.

Targeted monitoring to measure water quality improvement resulting from nonpoint source pollution grant projects was initiated in 2009. Performance monitoring targets watersheds that are impaired by nonpoint source pollution, receive nonpoint source funding, and meet threshold criteria. Threshold criteria can include the number of best management practices installed in a watershed, load reductions estimated, conclusion of a time lag for best management practice effectiveness, and group monitoring that indicates improvement. Sampling began in May 2023 in 11 performance monitoring watersheds: Black Creek (041000050104), Pigeon Lake- Pigeon Creek (040500011001), Page Ditch (040500011105), Hickory Branch-Iroquois River (071200020405), Burnett Creek (051201080202), Elliott Ditch (051201080104), Rogers Ditch (051201111511), Big Branch (051201111504), Little Creek (051201130706), Big Creek (051201130709), Calumet River-Frontal Lake Michigan (040400010603). In 2024, IDEM began monitoring in eight performance monitoring watersheds: Muddy Fork (051202060302), Turkey Run-East Fork Tanners Creek (050902030301), Indian Kentuck Creek (051401010205), Bone Creek-Flat Creek (051202090502), Mill Creek-Patoka River (051202090603), Sugar Creek-Patoka River (051202090604), Springle Creek-South Fork Blue River (051401040601), and Dutch Creek-South Fork Blue River (051401040604). Reasons for impairment in these streams include E. coli, nutrients, pH, and failure to support aquatic life. Samples are still being processed and IDEM reserves judgment as to whether any of the sampling in these watersheds demonstrates improvement. Success stories, load reductions, and BMPs reported in FY 2024 are described under Goal 4 of this document.

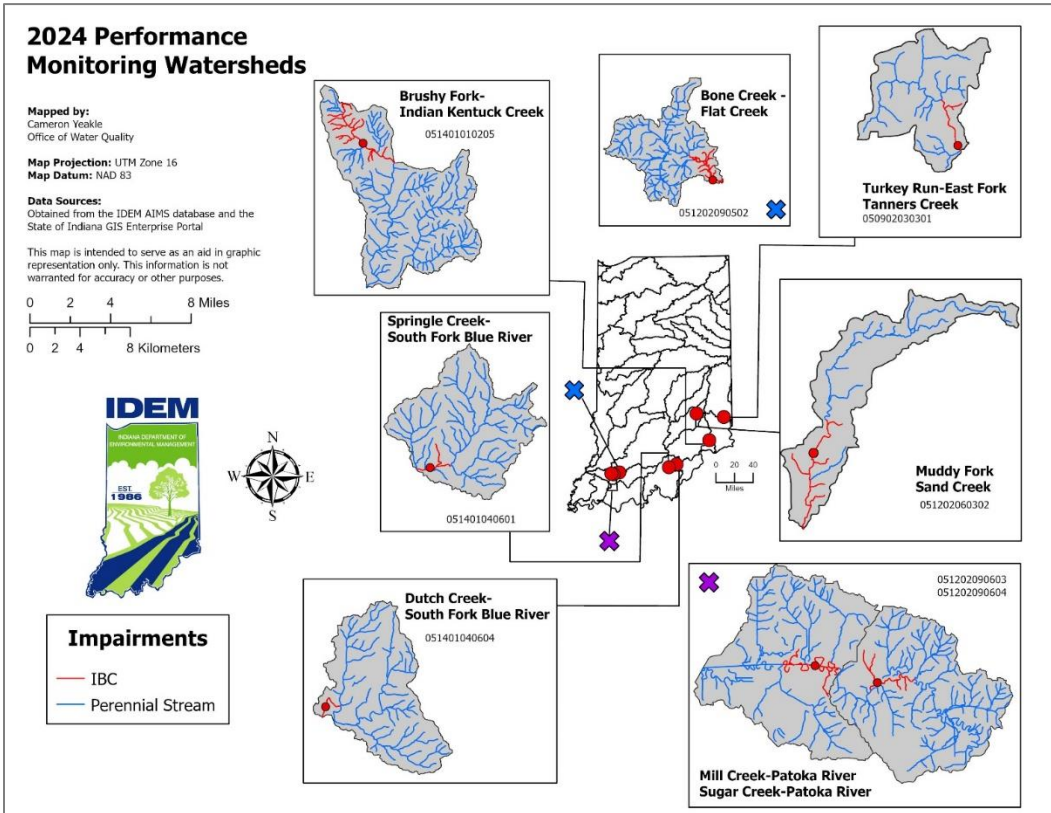
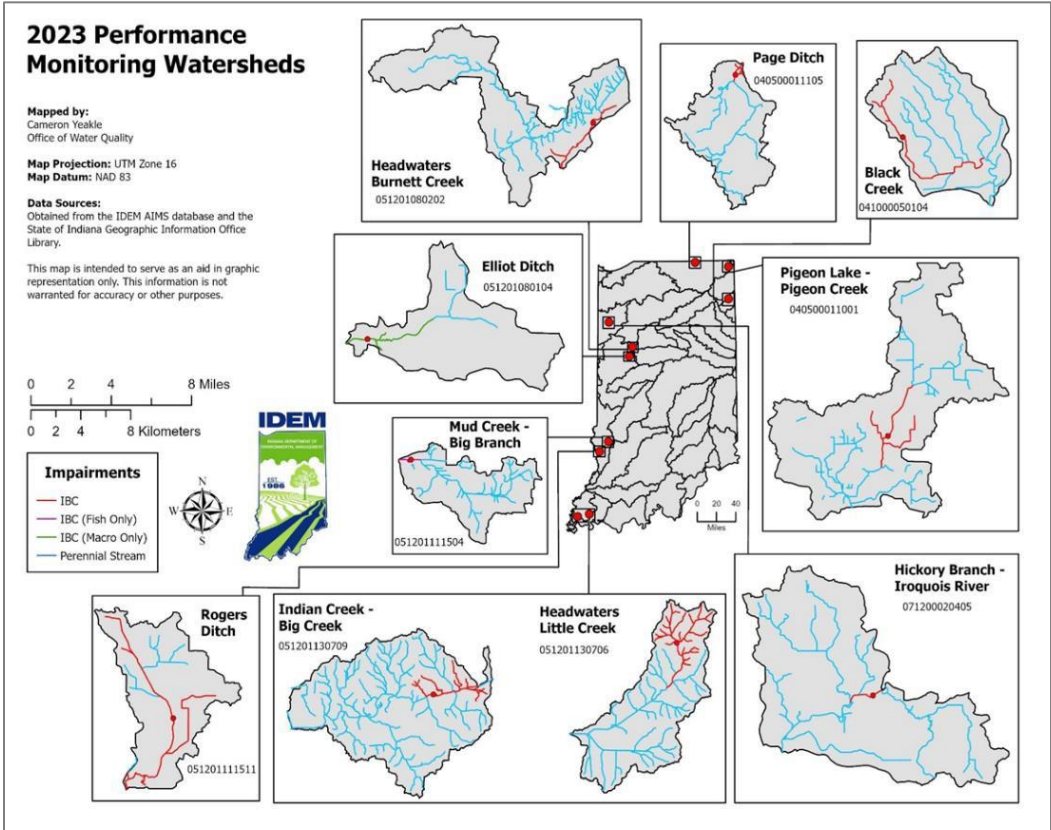


Figure 3. Performance monitoring watersheds in 2023 and 2024.

Ground Water Monitoring Network (GWMN)

Across the State of Indiana, ground water monitoring showed arsenic at concentrations ranging from non-detectable levels to levels well above the maximum contaminant level (MCL) of 10 parts per billion (ppb) in over 11% of residential wells sampled. Arsenic is naturally occurring and found in rocks, soil, water, and plants in many areas of the U.S. Arsenic is released into the water through natural events like infiltration, dissolution of minerals from clay, and erosion of rocks. Arsenic can also be released into the environment through industrial activities like wood preservation, mining, and smelting. In 2018, 231 of the sites with arsenic levels of $\frac{1}{2}$ the MCL (5 ppb) or greater were resampled to determine the specific concentration of two forms of arsenic, arsenic III and arsenic V. The samples collected in 2018 showed that the majority of arsenic present in Indiana groundwater occurs in the form of arsenic V, likely due to the strong reducing conditions in the groundwater. The sampling event confirmed that arsenic concentrations show high spatial variability across the state.

As a follow up in 2019, a small residential neighborhood in Nappanee in Elkhart County was intensively sampled to measure the variability of arsenic. Arsenic concentrations ranged from 13 to 140 ug/L over the 23-acre neighborhood, despite a similar geology across the study area. Statistical analysis of the full GWMN dataset showed that well depth and construction could account for small variations in arsenic levels across Indiana, but well depths alone could not explain the full variability of the arsenic levels observed in the Nappanee study area.

To further investigate the issue of spatial variability of arsenic levels, a residential neighborhood in New Palestine in Hancock County was selected for intensive sampling in 2023. The 400-acre neighborhood was selected because of known arsenic levels in groundwater from previous GWMN and the availability of well logs in the Indiana Department of Natural Resources database. Samples were collected from 48 private drinking water wells within the study area. Arsenic was found above the MCL in 12 of the samples with concentrations as high as 77 ug/L. For 2024, the small-scale study was expanded to four additional study areas across Hancock County. Sampling is ongoing for this season. When completed, the results from the study areas will be able to be compared to determine the aquifer characteristics responsible for the spatial variability of arsenic.

Beginning in the 2020 sampling season, a portion of the sites previously sampled for the GWMN were resampled to address cation-anion charge balance issues observed in the previous sampling. A total of 246 GWMN sites were resampled in 2020, and additional 125 sites were resampled in 2021. Evaluation of the data obtained from the resampling of sites in 2020 and 2021 is ongoing and once the charge balance issue is addressed, the geochemical modeling of the GWMN dataset can begin. Geochemical modeling will help evaluate the geochemistry of the aquifers of Indiana and determine the conditions under which arsenic is mobilized. The results of this study may allow IDEM to issue recommendations for well screen placement in newly drilled wells to minimize the amount of arsenic and assist in the creation of an arsenic hazard map in Indiana. A searchable database with information on arsenic levels in public drinking water in Indiana is available through IDEM's Drinking Water Branch at <https://myweb.in.gov/IDEM/DWW/>.

Additional Water Quality Monitoring

Entities other than IDEM conduct water quality monitoring programs around the state that are important to the Nonpoint Source Program. Many §319 projects conduct monitoring as part of their work to reduce nonpoint source pollution. These monitoring efforts and the subsequent data generated are shared and used by IDEM and others for many different purposes.

Hoosier Riverwatch Volunteer Monitoring Program

Hoosier Riverwatch (HRW) is a program hosted by IDEM's Watershed Assessment and Planning Branch

and is a volunteer-based stream water quality monitoring initiative. It is designed to increase public awareness of stream water quality issues by training citizen volunteers to monitor wadeable streams near their homes, schools, and communities in Indiana. The mission of HRW is “To involve the citizens of Indiana in becoming active stewards of Indiana's water resources through watershed education, water monitoring, and clean-up activities.” This mission is accomplished through the following goals:

- Educate citizens on watersheds and the relationship between land use choices and the resulting water quality of nearby streams.
- Train citizens on the basic principles of stream water quality monitoring.
- Promote opportunities for involvement in water quality issues at the local watershed level.
- Provide water quality information to individuals or groups working to protect water resources.
- Support volunteer efforts through technical assistance, monitoring equipment, networking opportunities, and educational materials.

HRW accomplishes its mission through training and equipping certified volunteer instructors, who in turn lead workshops to train volunteer monitors. HRW provides monitoring equipment to eligible groups and loaner equipment to eligible individuals. HRW also manages an online database as a repository of data collected by volunteers and distributes water quality news to volunteers and stakeholders. In FY 2024, 44 HRW workshops were held, and 125 stream sites were sampled by volunteers.

HRW maintains about two dozen loaner trunks across the state, with equipment needed to monitor water quality. These trunks may be borrowed by trained HRW volunteers for varying lengths of time. In addition, HRW staff were awarded one equipment grant kits this year. Requests to refill expendable/expired supplies and/or lost or broken equipment are also filled on an as-needed basis. These can be received from three sources: trainers preparing for workshops, those who maintain or house loaner trunks, and groups who have been awarded an equipment grant kit and have either been putting data into the database or submitting it to IDEM’s NPS staff. There were 119 equipment requests during the 2024 state fiscal year.

Indiana Clean Lakes Program

The Paul H. O'Neill School of Public and Environmental Affairs at Indiana University (IU) has been working with IDEM to use §319 funds to administer the Indiana Clean Lakes Program (CLP) since 1989. The Indiana CLP is a comprehensive, statewide public lake management program that includes public information and education, technical assistance, volunteer lake monitoring, and lake water quality assessment.

Indiana has over 1,400 lakes, reservoirs, and ponds—many of which are under pressure from human activities like poorly managed land disturbing activities, suburbanization of lakeshores, boating impacts, and septic system discharges. These activities can result in erosion, sedimentation, and excessive nutrient concentrations reaching lakes. This can lead to accelerated eutrophication and related undesirable effects including nuisance algae, excessive plant growth, murky water, odor, and fish kills.

Indiana’s CLP is coordinated by IU staff and students. The current grant agreement, which is in effect from April 2023 through May 2025, includes the following components:

- Annual sampling of 80 lakes and reservoirs (selected via a randomized approach) at one site for a variety of parameters. 2024 sampling occurred as scheduled.
- Training and support of a corps of volunteer lake monitors to collect water transparency data using a Secchi disk. A select volunteer group also collects chlorophyll-a and total phosphorus

data.

- Education and outreach through web engagement on social media or [Indiana Clean Lakes Program](#) website; maintenance of the website with program data, current information, ongoing activities and educational resources about lake and watershed issues; and participation in the annual Indiana Lakes Management Conference.
- Providing technical assistance and expertise on lake-related issues.

Section 314 of the CWA charges IDEM with responsibility for assessing and reporting the trophic status and trend in trophic condition of Indiana's public lakes. The State of Indiana began assessment of lake nutrient levels and effects in the early 1970s. Continued monitoring is necessary to:

- Report the status of lake eutrophication levels to the U.S. EPA in the State's Integrated Water Quality Monitoring and Assessment Reports.
- Determine and track trends in eutrophication levels of lakes and reservoirs to inform restoration priorities and activities.
- Provide data needed to support development of nutrient water quality criteria, as required by U.S. EPA.
- Provide data needed to determine if lakes and reservoirs are meeting water quality criteria and supporting the beneficial uses designated in Indiana's water quality standards.

