



Indiana Department
of Natural Resources

Division Of Water



A well used to water
agricultural fields in
Hamilton County.



Indiana Department of Natural Resources Division of Water

ANNUAL REPORT • JULY 2023 - DECEMBER 2024

By: DNR Staff

Indiana Department of Natural Resources

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DIVISION OF WATER MISSION

Protect, enhance, preserve, and wisely use water resources for the benefit of Indiana's citizens through professional leadership, management, and education.

Division of Water Programs

Administration

Provides support for all programs and sections of the Division of Water.

Compliance

Investigates potential violations of the Flood Control Act, Lake Preservation Act, Regulation of Dams, and other statutes, focusing on public education regarding regulatory requirements to increase compliance with statutes and reduce violations.

Dam and Levees Safety

Reviews proposed publicly and privately owned dams, oversees dam maintenance and inspection requirements, inspects dams, provides guidance on dam safety, develops dam breach flood inundation mapping, and responds to dam safety incidents and emergencies.

Engineering Service Center

Reviews proposed projects for permitting and compliance with the Flood Control Act and other statutes, models and maps floodplains for regulatory and insurance purposes, and leads coordination meetings related to county surveyor-initiated ditch maintenance projects; participates in the Cooperating Technical Partner program with FEMA to develop and maintain floodplain mapping.

Floodplain Management

With DNR being the state coordinating agency for the National Flood Insurance Program (NFIP), this team serves as FEMA's liaison to local communities to implement their floodplain ordinances, conducts periodic audits of Indiana NFIP-participating communities, and helps communities resolve violations.

Lake Michigan

Reviews permit applications for construction and emergency repair requests and serves as the division's expert on wind, waves, coastal erosion, dredging, sand movement, and seawall construction. Staff also advise and work closely with the Lake Michigan Coastal Program within the Division of Nature Preserves.

Resource Assessment

Offers information and products related to water resource availability. This section serves a leading role in the statewide water monitoring network, including operation of a groundwater monitoring well network; creates regional and county-level groundwater assessments and map products; and publishes weekly and monthly water resource summaries for the state with relevant information for multiple stakeholders.

Technical Services

Oversees permitting functions for various statutes, including the Flood Control Act, Lake Preservation Act, Regulation of Dams, and Navigable Waterways.

Water Rights and Use

Facilitates assessment, protection, and provision of Indiana's groundwater and surface water resources, administering water withdrawal facility registration and water-use reporting and Indiana's implementation of the Great Lakes Compact, and coordinating the sale of water from State-financed reservoirs.

Watershed Stewardship

Works with and reviews the activities of Conservancy Districts, Basin Commissions, and Watershed Development Commissions while also educating those entities about the division's functions and advising them on their proposed projects and activities and serving as the division's resource regarding public freshwater lakes.



Letter from the Director

Staffing and Organizational Achievements

The Division of Water experienced growth and change from July 2023 through the end of 2024. With the addition of 16 new staff members, we have successfully filled over 90% of all positions, strengthening our capacity to serve Indiana’s water management needs.

This year brought significant organizational changes through the appointment of two new Section Managers. Kristi Johnson assumed leadership of the newly established Watershed Stewardship Section, which oversees Conservancy Districts, Basin Commissions, and Watershed Development Commissions. Under Johnson’s leadership, the section has already achieved a significant milestone by establishing the state’s first Watershed Development Commission serving Pigeon Creek in Vanderburgh County.

A major restructuring of the Engineering Service Center resulted in the creation of two specialized sections. Amanda Brock leads the State Section, which focuses on project reviews for Indiana Flood Control Act approvals and maintains the Indiana Best Available Floodplain Mapping Layer dataset. The Federal Section, under the direction of Adam Bales, now manages our partnership with FEMA through the Cooperating Technical Partner program, encompassing both Flood Insurance Rate Map development and Letter of Map Revision reviews.

Technology Modernization Initiative

A primary focus of our 2024 efforts has been planning a comprehensive overhaul of the division’s database systems. This project encompasses 26 different modules scheduled for revision, resulting in a fully spatial-based solution using ESRI and Salesforce technology. The Division of Water continues its tradition as a technology leader, particularly in Geographic Information Systems and Groundwater monitoring telemetry, as detailed in this report.