Over the years, the Indiana CLP has continually provided IDEM a wealth of data for its CWA §314 and 305(b) assessments and for the development of its 303(d) List of Impaired Waters, which identifies waterbodies in need of restoration. These data are not only used to make waterbody-specific assessment and listing decisions, but the data set provided the foundation for the development of IDEM's assessment methodology for lakes and reservoirs. The Indiana CLP data, collected over more than three decades, have also been analyzed extensively by IDEM for the purposes of considering numeric nutrient water quality criteria for lakes and reservoirs. Although this work continues, the data set provided by the program and IDEM's analyses have helped inform the Agency's current approach to reducing nutrient loading to Indiana lakes and reservoirs.

Monitoring for the National Water Quality Initiative

IDEM is currently working with several partners to monitor at various scales in the School Branch watershed, part of the Eagle Creek watershed (HUC 051202011108), in Hendricks County, Indiana. This watershed is the focus of a collaborative, public-private partnership tied to the national initiative for agricultural conservation cropping systems. IDEM has provided the USGS with §319 and §205(j) grant funds to investigate three reaches of School Branch to determine if differences in physical, chemical, and biological indicators of stream water quality and quantity are related to long-term agricultural conservation cropping systems in the watershed. USGS was funded in 2016 with §319 funds to collect and interpret scientific data about water quality and water quantity in the School Branch watershed. The USGS was awarded a new §205(j) grant in FFY 2023 that extends the monitoring at School Branch through 2026. They will continue to operate three monitoring stations to continuously measure stream discharge. At one of these stations, real-time water-quality sensors and representative sampling are used to measure continuous and synoptic concentrations and loads of nitrogen, phosphorus, and suspended sediment in stream water. Continuous ground water levels and synoptic ground water quality are also measured. Chemical indicators of water quality and hydrologic data are used to understand the sources and transport of nitrogen, phosphorus, and sediment in the watershed. Biological inventories are used as additional indicators of water quality. A tile drain synoptic study was also completed. Data from the study is available at <https://pubs.er.usgs.gov/publication/sir20215061> and is communicated by the USGS through internet webpages, presentations, and publications.

In addition, IDEM has monitored two fixed station sites on School Branch monthly since April 2014 and continued through FY 2024. IDEM and USGS data (as well as data collected by other project partners) will be evaluated to determine whether goals of the project have been met. Additional watersheds, such as Ell Creek and Silver Creek, have been monitored for NWQI in the past. NRCS and IDEM are continuing to partner to evaluate the benefits of NWQI in future watersheds.

External Monitoring and the External Data Framework

IDEM recognizes that numerous universities, municipalities, watershed groups, and grassroots organizations throughout the state who participate in water monitoring activities. There are also regulated facilities that conduct monitoring above and beyond their permit requirements. Section 303(d) of the CWA requires that states consider all existing and readily available water quality data and related information in developing their 303(d) List of Impaired Waters. IDEM is required to solicit this information from external organizations for potential use in its 305(b) water quality assessments. Water quality data and information received from external organizations are reviewed for their usability in making assessments.

In 2015, OWQ developed the External Data Framework to provide a systematic, transparent, and voluntary process for external organizations to submit their water quality data for consideration in various OWQ programs. The External Data Framework describes OWQ policy regarding the agency use of external data, the guidelines for submitting data, and the technical assistance necessary to facilitate greater collaboration between OWQ and external parties.

[The External Data Framework website](#) is now active and provides general information on the EDF to the public. OWQ has also developed several presentations and other outreach materials to promote participation in the External Data Framework. The website offers guidance which provides an overview of the External Data Framework and addresses its structure, policies, and participation. The Technical Guidance also provides specific information regarding the requirements and recommendations of the External Data Framework that external organizations can use to develop their monitoring plans, improve the quality of the data they collect, and determine whether data sets they obtain from others are suitable for use in their projects.

OWQ's External Data Framework website also includes a page that describes two options for data submittal to OWQ's. All participants in the External Data Framework may select to 1) use a MS Excel template provided by OWQ that can directly upload into IDEM's Assessment Information Management System (AIMS), or 2) request the development of an electronic data import that will automatically feed their data into OWQ's AIMS database. Once data are in the AIMS database, they will be reviewed and ranked based on their data quality and made available to OWQ staff for use in their programs and by request to the public.

Data may be submitted to the External Data Framework at any time for consideration by the OWQ for potential use in its programs. OWQ programs can access data submitted through the External Data Framework at different times depending on their varying needs. Two OWQ programs – the Integrated Reporting and TMDL Programs – have more specific timelines in which they review the data submitted through the External Data Framework. Regardless of when they are submitted, all data sets are reviewed by OWQ and evaluated for their potential use by OWQ programs. These data and their associated quality assurance information can be accessed by other programs within IDEM or the public by request to the External Data Coordinator.

Data submitted by grantees of Indiana's Nonpoint Source Program are considered external data. These data are collected as a condition of IDEM's Section 319 grant with U.S. EPA and uploaded into U.S. EPA's Water Quality Exchange (WQX) with "CWA319" in the project ID. In FY 2024, eight datasets were uploaded into the national dataset: 2022 Little Blue River 68932 CWA 205j, 2022 Mill Creek-Wabash

River 70728 CWA 205j, 2022 Lower Elkhart River 68996 CWA 205j, 2020 Upper White WMP 48449 CWA 319, 2021 Upper Sugar Creek 58550 CWA 319, 2021 Upper Elkhart River 58587 CWA 319, 2020 Big Pine Mud Creek 49760 CWA 319, and 2020 Highland Pigeon 47568 CWA 319.

The OWQ secured funding through CWA Supplemental 106 (also called “Monitoring Initiative Funds”) to develop an online tool to help improve the data quality documentation that External Data Framework participants provide with their data submittals. This tool will facilitate the design of water quality monitoring projects and the development of associated quality assurance project plans (QAPP) by participants in the External Data Framework. The first phase of application development and testing of the “QAPP Tool” was completed as of June 30, 2021. QAPP Tool testing and maintenance is still ongoing in FY 2024 and IDEM is now in the process of uploading instructional content and technical assistance materials provided by an earlier (FFY 2013) CWA Supplemental 106 project. The 2013 project also produced a matrix to help IDEM choose the best platforms and cost-effective software to use in delivering content to participants. The content will be delivered online through an interactive interface that will benefit both OWQ and External Data Framework participants.

With the QAPP Tool, data collectors can develop a QAPP that contains all the informational requirements in U.S. EPA’s QA-G5 Guidance for Quality Assurance Project Plans. For Indiana users, the QAPP Tool assists in the development of QAPPs required for Nonpoint Source Program projects and provides guidance for anyone submitting external data through IDEM’s External Data Framework (EDF). For the NPS program, the tool also facilitates and streamlines the QAPP review and approval process. Below is a list of some of the key features and benefits provided by the QAPP Tool:

- Users can develop their QAPP online in a self-paced, guided process through a series of online forms. Users can save work in progress and download/print their finalized QAPP as a PDF.
- While developing their QAPP, users can access learning and other support materials in a variety of formats (video, downloadable documents, links to outside sources, etc.), tailored to their unique needs and the section they are working on.
- Users can upload additional materials if needed to append to their QAPP.
- When users have questions, they can interact directly with OWQ staff from within the tool using the Inquiry function. With this function, users can submit their questions within a given section of the QAPP, which triggers an email notification to OWQ staff that assistance is needed. Likewise, OWQ staff can respond to the inquiry within the admin area of the tool and upload or provide links to any additional technical assistance materials the user might need. This allows OWQ staff to provide highly targeted technical, yet streamlined, assistance to individual users.
- Users also can validate their QAPP prior to submitting it for review and approval (if required). The validation process checks to make sure all the required sections of the QAPP are complete and highlights those that are not.
- Users can also submit the finalized QAPP to OWQ for review and approval (if required) directly within the tool. Submittal of a finalized QAPP triggers an email to the OWQ staff member responsible for reviewing it. Once approved, the final OWQ approver can sign the approval page directly in the app.
- Completed QAPPs (as well as QAPPs in progress) are accessible at any time by both the users that authored them and OWQ staff and can be revised at any time and resubmitted for re- approval if required.
- The QAPP Tool allows anyone interested in documenting the quality of the data they are collecting to develop a QAPP. While the “marketing” of this tool will be targeted toward

organizations interested in sharing their data with IDEM, there are no barriers to its use by anyone in Indiana or elsewhere who are required to or have an interest in developing a QAPP.

Understanding the quality of external data sources is the key to confidently using these data. However, developing a QAPP to document the quality of data being collected has been a very arduous process for OWQ's NPS program projects and EDF participants. While the key requirements of a QAPP have not changed, the QAPP Tool makes meeting those requirements much easier. The online tool was developed to deliver technical expertise in an easy-to-use interface. This tool will not only improve the ability to serve OWQ programs but will also prove beneficial to any organization with an interest in improving the quality of the data they collect.

GOAL 3: DEVELOP AND CONDUCT A STRATEGIC OUTREACH AND EDUCATION PROGRAM

Outreach and education programs are used to help raise awareness of nonpoint source pollution issues to citizens of Indiana. Many citizens still do not have the basic knowledge or understanding of nonpoint source pollution, how a watershed functions or how their behaviors lead to water quality impairments. Without this understanding, they are less likely to change their behavior or support nonpoint source pollution reduction efforts. IDEM works to achieve unified messaging so that any campaigns on nonpoint source pollution are consistent with partners across the state.

In this past year, IDEM's Nonpoint Source Program continued to update its [website](#) with current information to educate citizens on nonpoint source pollution, provide grantees with information and guidance to successfully complete their nonpoint source pollution grant projects, share information about nonpoint source pollution grant projects and their successes, and communicate with stakeholders and partners on nonpoint source pollution efforts. IDEM has also continued to provide technical and/or financial support to education/outreach and training initiatives such as the Indiana Watershed Leadership Academy (IWLA) sponsored by Purdue University, the Indiana Lakes Management Society, the ICP's Training and Certification Program, and citizen monitoring training through Hoosier Riverwatch and the Indiana Clean Lakes Program. IDEM nonpoint source program staff continues to engage interested groups and communities, through direct contact, conference attendance, involvement in statewide and regional committees, and webinar and other training opportunities. A full accounting of progress made this year toward the objectives of Goal 3 in the [Indiana Nonpoint Source Program management plan](#) can be found in Appendix A.

Web-based Products

IDEM's NPS program hosts several web-based tools that integrate information about water quality, watershed health, and activities that are on-going in the OWQ. These tools are useful to watershed specialists in-house, external partners, watershed groups planning projects, and for public education and outreach. In addition to continually updated applications such as the [TMDL-NPS Story Map](#), [WMP and TMDL Report Search Tool](#) (WATRS Tool), and the [Indiana Impaired Waters e303d Tool](#), the [IDEM Funding Matrix](#) was updated in FY 2023 to integrate new and revised funding information for grantmaking activities available to watershed groups in the state. It was created to provide information on monetary sources available in addition to those at IDEM for funding watershed improvement work.

Watershed Specialists

The Watershed Specialists support watershed-based efforts throughout the state, providing financial, organizational, and technical assistance to local watershed groups, while also continuing to serve as grant Project Managers. Key accomplishments for FY 2024 are:

- Assisted approximately 68 active and developing watershed projects.

- Assisted Purdue University with the Indiana Watershed Leadership Academy by meeting the participants and explaining the Watershed Specialists' role.
- Worked with others in the Watershed Assessment and Planning Branch to develop watershed characterization studies and WQ-10(a) targeted monitoring sites.
- Continued to participate in the ICP's Pathway to Water Quality advisory committee to improve the Indiana State Fair exhibit that reaches tens of thousands of Hoosiers each year.
- Provided extensive support to the committee, led by IDEM, that is dedicated to implementing the *Domestic Action Plan* for Indiana under Annex 4 of the Great Lakes Water Quality Agreement.
- Coordinated actions between the watershed characterization/TMDL project staff and the nonpoint source program.

Indiana Watershed Leadership Academy

IDEM is continuing to partner with Purdue University to conduct the Indiana Watershed Leadership Academy (IWLA) to meet the needs of watershed coordinators, agency staff, and others who want to become more effective watershed leaders. Leading the development of a scientifically-sound watershed management plan that actively involves, engages, and is supported by the community requires people who have broad skills and know how to employ diverse tools and strategies related to watershed management.

Since 2006, more than 532 people have participated in the Academy learning skills in organization and communication, watershed technology, geographic information systems, policy, watershed science, and leadership. Forty-seven participants attended the 2024 Academy. Face-to-face meetings were held in January and March and 1-hour virtual sessions were held every two weeks in between. The program concluded with an in-person graduation ceremony on May 22, 2024.

The IDEM Nonpoint Source Program participates in the IWLA in several ways. NPS staff participate once a year in a steering committee meeting to discuss the future of the Academy and the NPS Section Chief participated as a session speaker to educate participants on how Indiana implements the Clean Water Act framework for improving water quality. The Watershed Specialists attended the first face-to-face session to network with potential new contacts and attended the graduation ceremony to support the graduates. The IWLA is funded in part through a FFY 2021 §319 grant.

Indiana Conservation Partnership Training and Certification Program

Since September 2009, IDEM has participated with other members of the Indiana Conservation Partnership (ICP) in developing a Training and Certification Program (TCP) to meet staff training and certification needs across the partnership. The ICP TCP operates with the help of a volunteer planning team.

In FFY 2024, the ICP's Technical Research Board and the advisory team has been working on updating the plan of work for 2025 and completing and recording trainings. The committee reviewed the ICP website and worked to generate a statewide map showing who requested trainings by number and county. The training sessions calendar and recordings from past sessions are available on the ICP [website](#).

Revision of the State NPS Program Management Plan 2025-2029

Indiana has been working with DJ Case and Associates to review and revise the State's *Nonpoint Source*

Program management plan that outlines how IDEM will administer and report on its use of federal funds for implementing the Nonpoint Source Program. IDEM and DJ Case have held two task force meetings with various partners from the ICP to develop strategic strategies for the Nonpoint Source Program for the next five years. The new revised plan will be a full revision, unlike the 2019 Addendum to the 2014 Plan. The final version of the NPSMP is expected to be submitted to EPA no later than September 31st 2024. The next year's NPS Annual Report will reference the goals and objectives of the new *State Nonpoint Source Program management plan*.

Watershed Group Recognition

The Hoosier Riverwatch (HRW) held their Annual Instructor Gathering to recognize the hard work of the HRW instructors. In the last year, three instructors were awarded the Lifetime Appreciation Award for those who have been involved with HRW for the longest. Instructors were also awarded for the Outstanding Outreach Award, awarded to the instructor who provided the most workshops in a calendar year, and the Fantastic Facilitator Award, for instructors who inspired, mentored, or guided a volunteer, where they went above and beyond the teaching of a workshop. Over the last two years, there have been a total of eight award winners.

GOAL 4: IMPROVE INDIANA'S WATER QUALITY, INCLUDING SURFACE AND GROUND WATER, BY REDUCING NONPOINT SOURCE POLLUTANTS SUCH AS NUTRIENTS, SEDIMENT, AND BACTERIA; RESTORING AQUATIC HABITATS; AND ESTABLISHING FLOW REGIMES THAT MIMIC NATURAL CONDITIONS

The heart of Indiana's Nonpoint Source Program is its effort to restore waterbodies impaired by NPS pollution. A primary focus of the NPS program is to help improve conditions so that the state's water quality goals of "swimmable" and "fishable" are met. The Watershed Planning and Restoration Section (WPRS), which houses the Nonpoint Source Program, administers two federal pass-through grant programs aimed at improving water quality in the state: the CWA §319(h) and §205(j) programs. Section 319(h) funding is predominantly used for the development and implementation of comprehensive watershed management plans (WMPs) that guide efforts to restore water quality in impaired waterways. Section 205(j) funding is used for the development of comprehensive WMPs along with monitoring projects to better assess water quality in Indiana. This has resulted in measurable improvements, especially in terms of estimated pollutant load reductions (Table 2). The WPRS also administers the TMDL program and the 303(d) Vision, and efforts are underway to revisit and integrate both the Nonpoint Source and TMDL program priorities. More information about the §319 and §205(j) grant programs and the TMDL program may be found on [IDEM's website](#). A full accounting of progress made in FY 2024 toward the objectives of Goal 4 in the [Indiana Nonpoint Source Program management plan](#) can be found in Appendix A.

Section 319 Grant Program

The §319 Grant Program is a major resource for reducing nonpoint source pollution in Indiana. In FY 2024 Indiana anticipates receiving \$3,645,000 in §319 funds that will be used for Nonpoint Source Program support (technical staff and administration) and nonpoint source pollution projects. It may be important to note that as of the writing of this report, though FFY 2024 funds have been allocated, but they have not yet been received. As a result of non-federal partnerships discussed under Goal 1, the Maintenance of Effort (MOE) level requirement under §319(h)(9) will be met this year.

Federal §319 grant funds require that a 40% match of project funding dollars be from a non-federal source. Match for Indiana's NPS pollution projects is provided by the project sponsor and its partners.

Match for IDEM’s staffing and program support activities is provided by the Indiana State Revolving Fund Loan Programs administered by the Indiana Finance Authority. The State Revolving Fund Loan Programs provide low-interest loans, funded by federal capitalization grants, to Indiana communities for projects that improve wastewater and drinking water infrastructure, including nonpoint source pollution projects that are tied to a wastewater loan. The federal funds loaned by the state and subsequently repaid by the borrower to the state are considered state funds. These funds are “recycled” to provide loans for other projects and can be used as match for the Nonpoint Source Pollution Program. To date, all the State Revolving Fund projects used for Nonpoint Source Program match involve extending sewers to areas with failing and aging septic systems. Removing these septic systems eliminates nonpoint source pollutants including pathogens and nutrients. Since extending sewers is considered a point source activity, only the homeowners’ cost to decommission the septic tank and hook up to the lateral is documented as match.

Section 319 Funding Priorities

U.S. EPA requires states to use at least 50% of their annual appropriation of §319 funds (called watershed project funds) to implement watershed-based (i.e., watershed management) plans in areas containing one or more impaired waters. A limited amount of watershed project funds may be allocated to the protection of unimpaired and high-quality waters if the state has listed protection as a priority in their State Nonpoint Source Program management plan. Protecting sensitive, vulnerable, and high quality waters of the state is Goal 5 of the updated [Indiana Nonpoint Source Program management plan](#). The EPA provides Indiana with an equal or lesser amount of program dollars which fund other activities that address NPS pollution including education, watershed planning, and program support.

Each year, IDEM solicits applications for projects that will reduce nonpoint source pollution in Indiana’s surface waters. Projects are selected based on their ability to make measurable improvements in water quality and to protect water quality designated uses (i.e., recreation, aquatic life, and public water supply). IDEM established the following four priorities for FFY 2024 funds. Projects focusing on these priorities through planning and implementation activities were considered a priority for funding:

- A. Develop a WMP or implement an IDEM-approved WMP that will reduce nutrient loads within the following 8-digit HUC watersheds (prioritized in [Indiana’s State Nutrient Reduction Strategy](#)). See Appendix B for the Nonpoint Source Priority Watersheds (FFY 2024) map for these HUC-8 Priorities.
 1. Upper Wabash (05120101).
 2. Middle Wabash-Deer (05120105).
 3. Middle Wabash-Little Vermillion (05120108).
 4. Middle Wabash Busseron (05120111).
 5. Lower Wabash (05120113).
 6. Upper White (05120201).
 7. Lower White (05120202).
 8. Maumee River (04100003, 04100004, 04100005, 04100007).
- B. Develop a WMP or implement an IDEM-approved WMP that includes a 10-digit HUC watershed with a surface water drinking water intake and waters identified in Category 4A and 5A of the Draft 2024 [§303\(d\) List of Impaired Waterbodies](#). This priority is derived from Goal 5, Objective 5.2 of the [Indiana State Nonpoint Source Program management plan](#). See the Nonpoint Source Pollution Priority Watersheds (FFY 2024) map for the Drinking Water Priority watersheds.

- C. Develop a WMP or implement an IDEM-approved WMP that includes a 10-digit HUC watershed that impacts outstanding state resource waters and/or waters with endangered, threatened, or rare species. This priority derives from Goal 5, Objective 5.5 of the *Indiana State Nonpoint Source Program management plan*. See the Nonpoint Source Pollution Priority Watersheds (FFY 2024) map for the Protection Priority Watersheds.
- D. Implement a WMP that meets the [IDEM 2009 Watershed Management Plan Checklist](#).

Section 319 Grant Projects

Grant applications are submitted each year by project sponsors, reviewed by a committee of WPRS staff, and selected for funding based on the Nonpoint Source Program's priorities and the quality of the proposal. Projects are administered through grant agreements that spell out the tasks, schedule, and budget for the project. Projects and grant agreements are typically administered over a two–three-year period. Projects are selected based on their expected impact on water quality. They are guided by the development of watershed management plans that must meet the criteria in IDEM's WMP Checklist and the EPA's 9 Key Elements for a successful watershed management plan. WMPs outline local water quality concerns and guide the implementation of cost-share programs to employ BMPs in critical areas of the watershed. The projects must also design education and outreach programs to bring about behavioral changes for stakeholders in the watershed and encourage BMP implementation. IDEM Project Managers or Watershed Specialists work closely with the project sponsors to help ensure that the project runs smoothly, and the tasks of the grant agreement are fulfilled. Site visits are conducted at least quarterly to communicate with the project sponsors, provide guidance and technical assistance, tour the watersheds and see the BMP installations, and work through any issues to ensure a successful project close-out.

Eight watershed projects allocated for funding in FFY 2024 address one or more of the Nonpoint Source Program priorities. These projects will be developing or implementing WMPs in watersheds with impaired waterbodies. The remaining two projects allocated for funding in FFY 2024 was for program support funding. Currently, there are 51 open or pending §319 projects, of which 39 are implementing watershed management plans and installing BMPs in critical areas of the watershed. Table 1 lists some of these BMPs. These implementation projects are achieving nonpoint source pollutant load reductions (Table 2), and improved water quality. All §319 projects open or pending during this fiscal year are located in Appendix C. Appendix D features a map showing the watersheds throughout Indiana where nonpoint source pollution §319 implementation projects are open, pending, or were completed during State Fiscal Year 2024.

Project information for all §319 projects is entered and maintained in U.S. EPA's Grant Reporting and Tracking System (GRTS) database. State Revolving Fund or other projects used as match for the Nonpoint Source Pollution Program are also entered at the end of the grant cycle. GRTS enables U.S. EPA and states to demonstrate the accomplishments achieved with the use of §319(h) grant funds. The data are also used by U.S. EPA to respond to inquiries received from Congressional committees, the White House, and various constituent groups. Project information in GRTS includes the project schedule, budget, description, type of BMPs implemented, location of BMPs, estimated pollutant load reductions, and progress reports. Final reports and deliverables for all projects are also entered into GRTS. The public may view this information on the [GRTS Home Page](#). Section 319 projects that closed this fiscal year are summarized in Appendix E, along with a summary of compliance with the Programmatic §319 Grant Conditions.

The Nonpoint Source Pollution Program is continually working to update and improve guidance for grantees to help them as they work towards implementing their nonpoint source pollution grant

project. Most information needed can be found on the [IDEM website](#); much of it in the [Nonpoint Source Pollution Grants Compendium](#), which is comprised of all the guidance, instructions, and requirements for §319/205(j) grantees.

Best Management Practices and Pollutant Load Reductions

Best management practices (BMPs) are land management techniques that mitigate pollution of the watershed and are compatible with the productive use of the resource. BMPs are used in both urban and agricultural areas. A project that is implementing a WMP administers a cost-share program to help landowners implement BMPs in critical areas to reach the goals of the WMP. If the planning process was successful, landowners will be aware of the water quality problems in their local watershed(s) and the ways to reduce the nonpoint source pollution, and they will be ready to participate in the cost-share program. When appropriate, IDEM encourages grantees to consider BMPs that will meet multiple objectives. For example, in the waters of the Coastal Zone, restoration activities undertaken with §319 funds will also be in accordance with the CZARA §6217(g) measures. IDEM is currently modeling this “bigger bang for the buck” concept through its TMDL/Nonpoint Source Pollution Program. TMDLs are being written on the TMDL-WMP template that allows watershed groups to incorporate TMDL data into their WMPs and streamline the watershed planning process. In addition, IDEM is encouraging a systems approach to implementing BMPs. Project groups are encouraged to work with landowners to implement a systems approach and prioritize cost-share recipients that propose a conservation cropping system (e.g., nutrient management conservation system or a conservation cropping system for soil health and water quality) rather than a single BMP.

In the state fiscal year 2024, watershed groups spent approximately \$1,007,933 (reported through June 1st, 2024) to install BMPs in critical areas of Indiana’s watersheds. Table 1 lists some of the BMPs implemented this state fiscal year compared to the last two fiscal years based on data from IDEM’s Project Tracking database. Watershed groups used an estimated \$1,039,301 and \$893,209 in funding to implement BMPs in state fiscal years 2022 and 2023, respectively. Total summaries reported here reflect the year of BMP implementation, regardless of the year the cost-share program was funded.

Table 1. A summary of the best management practices implemented in Indiana during State Fiscal Years 2022- 2024.

BMP	Approximate Number FY 2022	Approximate Number FY 2023	Approximate Number FY 2024
Cover Crop (acres)	10,005	13,823	10,956
Fence (feet)	21,710	18,356	17,523
Grassed Waterway (acres)	1.2	2.71	3,556
Heavy Use Area Protection (sq. ft)	79,720	92,967	36,259
Nutrient Management (acres)	0	1,391	3,074
Pasture and Hay Planting (acres)	77	440	59.9
Residue Management, No-Till (acres)	0	4.8	1,105
Tree and Shrub Establishment (each)	260	58	114
Watering Facility (each)	19	7	12
Rain Barrels (each)	2	1	2
Rain Gardens (sq. ft)	693	0	0
Native Planting (sq. ft)	39,094	4.4	0
Streambank and Shoreline Protection (sq. ft)	165	220	72

Additional BMPs implemented this year include adding access roads, animal trails and walkways, water and sediment control basin, and waste facility closure. The number of BMPs implemented each year varies depending on several factors including the weather, the focus of project implementation efforts guided by a watershed management plan, the change in focus and availability of other federal and state program grant funds, and changes in BMP promotion and recommendation in the agricultural community.

Indiana’s Nonpoint Source Pollution Program evaluates the effectiveness of BMP installations by estimating pollutant load reductions. Load reductions are measures that can be used to estimate the quantity of pollutants that were prevented from entering streams and lakes. Pollutant load reductions are primarily estimated using the Region 5 Load Estimation Model. This simple Excel workbook model provides a gross estimate of pollutant reductions (sediment, phosphorus, and nitrogen) from structural and agricultural field practices and urban BMPs. Reductions achieved through practices related to nutrients (not tied to sediment), bacteriological, and pesticide management are not captured through this estimation method; another model or method for estimating these load reductions must be used. In addition to the Region 5 Model, the Pollution Loading and Estimation Tool (PLET) model also is available and is used by some groups in Indiana. This model uses simple algorithms to calculate nutrient and sediment loads from different land uses and the load reductions that would result from the implementation of various BMPs. In addition, Indiana has created an Indiana *E. coli* Calculator (IEC), based upon the Bacterial Indicator Tool, to estimate bacterial load calculations. For each watershed, the annual nutrient loading is calculated based on the runoff volume and the pollutant concentrations in the runoff water based on factors such as the land use distribution and management practices.

Estimated load reduction data for each BMP implemented under a section 319 grant funded project (including BMPs not funded with §319 dollars and used as matching funds) are submitted by the project sponsor and entered by the IDEM project manager into the project tracking database at IDEM and the U.S. EPA GRTS database. Estimated load reductions vary depending on factors including the type of BMP implemented, the number of acres treated, land use, soil type, and in some cases, rainfall amounts. Urban BMPs generally provide lower estimated load reductions than agricultural BMPs. An estimate of the load reductions for BMPs implemented FY 2024 compared with the last two years are shown in Table 2. A summary of the cumulative total estimated load reductions reported in Indiana from §319 projects since reporting begin in FFY 1999 through July 14, 2024, are shown in Table 3.

Table 2. A summary of the estimated load reductions reported in State Fiscal Years 2022-2024.

Nonpoint Source Pollutant	Estimated Reduction FY 2022	Estimated Reduction FY 2023	Estimated Reduction FY 2024
Sediment (tons/yr.)	61,096	50,244	30,378
Phosphorus (lbs. /yr.)	65,795	54,269	35,675
Nitrogen (lbs. /yr.)	134,146	137,043	128,950
Biological Oxygen Demand (lbs. /yr.)	300	0	2
Chemical Oxygen Demand (lbs. /yr.)	1,580	0	11
Suspended Solids (lbs. /yr.)	62,706	0	28,910
TKN (lbs. /yr.)	0	0	0
Pathogens (coliform)*	0*	0*	0*
<i>E. coli</i> * (MPN/yr.)	9.04E+14	0	0

*Prior to 2021 the Spreadsheet Tool for Estimating Pollutant Loadings (STEPL) and the Ohio Septic Load Reduction Spreadsheet were used to calculate pathogens (as coliforms) for the purposes of BMP reduction, mostly from septic system removals. However, with the advent of the use of the Indiana *E. coli* calculator, the program could start to estimate *E. coli* reductions from agricultural and urban practices installed by the program. This change reduced reported coliforms by more accurately representing the *E. coli* reductions in the state.

Table 3. A summary of the cumulative total estimated load reductions in Indiana since FFY 1999.