In preparation for this technological transformation, each section conducted workflow reviews and process mapping to identify operational efficiencies. Business consultant Rachel Lamb and project manager Nancy Morris provided invaluable guidance throughout this process, helping us shape our vision for the new system. As of December 2024, we are in the final stages of vendor selection, with implementation scheduled for 2025.

Water Resource Management Outlook

Water resource management remains at the forefront of state priorities. The forthcoming release of the North Central and Upper Wabash water studies promises to generate important discussions about statewide water management strategies, as various sectors seek to secure their future water needs.

The Division of Water continues to play a central role in these critical conversations. Drawing upon our data resources, professional staff expertise, and deep understanding of water resource management, we are prepared to guide Indiana’s water future. We are ready to lead the way in developing sustainable water management solutions for all Indiana stakeholders.



Indiana Department of Natural Resources’
Division of Water Director David Knipe.

Learn more at on.IN.gov/water



Legislative Changes

The Division of Water has adjusted and is actively refining its operations in line with the modifications enacted during the legislative sessions of 2023 and 2024.

2023 Legislative Changes

SEA 242

Repeal of IC 14-28-1-40; this language was added in 2022 stating the local floodplain administrators should use the best available mapping provided by the department when issuing local floodplain permits.

Additions to Floodplain Management Act, IC 14-28-3:

- When issuing a permit for construction, a local official may elect to use the best available data provided by the department or an engineering study provided by the applicant; and the local official may not issue a permit that will be a violation of the National Flood Insurance Program.
- After June 30, 2025, an individual must not serve as the local floodplain administrator unless they have completed necessary training, including either the Certified Floodplain Manager program from the Association of State Floodplain Managers or another course by FEMA or approved by the department. (See an update on the communities who have achieved compliance with this training requirement in the Floodplain Management section update in Program Accomplishments & Highlights.)

SB 412

An amendment to Lake Preservation Act, IC 14-26-2-23, removing the option for a review to be filed with the Natural Resource Commission regarding riparian right disputes. These disputes are now handled at the county court level.

A person who files a permit application under the Flood Control Act, IC 14-28-1, must provide documentation that the person is the owner of the site where the work will take place or an affidavit from the owner of the site that authorizes the work.

Additions to Floodplain Management Act, IC 14-28-3:

- The Department shall hold a meeting at least once every 5 years with local officials. The meetings shall promote cooperation with the locals participating in the NFIP, provide technical and data assistance to the local officials, conduct trainings and outreach.

- Addition of permits needed by state owned and managed properties for work in the floodplain. This new process and permits are managed by the Division of Water and include permits issued to DNR and INDOT.

2024 Legislative Changes

SEA 140

Modifications to the existing permit exemption for logjams, located at IC 14-28-1-22.

Modifications to the new property ownership part to the Flood Control Act added in 2023, to not apply to the state or a county, city, or town if they are the applicant.

A request to update the Indiana Drainage Handbook, which will be led by the state Department of Agriculture.

HEA 1401

Additions to the Flood Control Act, IC 14-28-1:

- Construction of an accessory or agricultural structure as defined by FEMA, to the base flood elevation instead of the flood protection grade.
- Permit exemptions for agricultural fences and rural stream crossings for residential for agricultural purposes.

Additions to Floodplain Management Act, IC 14-28-3:

- The Department must update the website and the Indiana Floodplain Portal within 90 days of any changes to law enacted by the general assembly or rule adopted by the Natural Resource Commission.
- The Department must notify property owners within 90 days regarding any change made to the Best Available Floodplain Layer that would affect their property.
- The Department must notify the property owners that would be affected, before submitting the Best Available Floodplain Layer to FEMA for review.



State of the Water Resource

Over the last year and a half, Indiana received near normal precipitation or 96% of normal. The Standardized Precipitation Indices (SPI) show that the state experienced extremely dry to very wet conditions from July 2023 to November 2024. In January 2023, eight of the nine climate divisions experienced moderately wet or very wet conditions, making it the wettest month of the period. In contrast, October 2024 was the driest month, with eight climate divisions classified as extremely dry and one as moderately dry.

Statewide, the lowest percent of normal precipitation (13%) was received in October 2024, and the highest (213%) was received in January 2024.