Nonpoint Source Pollutant	Total Estimated Reduction
Sediment (tons)	1,470,561
Phosphorus (lbs)	2,084,559
Nitrogen (lbs)	4,208,274

BMPs and Load Reductions in State Fiscal Year 2024

To show the work that is being done in the different basins of the state and help target future resources, the achieved load reductions have been summarized for the following five major basins: Great Lakes, Upper Mississippi River, Wabash River, White River, and Ohio River (Figure 4).

Approximately 82% of Indiana (including the Wabash River and White River basins) drains to the Ohio River which flows into the Mississippi River until it reaches the Gulf of Mexico. Eight percent of Indiana drains (through Illinois) to the Upper Mississippi River and approximately ten percent of Indiana drains to the Great Lakes (Lake Michigan and Lake Erie). The bar chart on the following pages shows the load reduction of nitrogen, phosphorus, and sediment by BMPs installed in state fiscal year 2024 (Figure 5).

Nutrient load reductions to the Great Lakes are important because excess nutrients can result in harmful algal blooms. Phosphorus reduction in Lake Erie has become a focus at the state and national level to try and mitigate the issues resulting from large algal blooms. Indiana is engaged in the Great Lakes Water Quality Agreement Annex 4 Subcommittee. Many efforts are currently underway to target harmful algal blooms and reduce the amount of phosphorus entering Lake Erie. However, no implementation projects were reported in the Great Lakes in FY 2024.

As part of the Mississippi River watershed, Indiana is involved in the Mississippi River/Gulf of Mexico Hypoxia Task Force to eliminate the annual dead zone (or hypoxic zone) in the Gulf of Mexico. Nutrient loads from the Mississippi/Atchafalaya River Basin are contributing to eutrophication and harmful algal blooms in the Gulf. The development of [Indiana's State Nutrient Reduction Strategy](#) represents the state's commitment to reducing nutrient runoff from point and nonpoint sources. Nutrient reduction in the state benefits the local water quality and downstream in the Mississippi, Gulf of Mexico, and Great Lakes.

There were two implementation projects this year in the Upper Mississippi River Basin. However, no BMPs were installed by either project due to one project closing and the other just beginning in State Fiscal year 2024.

There were sixteen projects that implemented BMPs in the Wabash River Basin this year that reduced nutrient loads to the river as shown below in figure 5. An estimated 4,962 acres of cover crop were planted, and nutrient management plans were applied to 3,074 acres. The estimated load reductions achieved included 7,638 tons of sediment, 11,006 pounds of phosphorus, and 79,600 pounds of nitrogen.

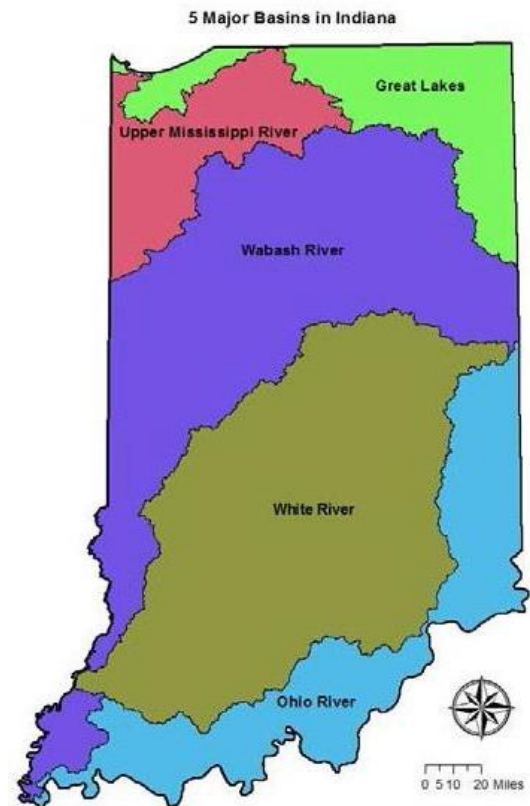


Figure 4. Major river basins in Indiana.

Eleven projects in the White River Basin worked to reduce nitrogen, phosphorus, and sediment in the watershed. An estimated 1,984 acres of cover crop were planted, 12,655 square feet of heavy use area protection was installed, and 2,316 feet of fencing was installed. Various other BMPs were implemented this year within the White River Basin, including watering facilities, pasture and hay planting, access roads, and roof runoff structures. The estimated load reductions were 6,544 tons of sediment, 7,185 pounds of phosphorus and 14,369 pounds of nitrogen.

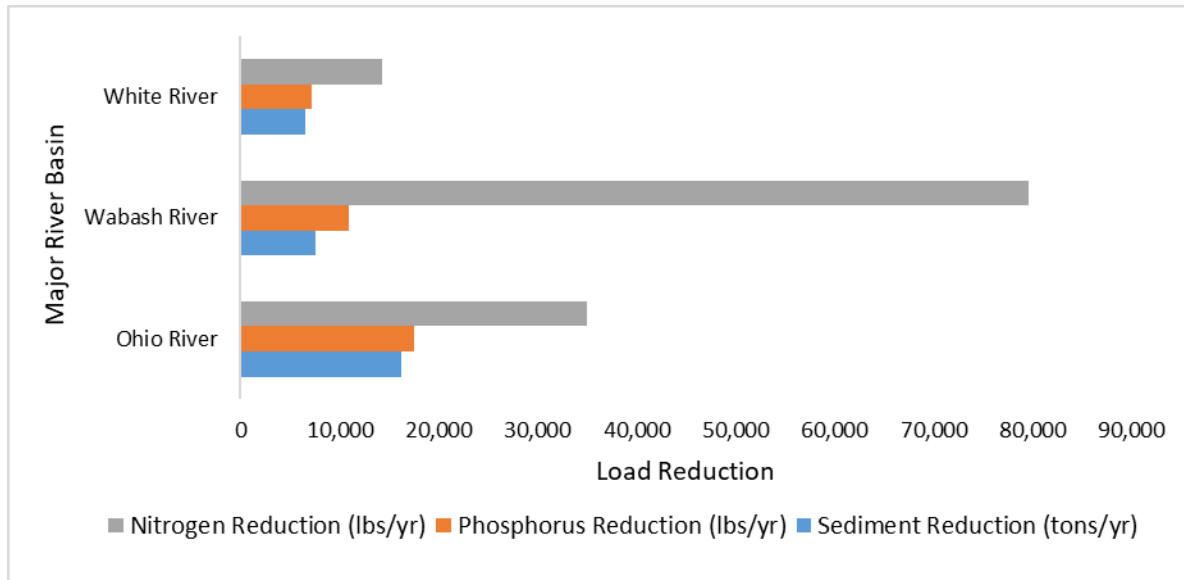


Figure 5. Load Reductions by Basin in State FY 2024.

Seven active projects in the Ohio River Basin worked to reduce nitrogen, phosphorus, and sediment. These reductions came primarily from implementation of cover crops, 4,009 acres, and heavy use area protection, 21,729 square feet, among others. These BMPs have estimated reductions of 16,195 tons of sediment, 21,971,483 pounds of phosphorus and 34,981 pounds of nitrogen.

Combined, the projects in areas that ultimately drain to the Gulf of Mexico had estimated load reductions of 30,378 tons of sediment, 35,675 pounds of phosphorus, and 128,950 pounds of nitrogen.

Nonpoint Source Success Story

Section 319 Nonpoint Source Pollution Success Stories are stories about nonpoint source pollution- impaired waterbodies where restoration efforts have led to documented water quality improvements. Many stories are about waterbodies that have achieved water quality standards for one or more pollutants and/or designated uses after having been previously included on the State's 303(d) List of Impaired Waters.

Aquatic Life Use Restored in Two Hogan Creek Watershed Streams

Waterbody Improved

The Indiana Department of Environmental Management (IDEM) listed several streams in the Hogan Creek watershed on its Clean Water Act (CWA) Section 303(d) List of Impaired Waters beginning in 2002 due to elevated *Escherichia coli*, impaired biotic communities, and low dissolved oxygen (DO). Partners developed and implemented the Hogan Creek Watershed Project (HCWP) in 2005, out of which the Hogan Creek Watershed Management Plan (WMP) was developed. After years of implementing best management practices (BMPs) and education and outreach in the watershed, monitoring revealed that aquatic life and/or recreational use is supported. IDEM removed biotic community impairments in Little Hogan Creek and South Hogan Creeks from the CWA 303(d) list in 2022 (see [earlier success story](#)) and will propose to remove *E. coli* and DO impairments from Goose Run and Little Hogan Creek in 2024.

Problem

Hogan Creek flows from its headwaters in northeast Ripley County until it reaches its confluence with the Ohio River, just north of the town of Aurora in southeastern Indiana (Figure 6). The greater Hogan Creek watershed (HUC 0509020304) includes Little Hogan Creek, South Hogan Creek, and Goose Run, in adjacent subwatersheds, constituting approximately 35 miles of stream combined. The Hogan Creek watershed is nearly half agricultural and half forested land. According to the 2007 Hogan Creek WMP, the Hogan Creek Steering Committee identified the top five concerns within the watershed as water quality, dumping of garbage, failed septic systems, cropland erosion, and urbanization. A windshield survey conducted by members of the Hogan Creek Technical Committee in 2006 identified farms that allowed livestock direct access to two tributaries of Hogan Creek and had numerous overgrazed pastures.

IDEM measured water quality in the watershed in 2010 as part of its Ohio River probability monitoring program and discovered that DO fell below the 4 milligrams per liter (mg/L) state standard on Goose Run, measuring at 2.42 mg/L. Additionally, *E. coli* was elevated on Little Hogan Creek (INV0341_T1006).

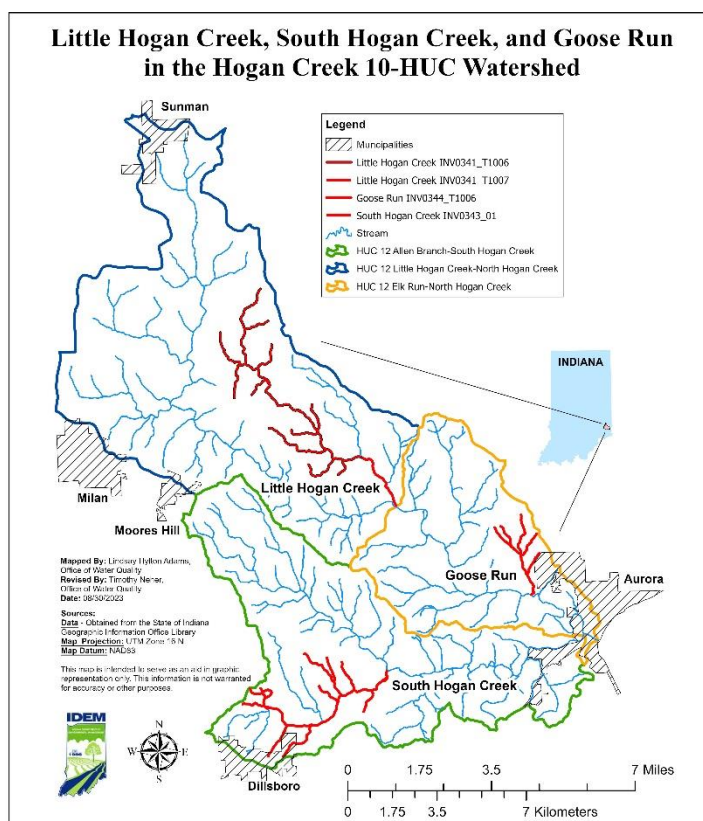


Figure 6. Southeastern Indiana's greater Hogan Creek watershed includes the Little Hogan Creek, South Hogan Creek, and Goose Run subwatersheds.

Elevated (in this case) means that two individual sampling events were above the single sample maximum of 235 colony-forming units (CFU)/100 milliliters (mL) and the geometric mean of five equally spaced samples collected over a 30-day period was greater than the state water quality standard of 125 CFU/100 mL.

Story Highlights

The Dearborn County Soil and Water Conservation District (SWCD) formed the HCWP in 2005, and the resulting WMP was approved in 2007. Since the approval of the WMP, the group has received four CWA section 319 implementation grants. See the 2020 success story, [*Aquatic Life Use Restored in Two Hogan Creek Watershed Streams*](#), to learn about efforts through 2018 that restored Little Hogan and South Hogan creeks. The most recent grant was administered in 2018, where the HWCP used the funding to install BMPs in critically needed areas within the watershed. The fourth round of implementation concluded in February of 2022, marking 14 years of BMP implementation.

Since the initial funding of section 319 implementation dollars in 2008, the HWCP has received \$757,851 in federal grant money. These dollars have supported the implementation of several BMPs within the watershed, notably over 3,500 acres of cover crops; 2,600 feet of access roads; 96,000 feet of fencing; 232,330 square feet of heavy use area protection; 180 acres of pasture and hay planting; 1,100 acres of roof runoff management; and 44 watering facilities. Additional funding was acquired through the Clean Water Initiative Program sponsored by the Indiana State Department of Agriculture, which supported another 300 acres of cover crops, 50 feet of access roads, and one watering facility. Likewise, the U.S. Department of Agriculture Natural Resources Conservation Service (USDA-NRCS) helped implement numerous BMPs in the watershed in 2005–2021, including over 1,100 acres of cover crops; 7,500 feet of fence; 31,300 square feet of heavy use area protection; 1,000 acres of improved nutrient uptake efficiency; 9,000 feet of livestock pipeline; and 13 watering facilities. The HWCP is proud of the work done in the watershed over the many years and is considering updating the 2007 WMP.

Results

IDEM conducted performance monitoring in 2022 on Little Hogan Creek, which showed significant improvements from previous performance monitoring at three separate stream branches within the watershed. These three stream segments now fully support their designated aquatic life uses due to improved water quality throughout the watershed. The Little Hogan Creek showed five DO measurements taken in April 2022, ranging from 9.43 mg/L to 13.08 mg/L. The upstream segment of Little Hogan Creek measured E. coli at a geometric mean of 99 CFU/100 mL, below the impairment threshold of 126 CFU/100 mL. And finally, the Goose Run monitoring showed five DO values ranging from 9.4 mg/L to 13.4 mg/L. All three monitored stream segments are meeting their aquatic life uses, and IDEM will propose to remove the impairments from its list of impaired waters in 2024.

Partners and Funding

The partnerships involved in the HCWP have been crucial to the success of the watershed restoration over the past 18 years. The partnership with IDEM led to the funding of the WMP with the CWA 205j funds of \$78,376, as well as the subsequent 319 funding of the four implementation projects that totaled \$757,851 with a \$888,086 match in cost-share. The USDA-NRCS partnership provided \$170,871 through the Environmental Quality Incentives Program (EQIP) and the Conservation Stewardship Program (CSP). Additionally, the Indiana State Department of Agriculture partnership provided \$241,542 of funding through the Clean Water Initiative. The success of the watershed implementation was also due to the partnerships with the Historic Hoosier Hills RC&D for assistance with the administrative duties and outreach, and with the Ripley County SWCD for their assistance with project outreach, education, and cost-share program efforts. Other important partnerships included Purdue Extension, Dearborn County

Health Department, IDNR, ORSANCO and the City of Aurora.