FIGURE 1

Standardized Precipitation Index for Indiana Climate Divisions

	CD1 (NW)	CD2 (NC)	CD3 (NE)	CD4 (WC)	CD5 (C)	CD6 (EC)	CD7 (SW)	CD8 (SC)	CD9 (SE)
Jul '23			Very Wet				Very Wet	Very Wet	
Aug '23			Moderately Wet	Moderately Wet			Moderately Wet		
Sep '23				Moderately Dry			Moderately Wet		
Oct '23					Moderately Dry	Moderately Dry			Moderately Dry
Nov '23					Moderately Dry	Moderately Dry	Moderately Dry	Moderately Dry	Moderately Dry
Dec '23							Moderately Dry		
Jan '24	Very Wet	Very Wet	Very Wet	Very Wet	Very Wet	Very Wet	Very Wet	Very Wet	Very Wet
Feb '24	Moderately Dry			Moderately Dry				Moderately Dry	
Mar '24								Moderately Dry	
Apr '24	Very Wet	Very Wet	Very Wet	Very Wet	Very Wet	Very Wet	Moderately Wet		
May '24								Moderately Wet	
Jun '24								Moderately Dry	Severely Dry
Jul '24	Moderately Wet	Moderately Wet						Moderately Wet	
Aug '24		Moderately Dry							
Sep '24									
Oct '24	Moderately Dry	Extremely Dry	Extremely Dry	Extremely Dry	Extremely Dry	Extremely Dry	Extremely Dry	Extremely Dry	Extremely Dry
Nov '24							Moderately Wet	Very Wet	
Dec '24									

LEGEND

Extremely Wet	Extremely Dry	Near Normal
Very Wet	Severely Dry	
Moderately Wet	Moderately Dry	

Beginning June 2023, the drought monitor indicated peak drought for 2023. Precipitation allowed for drought conditions to improve through Aug. 29, 2023, before worsening through Dec. 19, 2023. Drought conditions improved through winter and spring 2024 with no drought identified in the state from April 23 through June 11, 2024. Conditions rapidly dried until June 25, 2024, and improved though Aug. 13, 2024. Peak drought for 2024 was identified on Sept. 24, 2024.

Seasonal Drought Outlook from NWS Climate Prediction Center indicates drought removal throughout the state through the end of February 2025.