Section 205(j) Grant Program

The §205(j) Grant Program is dedicated to water quality management planning and monitoring. Funds are used to determine the nature, extent, and causes of point and nonpoint source pollution problems and to develop plans to resolve these problems. There is no match required for these funds. IDEM received \$742,000 in FFY 2023 funds, including \$507,000 in Bipartisan Infrastructure Law (BIL) funds. These funds will be used for the development of two local watershed management plans, four monitoring projects, and a contractor-assisted update to Indiana's State Nonpoint Source Program management plan. The two watershed planning projects are: Monroe County SWCD will be creating a WMP for the Beanblossom Creek watershed and the Warrick County SWCD will create a WMP for the Little Pigeon Creek watershed. Four monitoring projects were also funded, one with Ohio River Valley Water Sanitation Commission (ORSANCO), one with U.S. Geological Survey to continue monitoring for the NWQI School Branch Project, another with the U.S. Geological Survey to monitor pollutant loads on the Iroquois River leaving the state, and a monitoring project with IDEM to monitor poly- and perfluoroalkyl substances in fish tissue. A list of all 205(j) projects open or pending during this fiscal year is in Appendix F of this report.

Additionally, IDEM received its FFY 2024 205j grant from U.S. EPA since its last report. IDEM received \$805,000 in FFY 2024 funds, including \$554,000 in BIL funds. These funds will be used for the development of two local watershed management plans and four monitoring projects. The Wayne County SWCD will create a WMP for the Upper East Fork Whitewater River watershed and the Hendricks County SWCD will create a WMP for the Mill Creek watershed. IDEM will increase its monitoring for poly- and perfluoroalkyl substances in fish tissue. The U.S. Geological Survey will maintain continuous water quality monitor supergages at the Kankakee and New Harmony monitoring locations. ORSANCO will continue monitoring on the Ohio River for early warning detection of harmful algal blooms in drinking water.

Integrating the Nonpoint Source Pollution Program with the 303(d) Vision

Indiana continues to align its CWA Total Maximum Daily Load and Nonpoint Source Programs to receive the maximum benefit to water quality by working with local watershed stakeholders to utilize nonpoint source funds to implement TMDLs. The presence of a local stakeholder group willing to implement is an important component of Indiana's TMDL Vision Priority Framework. Likewise, the Nonpoint Source Pollution Program continues to work with groups following TMDL completion to write 9-Element watershed management plans that can be implemented using §319 funds. In FFY 2022, Indiana accepted a proposal from the Greene County Soil and Water Conservation District to use 319 funds to create and implement a watershed management plan that fulfilled the requirements of the Black Creek TMDL, approved by U.S. EPA on February 29th, 2024. The WMP and implementation contract was executed on January 12th, 2023 and is on track to be completed on January 11th, 2027. Additionally, the Parke County Soil and Water Conservation District received §319 funds to implement the Big Raccoon TMDL which was approved on August 22, 2024.

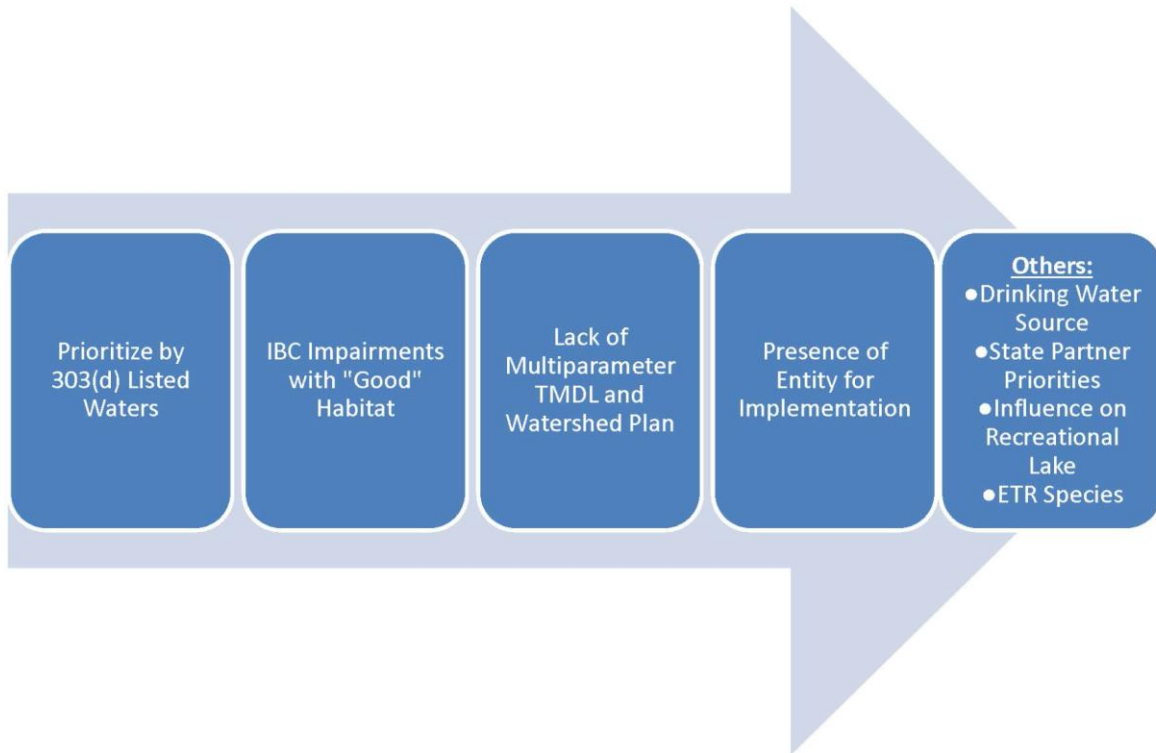


Figure 9. Indiana's TMDL priority framework under the Vision.

GOAL 5: PROTECT SENSITIVE, VULNERABLE, AND HIGH QUALITY WATERS OF THE STATE SO THAT THEY MAY CONTINUE TO MEET THEIR DESIGNATED USES

Prior to FFY 2013, IDEM’s Nonpoint Source Pollution Program emphasized the restoration of impaired waters, while the issue of protecting sensitive, threatened, or high-quality waters was largely unrecognized. For the purposes of this goal, the Nonpoint Source Pollution Program considers

“sensitive, vulnerable and high quality waters” to include water quality assessment Category 1 waters, watersheds including karst landscapes, outstanding state resource waters (OSRWs), outstanding national resource waters (ONRWs), drinking water source waters, cold/coolwater/salmonid waters, and waterbodies harboring endangered species.

In 2024, IDEM continued its efforts to protect vulnerable landscapes, species, and designated uses by making these waters a priority of the solicitation. Ninety-eight watersheds were defined under this priority. Four applications proposed to address a protection watershed and were in turn recommended to EPA for funding under the §319 or 205(j) grant programs.

Adaptive Management

The Nonpoint Source Program has continued to accomplish the majority of its goals despite turnover in key staff positions. Notable areas in which the program falls short of meeting its objectives include incomplete spending of grant funds in watershed implementation projects and providing outreach and education for watershed managers and the public. Unforeseen events or lack of cost-share interest typically explain unspent funds that are returned to the EPA, however earlier interventions by IDEM may help allocate extra funds to projects that could be used for implementing additional BMPs. The education and outreach goals are highlighted in the revised Nonpoint Management Plan that will cover years 2025-2029 and define goals that are aimed towards education and outreach for a variety of audiences. Our adaptive management framework allows for real-time adjustments to our Nonpoint Source Program management plan in case modifications are needed.

Appendix A - Reportable Activities for 2024

Goal 1: Utilize partnerships to leverage resources available for nonpoint source management.					
Obj. #	MM	Objective	FFY Start	FFY End	Frequency
1.2	a	Provide implementation support for the Coastal Zone TMDLs. Progress: There were no TMDLs written in the Coastal Zone during this reporting year.	2019	2024	ongoing
1.2	b	Provide implementation support for the Coastal Zone WMPs. Progress: IDEM NW WSS met with and provided support to the Trail Creek Watershed Partnership in submitting an NOI for FY25 319 funds to rewrite the Trail Creek WMP.	2019	2024	ongoing
1.3	a	Northwest watershed specialist will continue to participate in relevant meetings regarding the CNPCP. Progress: The NW WSS participates on the DNR's Coastal Advisory Board on a quarterly basis. The NW WSS also participates in meetings as necessary with the DNR LMCP to discuss our current 319 on-site disposal system project as well as potential future projects that will meet the goals of the CNPCP.	2019	2024	ongoing
1.3	b	Integration of CNPCP goals and objectives in new WMP efforts in the Coastal Zone. Progress: The Trail Creek Watershed Partnership was assisting the Michigan City Sanitary District in submitting a FY25 319 planning grant application to rewrite the current Trail Creek WMP. They have now decided to wait until 2025 to apply due to changes in staff capacity at the MI City Sanitary District.	2019	2024	ongoing
1.4		Support the Conservation Reserve Enhancement Program (CREP), Resource Conservation Partnership Program (RCPP), Great Lakes Restoration Initiative (GLRI), Lake and River Enhancement (LARE), Clean Water Indiana (CWI), and other Indiana Conservation Partnership (ICP) and statewide initiatives as they become available. See below for progress on components of this objective.	2019	2024	ongoing
1.4	a	Forward solicitation or information as it becomes available. Progress: Watershed Specialists have forwarded various funding information initiatives as they became available this reporting period to over 70 groups in Indiana.	2019	2024	ongoing
1.4	b	Participate in ICP planning meetings to determine priorities for funding/initiatives that align with WMP critical areas, water quality, and/or TMDL priority areas (every other month). Progress: The Branch Chief and the Watershed Planning and Restoration Section (WPR) Chief participated in bimonthly ICP Leadership meetings.	2019	2024	ongoing
1.4	c	Promote the programs through the watershed specialists and work with watershed groups to identify/recommend projects that would fit well under the priorities for each funding source. Progress: Funding/solicitation information was recommended to more than 70 groups in	2019	2024	ongoing

Goal 1: Utilize partnerships to leverage resources available for nonpoint source management.					
Obj. #	MM	Objective	FFY Start	FFY End	Frequency
		Indiana. WSS worked with 28 groups on specific projects that could benefit from specific ICP program funding.			
1.4	d	Include program information in relevant TMDLs as methods for implementation. Progress: The Big Raccoon Creek (completed), Indian Creek White River (in progress), Lake Manitou (in progress), and Indian Creek Monroe (in progress) TMDLs include a description of the programs listed in Objective 1.4 as means to implement nonpoint source programs in the Reasonable Assurances/Implementation section.	2019	2024	ongoing
1.4	e	Coordinate with ICP partners on meetings and workshops. Progress: Staff continue to attend ICP meetings every other month. Staff attended the annual partner meeting and provided an update on IDEM's nonpoint source program accomplishments in 2024. Technical staff have also attended multiple virtual sessions through the ICP's "Conservation Programs" training series. Staff participate in the partnership's annual plan of work development and implementation.	2019	2024	ongoing
1.5		Utilize the ICP as an advisory group for priority state nonpoint source pollution policies and updates by participating in bimonthly leadership meetings. Progress: The Branch Chief and Section Chief participated in bimonthly ICP Leadership meetings.	2019	2024	ongoing
1.6		Continue to provide technical assistance to local watershed groups through the watershed specialist or project manager as documented through quarterly site visit reports and the Section 319 Annual Report. Progress: Watershed Specialists provided technical assistance to approximately 68 watershed groups this reporting period.	2019	2024	ongoing
1.7		Continue to align the TMDL and WMP planning process with the TMDL vision. Progress: The TMDL program continued to participate in meetings this FFY to discuss EPA expectations for "Vision 2.0" and submitted an updated priority framework to EPA. A new list of priority projects was developed based on current priorities. Waters for the bridge metric were entered into ATTAINS by the deadline. According to Indiana's priority framework, TMDLs continue to be completed where watershed groups are willing and waiting to implement, typically utilizing 319 funds.	2019	2024	ongoing
1.7	c	Continue using prioritization process to determine TMDL project watersheds. Progress: Priority watersheds were reanalyzed based on current and updated priorities for use through 2032. The FY 2027 TMDL has been determined to be the Indian Creek Monroe County watershed and Honey Creek was selected as the FY 2028 TMDL project These projects will both partner with local groups to use the final TMDLs to develop watershed management plans.	2020	2024	ongoing

Goal 1: Utilize partnerships to leverage resources available for nonpoint source management.					
Obj. #	MM	Objective	FFY Start	FFY End	Frequency
1.8	a	Continue support of the School Branch Project. Progress: The monitoring project §205j grant under contract 68804 expired on 2/27/24. A new contract 80302 §205j grant was executed on 2/28/24 that continues the monitoring project through 8/31/26.	2019	2024	ongoing
1.8	b	Coordinate with NRCS on at least an annual basis to share in the decision-making on next steps for the Initiative. Progress: In FY 24, IDEM discussed project coordination with NRCS on NWQI projects. Annual coordination continues to take place through the Indiana Conservation Partnership. Indiana had 5 NWQI projects in FY 2024: School Branch monitoring project; the Muncie Creek planning project; and implementation in the Blue Sinking, Black River, and Lake Wawasee watersheds. IDEM participates in the NRCS State Technical meetings where NWQI projects are discussed.	2019	2024	annually
1.9		Support implementation of the <i>State Nutrient Reduction Strategy</i> and the <i>Indiana GLWQA Annex 4 Domestic Action Plan</i> . Progress: IDEM NPS grant priorities included a priority for reducing loads within the prioritized watersheds in the State Nutrient Reduction Strategy. Projects from this reporting year that supported the GLWQA DAP efforts was the Cedar Creek WMP (FY22 70742).	2019	2024	ongoing
1.9	a	Review priorities of both documents and import objectives of nonpoint source pollution related importance to the state nonpoint source pollution program plan. Progress: These documents are reviewed annually before the annual solicitation is prepared to incorporate important priorities into the solicitation. In FFY 2024, no additional priorities were added to the solicitation or project plan after reviewing these documents. The NPS program continued working with IDEM’s Environmental Justice Coordinator to continue refining methods for incorporating EJ priorities into project application reviews. The Nonpoint Source Management Plan is currently being revised for the 2025-2029 cycle and are discussing the program priority criteria.	2019	2024	ongoing
1.13		Utilize IDEM watershed specialist or project manager to assist partners with nonpoint source pollution planning and implementation activities. Progress: As a whole, the IDEM Watershed Specialists provided watershed planning and implementation technical assistance to at least 68 watershed groups.	2019	2024	ongoing

Goal 2: Monitor and assess Indiana waters for nonpoint source pollution impairments and improvements.					
Obj. #	MM	Objective	FFY Start	FFY End	Frequency
2.1		Require the use of the <i>Environmental Monitoring for Watershed Groups</i> handbook for 319 grantees. Progress: The Handbook is provided to all grantees as guidance during QAPP development and core parameters must be included in the monitoring program. All grant agreements executed in FFY 2023 included the core parameters outlined in the Handbook	2019	2024	ongoing
2.2		Import 319 grantee data meeting appropriate data quality criteria into AIMS or the Hoosier Riverwatch Database to be uploaded into WQX on a routine basis. Progress: IDEM imported 319 grantee data meeting appropriate data quality criteria into AIMS for 8 projects: 2022 Little Blue River 68932 CWA 205j, 2022 Mill Creek-Wabash River 70728 CWA 205j, 2022 Lower Elkhart River 68996 CWA 205j, 2020 Upper White WMP 48449 CWA 319, 2021 Upper Sugar Creek 58550 CWA 319, 2021 Upper Elkhart River 58587 CWA 319, 2020 Big Pine Mud Creek 49760 CWA 319, and 2020 Highland Pigeon 47568 CWA 319.	2019	2024	ongoing
2.3		Invite the participation of local project leaders when conducting 305(b) CWA assessments on watershed characterization monitoring data completed for TMDL and WMP development. Progress: The Big Raccoon TMDL contacts were invited to the assessment meeting with a call-in and in person option, but they did not attend. The impairments at each site were discussed with a map displayed to visually see the land scape while discussing possible reasons for the impairments.	2019	2024	ongoing
2.5		Continue to fund the Clean Lakes Program (volunteer and professional) data collection for use in CWA 305(b) and 314 assessments and 303(d) listings. Progress: Indiana University continues to sample for the Clean Lakes Program under a FFY 2022 \$319 grant. This contract is open until 3/31/2025.	2019	2024	ongoing
2.6		Direct IDEM resources to perform watershed characterization monitoring of at least one watershed annually to support TMDL and watershed planning efforts. Progress: In October 2023, monitoring ended for the Big Raccoon project. It is anticipated that the Big Raccoon TMDL report will be submitted to EPA in the fall of calendar year 2024. In November 2023, IDEM began monitoring for the Indian Creek-White River TMDL project. Monitoring for Indian Creek-White River is scheduled to be completed in October 2024. The SW WSS worked with TMDL staff and watershed groups to evaluate and select Indian Creek-Monroe as the next TMDL project after Indian Creek-White River; monitoring will begin in November 2024.	2019	2024	annually
2.6		Big Raccoon TMDL and WMP: Monitoring for this project began in November 22 and concluded in October 2023. The final TMDL report will be submitted to U.S. EPA prior to September 1, 2024. The WMP and implementation project has been awarded with FFY24 319 funds and expected to commence in winter 2024 Black Creek TMDL and WMP Progress: Monitoring for this project began in November 2021 and concluded in October 2022. The final TMDL report	2024	WMP-2026	ongoing

Goal 2: Monitor and assess Indiana waters for nonpoint source pollution impairments and improvements.					
Obj. #	MM	Objective	FFY Start	FFY End	Frequency
		was approved by U.S. EPA on 2/29/2024. The WMP and implementation contract was executed 1/12/2023 and is on track to be completed on 1/11/2027.			
2.7		Utilize IDEM resources to monitor the School Branch Watershed for the National Water Quality Initiative (NWQI) as described in the sampling design developed by IDEM and NRCS. Progress: IDEM continues to monitor the School Branch watershed of Eagle Creek through its fixed station monitoring program and through joint funding agreements with the USGS. All of the data collected will be evaluated at regular intervals during the study. The report covering the first three years of data is available at https://pubs.usgs.gov/sir/2021/5061/sir20215061.pdf. Real-time data can be accessed online at https://waterdata.usgs.gov/monitoring-location/03353420/#parameterCode=00065&period=P7D&showMedian=false.	2019	2024	ongoing
2.8		Continue support of the Hoosier Riverwatch voluntary monitoring program as part of IDEM's monitoring and assessment schemas. Progress: Approximately 125 stream sites were sampled from 7/1/23 - 6/30/24. Approximately 2,212 tests were conducted at these sites during that timeframe.	2019	2024	ongoing
2.8	b	Provide support for 20 Hoosier Riverwatch workshops (volunteer trainings) and maintain current loaner/teaching trunks. Progress: Forty-four workshops were conducted from 7/1/23 - 6/30/24. The program currently maintains over 20 loaner trunks across the state. Efforts were made to ensure all loaner trunks were accounted for given turnover of numerous volunteer instructors. Contact labels were developed and provided for existing loaner equipment. An online mapping tool was developed to replace the hard copy list of loaner equipment, making it easier for people to find equipment and instructor locations in the state (https://experience.arcgis.com/experience/c5a810aed9904411a61a38ce3753f1b7/)	2019	2024	annually
2.8	c	Provide support for maintenance and upgrades of the Hoosier Riverwatch water quality monitoring database and associated websites. Progress: Continued support and maintenance by the contractor allows the database and website to function as designed. Contractor removed dataset query limit so that entire data logs can be searched by desired parameter.	2019	2024	ongoing
2.10		Utilize IDEM resources to delist waters, or otherwise demonstrate water quality improvements, where nonpoint source pollution has been abated. Progress: IDEM accomplishes this objective by monitoring annually for water quality improvements due to nonpoint source measures and delisting segments based upon the water quality data and ensuing assessments. Since the last Annual Report, the 2023 Success Story (Hogan Creek Update 1) was published to EPA's website. For FFY 2024, Indiana will report the success story of Prairie Creek within the South Fork Wildcat Creek Watershed (0512010703) for the improvement of the index of biological integrity (IBI).	2019	2024	ongoing

Goal 2: Monitor and assess Indiana waters for nonpoint source pollution impairments and improvements.					
Obj. #	MM	Objective	FFY Start	FFY End	Frequency
2.10	b	Use additional resources (e.g., staff, funds, and technical support) to monitor water quality in watersheds where nonpoint source pollution restoration activities have occurred. The monitoring data will be compared to baseline information, if available, to gauge the efficacy of the work. Progress: Monitoring in 2023 showed improvements in biological communities in Big Branch, Elliott Ditch, and Big Creek. In 2024, IDEM sampled in the Muddy Fork (051202060302), Turkey Run-East Fork Tanners (050902030301), Indian Kentuck Creek (051401010205), Bone Creek-Flat Creek (051202090502), Mill Creek-Patoka River (051202090603), Sugar Creek-Patoka River (051202090604), Springle Creek-South Fork Blue River (051401040601), and Dutch Creek-South Fork Blue River (051401040604) watersheds and results are forthcoming.	2019	2024	annually
2.11		Continue the Ground Water Monitoring Network (GWMN). Progress: In 2023 IDEM GWMN performed intensive sampling of small areas with known arsenic issues to further study the variability of arsenic in various hydrogeologic settings. IDEM GWMN will continue with a new neighborhood level study of arsenic variability in various hydrogeologic settings for 2024.	2019	2024	ongoing

Goal 3: Provide statewide outreach and Update the State NPS Management Plan.					
Obj. #	MM	Objective	FFY Start	FFY End	Frequency
3.2	i	Continue to support Pathway to Water Quality’s work, financially and otherwise with the Indiana State Department of Health. Progress: IDEM currently participates in the Pathway to Water Quality steering committee, sending 2 staff members to the committee, and funds the current coordinator with funds from a FFY 2019 319 grant (contract number 40994) which is set to expire on 4/21/2024. A new contract from a FFY 2024 319 grant will fund the coordinator through 9/30/2028.	2019	2024	ongoing
3.5		Continue to provide citizen monitoring training through Hoosier Riverwatch and the Clean Lakes Program. Progress: Hoosier Riverwatch instructors have provided forty-four workshops this year and the Clean Lakes Program has instructed 140 adults and 650 youths in 6 workshops/outreach events.	2019	2024	ongoing
3.6	a	Produce 5 “Success Stories” (U.S. EPA WQ-10a Strategic Measure) by 2023 and publicize within Indiana. Progress: Seven NPS Success Stories will have been completed since 2019 and entered into the GRTS database. Those stories are Hogan Creek, Hogan Creek update, Big Creek (Muscatatuck), Little Deer Creek, Stump Ditch/Kilmore Creek, Tributary to South Fork Wildcat, and Boyles Ditch.	2019	2024	annually
3.6	b	Publicize any awards given to watershed groups related to their water quality efforts in Indiana. Progress: The Hoosier Riverwatch awarded instructors with the Outstanding Outreach, Lifetime Appreciation, and Fantastic Facilitator Awards at the Annual Instructor Gathering.	2019	2024	ongoing
3.7		Provide cost-effective outreach to audiences in Indiana. Progress: Outreach was provided in conjunction with other IDEM and partner agencies through Hoosier Riverwatch workshops, Master Naturalist days, the Pathway to Water Quality exhibit, and Earth Day presentations. The Hoosier Riverwatch program also provided advanced workshops on E. coli and began development for advanced workshops on macroinvertebrates. Additionally, HRW staff leveraged the program to provide additional education at locations including schools, boy scout troops, and other interested groups, reaching over 450 students.	2019	2024	ongoing
3.7	a	Continue to participate in the Pathway to Water Quality at the Indiana State Fairgrounds. Progress: IDEM currently participates in the Pathway to Water Quality steering committee, sending 2 staff members to the committee, and funds the current coordinator with funds from a FFY 2019 319 grant (contract number 40994) which is set to expire on 4/21/2024. A new contract from a FFY 2024 319 grant will fund the coordinator through 9/30/2028. At least 5 IDEM staff participated in running the exhibit in 2024.	2019	2024	ongoing
3.7	b	Continue to support the Indiana Watershed Leadership Academy with technical support. Progress: IDEM NPS continues to support the IWLA financially and with technical assistance as	2019	2024	ongoing

Goal 3: Provide statewide outreach and Update the State NPS Management Plan.					
Obj. #	MM	Objective	FFY Start	FFY End	Frequency
		needed. The SE WSS attends annual steering committee meetings and NPS staff attend face-to-face meetings to engage with participants.			
3.7	c	Participate in regional meetings as needed to inform watershed interest groups of nonpoint source pollution program information. Progress: NPS program staff attended the IASWCD Annual conference this FY to provide information on the next update to this plan and asked for program feedback. WSS also attended CCSI regional meetings and steering committee meetings.	2019	2024	ongoing
3.7	d	Provide regular communication to regional groups of nonpoint source pollution watershed efforts. Progress: Watershed specialists provide funding, training, and program updates to distribution lists of active or prospective watershed groups on a regular basis.	2019	2024	ongoing
3.9		Continue to build capacity for water quality improvement in the state. Progress: See each sub-objective below for a progress report.	2019	2024	ongoing
3.9	a	Continue to educate leaders through Purdue University's Indiana Watershed Leadership Academy. Progress: IDEM NPS continues to support the IWLA financially and with technical assistance as needed. Financial assistance is currently provided under a FFY 2021 grant under contract number 58554, which is due to expire on 12/31/25.	2019	2024	ongoing
3.9	b	Continue to support the ICP's Training and Certification Program on watershed related issues by sitting on the Technical Research Board and the advisory team. Progress: The SW WSS participated in the advisory committee that has worked on updating the plan of work for 2025 and completing and recording trainings. The committee reviewed the ICP website and worked to generate a statewide map showing who requested trainings by number and county.	2019	2024	ongoing
3.10		Update the State NPS Management Plan 2025-2029 Revision Progress: IDEM has partnered with DJ Case and Associates through a FFY 2023 205j grant to revise the State NPS Management Plan. DJ Case has held 2 taskforce meetings and meets biweekly with IDEM to collaborate on the plan. The final plan update for 2025-2029 will be submitted to U.S. EPA for final approval prior to October 31, 2024.	2023	2024	once

Goal 4: Improve Indiana’s water quality, including surface and ground water, by reducing nonpoint source pollutants such as nutrients, sediment, and bacteria; restoring aquatic habitats; and establishing flow regimes that mimic natural conditions.					
Obj. #	MM	Objective	FFY Start	FFY End	Frequency
4.1	a	Utilize the TMDL-WMP template for TMDLs sampled for and written so that they provide the best detail for the development of 9-Element WMPs that are implementable using 319 funds. Progress: All TMDLs developed in FY 2024 were written using the TMDL-WMP template.	2019	2024	ongoing
4.1	b	Link TMDLs with watershed characterization monitoring projects for Section 319 watershed management planning applications. Progress: Monitoring for Big Raccoon TMDL took place from Nov 2022-Oct 2023. The Park County SWCD wrote an application for and was awarded a FFY 2024 319 planning and implementation grant which will begin in December 2024 and is expected to expire in 2028. Monitoring for Indian Creek-White River TMDL began in November 2023 and will end in October 2024. A proposal for the Indian Creek-White River WMP was submitted by the Knox Co SWCD for FFY 2025 319 funding and will be considered during this year’s application review.	2019	2024	ongoing
4.4		Use Section 319 funding to support implementation of WMPs that meet the U.S. EPA’S 9 Key Elements of a Watershed Plan (including staff support and outreach as well as the placement of BMPs in critical areas as identified in the WMPs). Progress: In FFY 2024, eight WMP implementation projects were chosen to receive funding and were proposed to U.S. EPA, including Twin Creek Lick Branch, Maria-No Business Creek, Lower Big Blue River, Big Pine Creek, Big Walnut Creek, North Laughery Creek, Big Raccoon Creek, and Lower Fall Creek.	2019	2024	ongoing
4.5		Repair previously-installed BMPs with the caveats outlined in the program policy. Progress: There were no BMP repairs in State Fiscal Year 2024.	2019	2024	ongoing
4.6		Continue to leverage LARE and CWI funds to address erosion, sedimentation and nutrient input concerns as long as the General Assembly continues to approve appropriations. Progress: As the opportunity arises, LARE and CWI projects are used as match for nonpoint source pollution projects.	2019	2024	ongoing
4.9		Show restoration in at least 5 12-digit watersheds (at least 5 WQ-10) in the five-year cycle 2019-2023. Progress: Including its 2023 submission, Indiana has submitted 13 water quality improvements in 7 success stories over the past 5 years. One Success Story (Boyles Ditch) was submitted in 2019. One Success Story (Hogan Creek) was submitted in 2020. Three Success Stories were submitted for WQ-10a in FFY 2021: Little Deer, Unnamed Tributary to South Fork Wildcat, and Stump Ditch/Kilmore Creek. One Success Story (Big Creek) was submitted in 2022. One Success Story was submitted for 2023 (Hogan Creek update). At least one Success Story (Prairie Creek) will be submitted for 2024.	2019	2024	annually
4.10		Continue to geolocate all BMPs installed through the Section 319 grant program in order to enhance the BMP GIS layer located in the nonpoint source pollution program. Progress: BMPs	2019	2024	ongoing

Goal 4: Improve Indiana’s water quality, including surface and ground water, by reducing nonpoint source pollutants such as nutrients, sediment, and bacteria; restoring aquatic habitats; and establishing flow regimes that mimic natural conditions.					
Obj. #	MM	Objective	FFY Start	FFY End	Frequency
		are mapped upon receipt of the invoice and location information from the local project. Staff continue to refine the attributes in the layer to make it more beneficial for use in different programs. Updates include refining and standardizing the BMP naming structures and updating options for reporting specific units for individual practices. This data continues to be used in determining sites for follow up monitoring for NPS success stories and is used to share annual practice information with ISDA.			
4.11		Solicit for proposals to use Section 319 funding to support implementation of WMPs that meet the U.S. EPA’S 9 Key Elements of a Watershed Plan (includes staff support as well as BMPs). Progress: The solicitation announcement for FY 2024 was published on April 1, 2023. Twenty-seven notices of intents were received on or before June 1st, 2023. Full proposal applications were due September 1st, 2023. A total of 24 full proposals were received and reviewed by Nonpoint source pollution staff. Ten proposals were submitted to EPA for funding consideration, and an additional 2 planning proposals, and 4 monitoring proposals requested to be funded by CWA §205j base funds. The solicitation announcement for FY 2025 was published on April 1, 2024. Thirty notices of intents were received on or before June 3rd, 2024.	2019	2024	annually
4.11	a	Provide financial and technical support to install agricultural BMPs in critical areas identified in the plan. Progress: A list of the BMPs installed using §319 funding during State Fiscal Year 2024 is available in Table 1 of this report.	2019	2024	annually
4.11	b	Provide financial and technical support to install urban and/or residential BMPs in critical areas identified in the plan. Progress: A list of the BMPs installed using §319 funding during State Fiscal Year 2024 is available in Table 1 of this report.	2019	2024	annually
4.11	c	Provide financial and technical support to install forestry BMPs in critical areas identified in the plan. Progress: A list of the BMPs installed using §319 funding during State Fiscal Year 2024 is available in Table 1 of this report.	2019	2024	annually
4.11	d	Provide financial and technical support to install abandoned mine BMPs in critical areas identified in the plan. Progress: A list of the BMPs installed using §319 funding during State Fiscal Year 2024 is available in Table 1 of this report.	2019	2024	annually
4.11	e	Provide financial and technical support to install hydrological and aquatic habitat BMPs in critical areas identified in the plan, including dam removal. Progress: A list of the BMPs installed using §319 funding during State Fiscal Year 2024 is available in Table 1 of this report.	2019	2024	annually

Goal 5. Protect sensitive, vulnerable, and high quality waters of the state so that they may continue to meet their designated uses.					
Obj. #	MM	Objective	FFY Start	FFY End	Frequency
5.1		Continue to encourage watershed planning activities in watersheds with Category 1 waters. Progress: Category 1 waters in Indiana include waters that are outstanding state resource waters and/or waters with habitats for endangered, rare, and threatened species. In FFY 2024, the §319 solicitation included priorities for developing a WMP for a 10-digit HUC watershed that impacts outstanding state resource waters and/or waters with endangered, threatened, or rare species. Thirteen proposals met the OSRW/ETR priority.	2019	2024	ongoing
5.2		Prioritize for planning watersheds with source water intakes. Progress: NPS projects in watersheds with a surface drinking water intake were prioritized in the FFY 2024 solicitation. Source waters are also a priority of the Indiana Conservation Partnership. Five of the proposed planning projects include a surface water intake.	2019	2024	annually
5.5		Fund 319-eligible protection strategies identified in critical areas of IDEM-approved 9-Elements watershed management plans proposed by Section 319 grant applicants whose implementation applications rank high enough for funding. Progress: No protection strategies have been funded by 319 this FFY.	2019	2024	annually

Appendix B – Open and Pending 319 Projects

Open and Pending 319 Projects							
FFY	Contract #	Contractor	Project	Status	Start Date	End Date	Project Type
2024	Pending	Sullivan County SWCD	Maria-No Business Creek Implementation II	Pending	-	-	Restoration/Implementation
2024	Pending	Shelby County SWCD	Lower Big Blue River Implementation	Pending	-	-	Restoration/Implementation
2024	Pending	Washington County SWCD	Twin Creek Lick Branch Watershed Project Phase 1	Pending	-	-	Restoration/Implementation
2024	Pending	Indiana University	Clean Lakes Program	Pending	-	-	Assessment
2024	Pending	Marion County SWCD	Lower Fall Creek WMP Update Implementation	Pending	-	-	Restoration/Implementation
2024	Pending	Parke County SWCD	Big Raccoon Creek WMP	Pending	-	-	Combination of planning and Implementation
2024	Pending	Indiana Association of Soil and Water Conservation	Pathway to Water Quality	Pending	-	-	Education
2024	Pending	Historic Hoosier Hills	North Laughery Creek	Pending	-	-	Restoration/Implementation
2024	Pending	Putnam County SWCD	Big Walnut Creek 319 Implementation	Pending	-	-	Restoration/Implementation
2024	Pending	Benton County SWCD	Big Pine Creek Watershed Implementation	Pending	-	-	Restoration/Implementation
2023	79775	Lawrence County SWCD	Lower Salt Creek Watershed Project Phase 1 Implementation	Open	1/29/2024	1/30/2027	Restoration/Implementation

Open and Pending 319 Projects

FFY	Contract #	Contractor	Project	Status	Start Date	End Date	Project Type
2023	80030	Delaware Co. SWCD	Upper Mississinewa River Watershed 319 Implementation Phase 2	Open	1/10/2024	1/9/2027	Restoration/Implementation
2023	80027	Trustees of Indiana University	Indiana Water Quality on Wheels Exhibit	Open	1/3/2024	1/2/2026	Education
2023	82336	Lake Monroe Water Fund	Innovative Funding for NPS Improvement	Open	4/17/2024	4/16/2026	Restoration/Implementation
2023	81023	Pike County SWCD	Lower East Fork White River WMP Implementation	Open	2/5/2024	2/6/2027	Restoration/Implementation
2023	80023	Vanderburgh SWCD	Lower Pigeon Creek Implementation	Open	1/24/2024	1/25/2027	Restoration/Implementation
2023	79777	Jasper County SWCD	Lower Kankakee Watershed Initiative Implementation	Open	1/12/2024	1/11/2027	Restoration/Implementation
2023	80230	Dearborn County SWCD	Whitewater River Watershed	Open	1/25/2024	4/23/2027	Restoration/Implementation
2023	80388	Carroll County SWCD	Deer Creek-Sugar Creek Implementation	Open	1/18/2024	1/17/2027	Restoration/Implementation
2023	80895	Ouabache Land Conservancy	Otter Creek Watershed Implementation	Open	2/4/2024	2/5/2027	Restoration/Implementation
2023	80957	The Watershed Foundation	Walnut Creek-Tippecanoe River WMP Phase 2 Implementation	Open	1/30/2024	1/31/2026	Restoration/Implementation
2022	69069	Patoka Lake Regional Water & Sewer District	Patoka Watershed Clean Sweep	Open	12/21/2022	12/20/2025	Restoration/Implementation

Open and Pending 319 Projects

FFY	Contract #	Contractor	Project	Status	Start Date	End Date	Project Type
2022	69119	Greene County SWCD	Black Creek Watershed	Open	1/12/2023	1/11/2027	Combination of planning and Implementation
2022	68646	Decatur County SWCD	Salt-Pipe Creek Watershed	Open	2/1/2023	5/1/2026	Restoration/Implementation
2022	68577	Friends of Lake Monroe	Lake Monroe Watershed Management Plan Implement	Open	11/28/2022	5/28/2025	Restoration/Implementation
2022	68369	Orange County SWCD	Lost River Watershed Implementation	Open	12/19/2022	12/18/2025	Restoration/Implementation
2022	68119	Wabash River Enhancement Corp.	Region of the Great Bend of the Wabash River	Open	1/27/2023	1/26/2026	Restoration/Implementation
2022	68451	Wells County SWCD	Lower Salamonie River Watershed Implementation Project	Open	1/1/2023	1/1/2026	Restoration/Implementation
2022	68993	Trustees of Indiana University	Indiana Clean Lakes Program	Open	4/1/2023	3/31/2025	Assessment
2022	69065	Owen County SWCD	Fish Creek Watershed	Open	1/18/2023	1/17/2025	Planning
2022	68776	Jennings County SWCD	Vernon Fork Muscatatuck Watershed	Open	1/4/2023	1/3/2027	Combination of planning and Implementation
2021	71435	JMA Communications, LLC	Indiana Lakes Reach Index	Open	3/3/2023	3/2/2025	Program Support
2021	60144	Clay County SWCD	Lower Eel River Watershed	Open	1/28/2022	1/28/2025	Restoration/Implementation
2021	58548	Shelby County SWCD	Lower Big Blue River Watershed	Open	11/15/2021	11/14/2024	Restoration/Implementation

Open and Pending 319 Projects

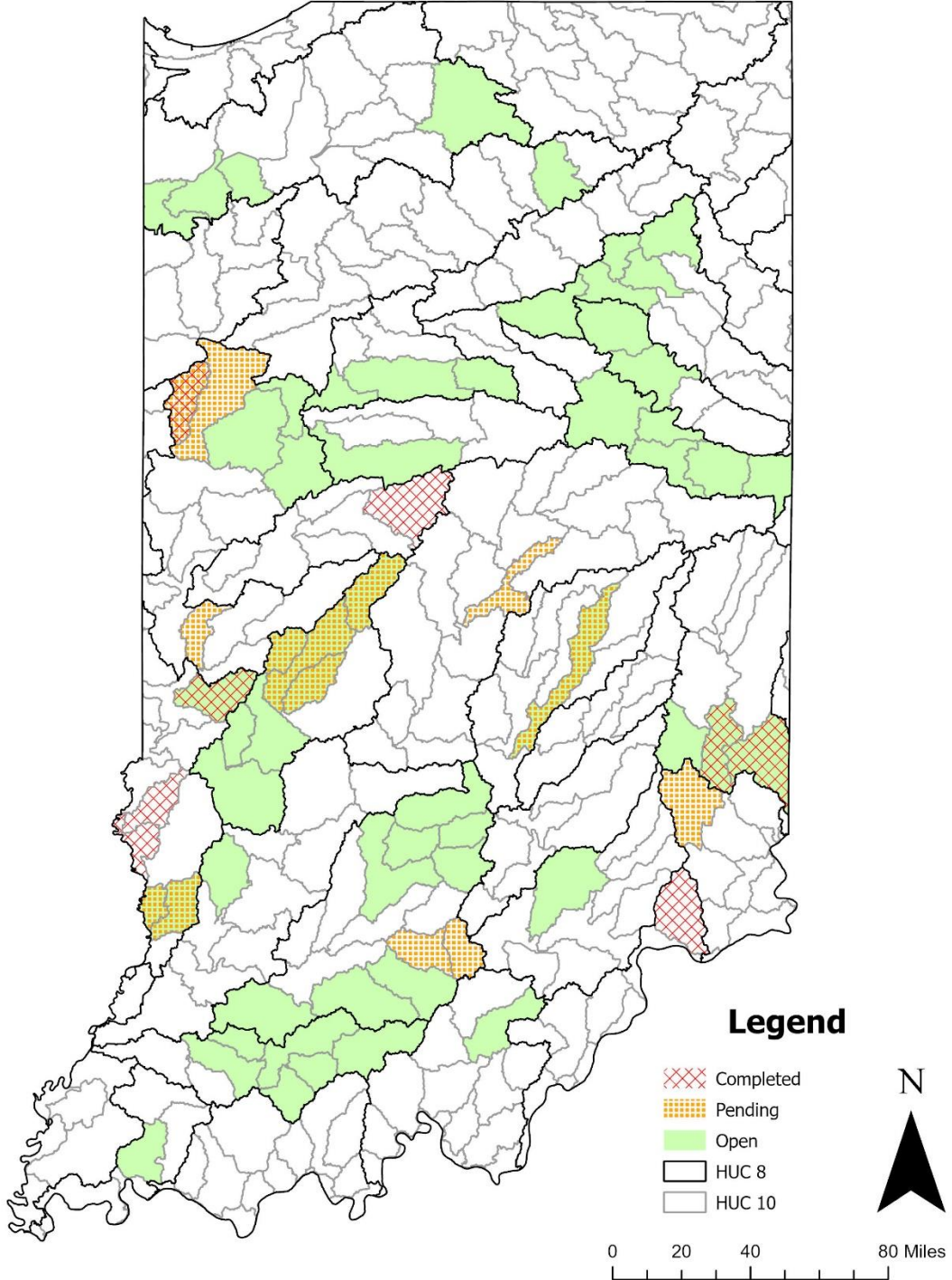
FFY	Contract #	Contractor	Project	Status	Start Date	End Date	Project Type
2021	58551	Huntington County SWCD	Upper Wabash River Phase 3	Open	11/9/2021	11/7/2025	Restoration/Implementation
2021	58589	Marshall County SWCD	Headwaters Yellow River	Open	11/24/2021	11/23/2024	Restoration/Implementation
2021	58554	Purdue University	Indiana Watershed Leadership Academy	Open	1/1/2022	12/31/2025	Education
2021	59519	Knox County SWCD	Snapp Creek-Kelso Creek WMP	Open	12/21/2021	12/21/2023	Planning
2021	61096	EcoLogik, Inc.	Hoosier Riverwatch & QAPP Maintenance	Open	3/29/2022	3/29/2025	Program Support
2021	58552	Clinton County SWCD	South Fork Wildcat Creek Phase 3	Open	1/15/2022	1/14/2025	Restoration/Implementation
2021	58547	Wabash River Defenders	Treaty Creek-Wabash River	Open	11/24/2021	11/23/2024	Restoration/Implementation
2021	58545	Putnam County SWCD	Big Walnut Watershed Alliance Implementation	Open	11/23/2021	11/22/2024	Restoration/Implementation
2020	48941	The Watershed Foundation	Walnut Creek-Tippecanoe	Open	3/10/2021	3/9/2025	Restoration/Implementation
2020	48881	Washington County SWCD	South Fork Blue River	Open	1/25/2021	1/24/2025	Restoration/Implementation
2020	48870	Carroll County SWCD	Deer Creek-Sugar Creek	Open	12/2/2020	12/1/2024	Restoration/Implementation
2020	47519	Sullivan County SWCD	Maria & No Business Creek	Open	12/10/2020	12/9/2024	Combination of planning and Implementation

Open and Pending 319 Projects

FFY	Contract #	Contractor	Project	Status	Start Date	End Date	Project Type
2020	63816	Indiana Department of Natural Resources	OSDS, Capacity Enhancement, and Tracking	Open	6/12/2022	2/12/2025	Program Support
2020	48894	Ouabache Land Conservancy	Otter Creek	Open	1/7/2021	1/6/2024	Restoration/Implementation
2019	41471	Sullivan County SWCD	Turtle Creek, Turman Creek, Kelley Bayou	Open	5/12/2020	2/29/2024	Restoration/Implementation
2019	40994	Indiana Association of Soil and Water Conservation	Pathway to Water Quality	Open	4/22/2020	4/21/2024	Education

Appendix C – 319 Implementation Projects in FY 2024

319 Implementation Projects in FY 2024



Mapped By: Timothy Neher, OWQ Date: 08/22/2024

Appendix D – Summary of Closed 319 Projects

The section summarizes \$319 funded projects that closed in fiscal year 2024 (1 July 2023 – 30 June 2024).

FY 2019

Turtle Creek, Turman Creek, Kelly Bayou (Contract # 41471)

The Sullivan County SWCD developed, promoted, and implemented a cost-share program that implemented BMPs such as cover crops, filter strips, conservation tillage and others that addressed the water quality concerns outlined in the Turtle Creek, Turman Creek, Kelley Bayou (TTK) WMP. The district also conducted an education and outreach program that included public meetings, newsletters, news releases, field days and workshops that educated people on the cost-share program and BMPs available. They also promoted a website (www.watershed-alliance.org), and added promotional signs throughout the watershed to raise awareness about the TTK project and to highlight BMPs implemented.

Pathway to Water Quality (Contract # 40994)

The Indiana Soil and Water Conservation District Association hired a Pathway to Water Quality (PWQ) Coordinator to act as the main liaison between the PWQ Steering Committee and the Indiana State Fairgrounds staff such as the exhibit liaison, education staff, and grounds maintenance manager. The hired PWQ Coordinator was Arion Consultants. Arion Consultants coordinated regular PWQ meetings, maintained a list of PWQ Committee members, and ensured the smooth operations of the PWQ exhibit at the Indiana State Fair every summer.

Browns Wonder-Sugar Creek (Contract # 37907)

Clinton County SWCD developed and promoted a cost-share program that implemented best management practices (BMPs) such as (but not limited to) cover crops, conservation tillage, nutrient management, and others that addressed the water quality concerns outlined in the Browns Wonder – Sugar Creek Watershed Management Plan (WMP). The SWCD conducted an education and outreach program designed to bring about behavioral changes and encourage BMP implementation that will continue to lead to reduced nonpoint source pollution in the watershed. Activities included Steering committee and partner meetings. They conducted field days and workshops and annual Community Stewardship Events. The SWCD developed and provided signage with the watershed project logo and installed at public locations. They promoted the program with social media posts, quarterly press releases and direct mailings.

Indian Kentuck Watershed (Contract # 37187)

The Historic Hoosier Hills RC&D (HHH) developed and implemented a cost-share program for BMPs such as conservation tillage, cover crops, pasture/hay land improvement, livestock exclusion, riparian buffers and others that addressed the water quality concerns outlined in the Indian Kentuck WMP. The HHH conducted an education and outreach program that educated stakeholders on water quality and BMPs including steering committee meetings, public meetings, field tours/days, workshops, brochures, river clean-ups, and posted information about the project and educational materials on the Historic Hoosier Hills RC&D watershed web site.

Whitewater River Watershed (Contract # 37186)

The Dearborn County SWCD developed and promoted a cost-share program that implemented best management practices (BMPs) such as cover crops, no-till, nutrient management, pasture/hay land improvements, livestock exclusion, and others that addressed the water quality concerns in the

Whitewater River WMP. The SWCD conducted an education and outreach program that led to reduced nonpoint source pollution in the watershed. They conducted field days and workshops, clean-ups, and developed and distributed flyers, pamphlets, newsletters, news releases or fact sheets. The SWCD developed and provided “Friends of the Whitewater River” signs to all cost-share program participants willing to display the signs for public outreach and awareness of the cost-share program.

Salt-Pipe Creek (Contract # 37162)

Decatur County SWCD developed and promoted a cost-share program that implemented best management practices (BMPs) such as cover crops, no-till, nutrient management, pasture/hay land improvements, livestock exclusion, alternative watering systems, heavy use area protection, roof runoff structures, waste storage facilities, buffers and others that addressed the water quality concerns outlined in the Salt-Pipe Creek WMP. Once the cost-share program was approved, the Grantee provided technical assistance to landowners to help facilitate BMP implementation through the coordinator’s activities such as conducting farm visits; assisting with conservation planning and BMP selection; and inspecting installed BMPs to ensure that they meet design specifications. The SWCD promoted other conservation programs such as the Conservation Reserve Program, Environmental Quality Incentive Program, Classified Forest and Wildlands Program, Clean Water Indiana Program, Lake and River Enhancement Program, and the Ohio River Basin Fish Habitat Partnership. Decatur County SWCD conducted an education and outreach program designed to bring about behavioral changes and encourage BMP implementation that will continue to lead to reduced nonpoint source pollution in the watershed. Activities included workshops and field days, development and distribute of flyers, pamphlets, newsletters, news releases or fact sheets. The SWCD developed and provided “Friends of the Salt-Pipe Creek Watershed” signs to all cost-share program participants willing to display the signs for public outreach and awareness of the cost-share program.

North Laughery Creek WMP and Implementation (Contract # 37151)

Historic Hoosier Hills (HHH) produced a WMP for the North Laughery Creek watershed, Hydrologic Unit Code (HUC) 0509020305. The watershed plan included all elements listed in the State’s Watershed Management Plan Checklist (updated 2009). The WMP was designed to achieve the reduction in pollutant loads called for in the nonpoint source Laughery Creek TMDL. The WMP was approved by EPA and IDEM in August 2022. HHH developed and promoted a cost-share program that implemented best management practices (BMPs) such as conservation tillage, cover crops, pasture/hayland improvement, livestock exclusion, riparian buffers, tree plantings and others that addressed the water quality concerns outlined in the North Laughery Creek WMP. They conducted an education and outreach program designed to bring about behavioral changes that led to reduced nonpoint source pollution in the watershed. HHH developed and distributed a cost-share brochure, press releases, field days, stream clean-ups, and gave a tour of the local wastewater treatment plant. HHH promoted the program by developing a display that was used at county fairs and public events. They also developed and installed signage along the roadside of cost-share participants.

Kankakee Super Gage at Shelby (Contract # 68405)

The United States Geological Survey continued to operate a super gage for two (2) years on the Kankakee River at Shelby to quantify sediment and nutrient transport in the watershed. The gage took real-time continuous measurements of nitrate, phosphate, turbidity, water temperature, pH, dissolved oxygen, and specific conductance. Additionally, periodic stream-width and depth-integrated measurements of water-quality parameters were taken, and water-quality samples were collected periodically for laboratory analysis. Mathematical models were produced and verified so that sensor data could be used as mathematical surrogates to represent continuous suspended sediment, total

nitrogen, and total phosphorus concentrations.

FY 2020

Otter Creek (Contract # 48894)

Ouabache Land Conservancy developed and promoted a cost-share program that implemented best management practices (BMPs) such as cover crops, no-till, nutrient management, pasture/hay land improvements, livestock exclusion, and others that addressed the water quality concerns in the Otter Creek Watershed WMP. The SWCD conducted an education and outreach program that led to reduced nonpoint source pollution in the watershed. They conducted field days and workshops, clean-ups, and developed and distributed flyers, pamphlets, newsletters, news releases and fact sheets. The SWCD developed and provided “Friends of the Whitewater River” signs to all cost-share program participants that were willing to display the signs for public outreach and awareness of the cost-share program.

Big Pine Creek Watershed (Contract # 49760)

This was a continuation of Benton County SWCD’s FY2016 grant #19223. The SWCD continued to promote a cost-share program to implement best management practices (BMPs) such as cover crops, conservation tillage, nutrient management and others that address the water quality concerns outlined in the Big Pine Creek Watershed Management Plan (WMP). Benton County SWCD conducted a monitoring program for educational purposes and monitored water quality trends in the Big Pine Creek watershed. They sampled chemical parameters at sites throughout the watershed capturing at least one storm event and one base flow per year. Monitoring parameters included total suspended solids, nitrate-nitrogen, total phosphorus, E. coli, stream flow, dissolved oxygen, pH, and water temperature. They also conducted stream macroinvertebrate and fish sampling and analyzed the collected community using the State’s Index of Biotic Integrity (IBI) and macroinvertebrate Index of Biotic Integrity (mIBI). Benton County SWCD conducted a habitat assessment during the biological sampling activities using the State’s Qualitative Habitat Evaluation Index (QHEI). Benton County SWCD also conducted an education and outreach program that held steering meetings, quarterly mailings, press releases, updates to their website and held workshops and field days.

FY 2021

Upper Elkhart River WMP (Contract # 58587)

Elkhart River Restoration Association (ERRA) produced a watershed management plan (WMP) for the Upper Elkhart River watershed. It was approved by EPA and IDEM in January 2024. The plan includes all elements listed in Indiana’s WMP Checklist. They developed a steering committee of local stakeholders to guide the development of the WMP. The ERRA conducted an education and outreach program designed that raised awareness of issues in the watershed, informed on problems facing the watershed, and encouraged actions that county residents can take to reduce nonpoint source pollution in the watershed. The ERRA outreach program included development and distribution of newsletters, brochures, social media updates, community events, field days and workshops, and press releases. They hosted a Hoosier Riverwatch training and implemented a water monitoring program. The ERRA used the Agricultural Conservation Planning Framework to prioritize locations in the watershed for the implementation of best management practices.

Upper Sugar Creek WMP (Contract # 58550)

Montgomery County Soil & Water Conservation District produced a watershed management plan (WMP) for the Upper Sugar Creek watershed. The WMP was approved by EPA and IDEM in August 2024. The plan included all elements listed in Indiana’s WMP Checklist. They developed a steering

committee of local stakeholders that guided the development of the watershed management plan. The SWCD conducted an education and outreach program that raised awareness of issues in the watershed, informed on problems facing the watershed, and encouraged actions county residents can take to reduce nonpoint source pollution in the watershed. Washington County's outreach program included the development and distribution of newsletters, brochures, social media updates, and press releases. They hosted a Hoosier Riverwatch training and implemented a water monitoring program.

Snapp Creek-Kelso Creek WMP (Contract # 59519)

Knox County Soil & Water Conservation District produced a watershed management plan (WMP) for the Snapp/Kelso Watershed. The plan is currently in the EPA approval process. The plan included all elements listed in Indiana's WMP Checklist. They developed a steering committee of local stakeholders that guided the development of the WMP. Knox County conducted an education and outreach program that raised awareness of issues in the watershed, informed on problems facing the watershed, and encouraged actions county residents can take to reduce nonpoint source pollution in the watershed. The outreach program included public presentations and displays. They also developed and distributed newsletters, pamphlets, social media updates, press releases, and locally broadcasted presentations. Knox County also conducted field days and education events. Additionally, they hosted two Hoosier Riverwatch trainings and implemented a water monitoring program.

AIMS EnfoTech Enhancement (Contract # 73004)

EnfoTech assisted with water quality and aquatic biological data management for annual surface water assessments. They provided enhancements on the AIMS II that included functionality of new queries and reports converted from Microsoft Access. Additionally, EnfoTech added queries and associated reports for the following database groups: fish tissue and sediment, macroinvertebrates, fish community and data requests, maintenance, and QA review. They also provided AIMS system enhancements for converting and adding queries and associated reports to five database groups.

Appendix E – Open and Pending 205(j) Projects

Open and Pending 205(j) Projects							
FFY	Contract #	Contractor	Project	Status	Start Date	End Date	Project Type
2024	Pending	U. S. Geological Survey	New Harmony Super Gage	Pending	-	-	Assessment
2024	Pending	U. S. Geological Survey	Kankakee Super Gage	Pending	-	-	Assessment
2024	Pending	Hendricks County SWCD	Mill Creek Watershed Management Plan	Pending	-	-	Planning
2024	Pending	Wayne County SWCD	Upper East Fork Whitewater River WMP	Pending	-	-	Planning
2024	Pending	Ohio River Valley Water Sanitation Commission	Continuous Monitoring (x 24 months)	Pending	-	-	Assessment
2024	Pending	Indiana Department of Environmental Management	Per- and Polyfluoroalkyl Substances in Fish	Pending	-	-	Assessment
2023	81024	U. S. Geological Survey	Continuous Monitoring Supergage at Iroquois River	Open	3/1/2024	2/28/2026	Assessment
2023	80235	Monroe County SWCD	Beanblossom	Open	1/15/2024	1/16/2026	Planning

Open and Pending 205(j) Projects							
FFY	Contract #	Contractor	Project	Status	Start Date	End Date	Project Type
2023	78896	Ohio River Valley Water Sanitation Commission	Operation of two Continuous Monitors on the Ohio River	Open	7/1/2024	12/31/2025	Assessment
2023	81027	Indiana Department of Environmental Management	NPS Management Plan	Open	2/29/2024	1/28/2025	Program Support
2023	79733	Warrick County SWCD	Little Pigeon	Open	12/26/2023	12/27/2025	Planning
2023	80302	U. S. Geological Survey	School Branch	Open	2/28/2024	8/31/2026	Assessment
2022	N22-02	Indiana Department of Environmental Management	Per- and Polyfluoroalkyl Substances in Fish Tissue	Open	6/1/2023	12/31/2025	Assessment
2022	68996	City of Goshen	Lower Elkhart WMP	Open	1/12/2023	1/11/2025	Planning
2022	70728	Vermillion County SWCD	Mill Creek - Wabash River WMP	Open	3/1/2023	2/28/2025	Planning
2022	70736	Ohio River Valley Water Sanitation Commission	Operation of Two Continuous Monitors on the Ohio	Open	7/1/2023	1/1/2025	Assessment
2022	68932	Shelby County SWCD	Little Blue River Watershed Management Plan	Open	12/13/2022	12/12/2024	Planning

Open and Pending 205(j) Projects							
FFY	Contract #	Contractor	Project	Status	Start Date	End Date	Project Type
2022	70742	Fort Wayne City Utilities	Cedar Creek Watershed Management Plan	Open	2/22/2023	2/21/2025	Planning
2022	N22-01	Indiana Department of Environmental Management	Climate Change & Environmental Equity assessment	Open	9/1/2022	8/30/2027	Assessment
2021	56800	Washington County SWCD	Twin Creek-Lick Branch	Open	9/30/2021	1/29/2025	Planning
2021	43799	U. S. Geological Survey	Nutrient Supergage and HABs at New Harmony	Open	9/16/2021	9/23/2024	Assessment
2021	56382	Ohio River Valley Water Sanitation Commission	Operation of Two Continuous Monitors on the Ohio	Open	7/1/2022	6/30/2023	Assessment