FIGURE 2

Precipitation Departure from Normal for 2023 and 2024

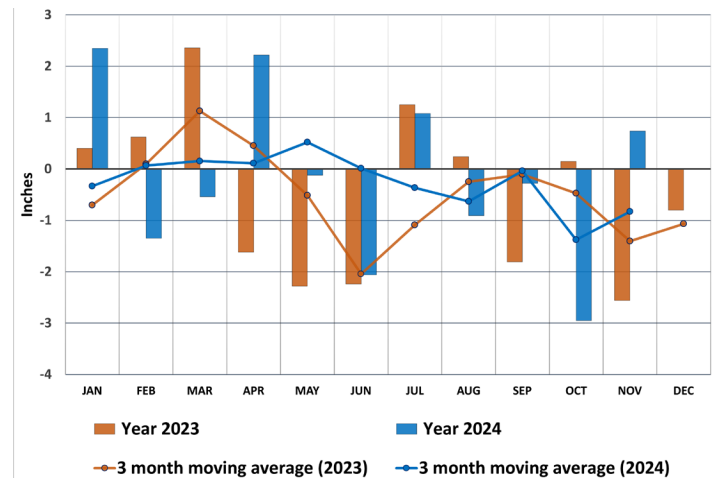


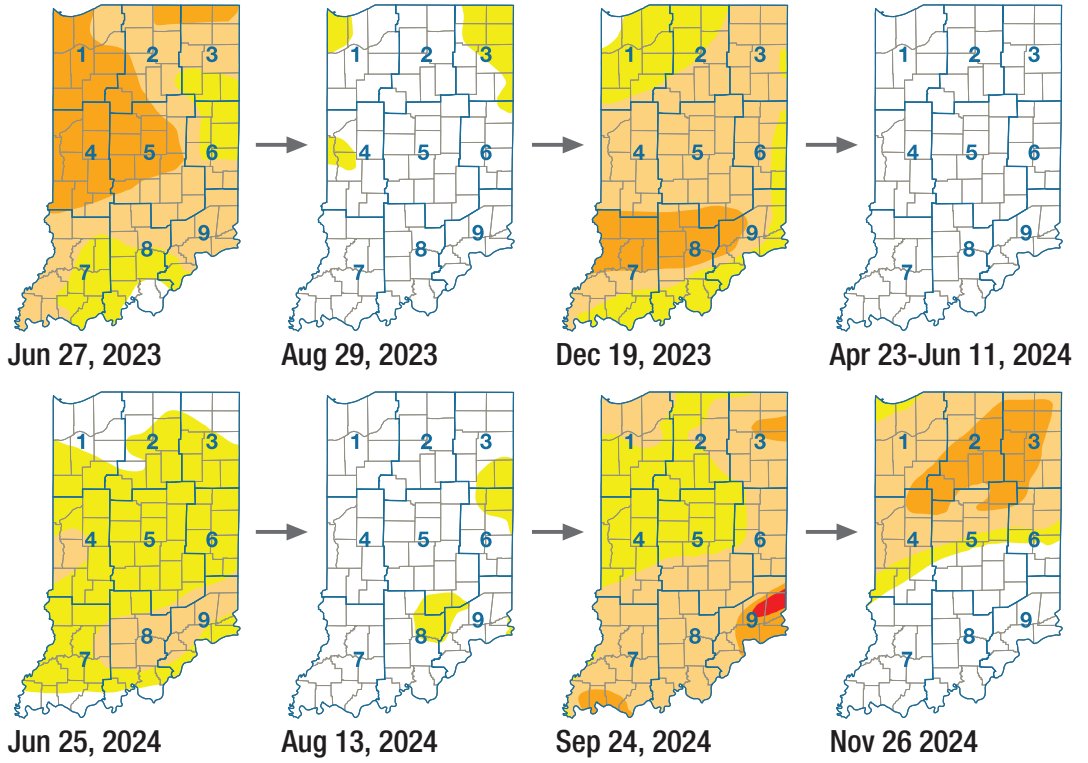


FIGURE 3

Time Series of Indiana Drought Monitor Conditions from June 2023 to November 2024

Intensity

- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought





FEATURE: Outreach Efforts

In 2023, the Division of Water hired McFarland PR & Public Affairs, Inc. to comprehensively evaluate its outreach and communication strategies. The evaluation process involved conducting surveys and interviews with DNR staff, consulting key external stakeholders, and distributing an electronic survey completed by more than 1,100 individuals who had recently interacted with the division.

The resulting report provided a detailed and adaptable plan to enhance the division’s communication efforts. The recommendations aimed to leverage existing strengths, improve current practices, and establish clear metrics for measuring success.

The consultant’s report highlighted several core messages about the Division of Water. First and foremost, the division wants stakeholders to understand that it is much more than a simple regulatory body. Instead, it positions itself as Indiana’s premier resource for water-management issues, with deep expertise in critical areas such as water availability, dam management, floodplain analysis, special taxing districts, water withdrawals, well-drilling, and construction permits related to waterways.

The division is a comprehensive resource center, offering assistance and information to a wide range of stakeholders, including landowners, floodplain residents, local governments, engineers, contractors, well-drillers, pump installers, and groundwater users. Its staff are committed to helping Hoosiers navigate complex water-related challenges by explaining regulations, connecting them with local resources, and developing targeted solutions.

Following the consultant’s guidance, the Division of Water has already begun implementing and planning various outreach activities. These include conducting focus group discussions to gather nuanced feedback,

launching targeted email newsletters, updating websites to improve user experience, developing a formal speakers bureau, expanding training resources, collaborating on social media communications, and increasing engagement at conferences and partner events.

A division open house took place in Alexandria in September 2024. These events facilitate direct engagement with various stakeholders and fulfill the legal obligation to meet with local officials every five years. Additional open house events are planned throughout 2025. Email newsletters tailored to specific stakeholder groups were launched in 2024, and the division has begun updating its online platforms to enhance navigation and accessibility. Recorded trainings have been added to the Engineering Service Center section of the website, building on the Trainings & Events page that currently features Floodplain Management resources.

By embracing these strategic communication approaches, the Division of Water aims to transform its public perception from a purely regulatory agency to a dynamic, responsive, and invaluable resource for water-related information and support in Indiana.



Division of Water staff Celena Langlois (left) and Savannah Meyer (right) teach Girl Scouts about flooding using an interactive flood model.

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e-newsletters



on.IN.gov/water-newsletters



SHARING OUR WORK

The following are conferences and meetings where Division of Water staff presented:

- AEC Leadership Development Program
- Alliance of Indiana Rural Water
- Association of Indiana Counties
- Association of Indiana Municipalities
- Association of State Floodplain Managers (National conference)
- Certified Crop Advisors Annual Conference
- City of Indianapolis
- Civil Engineering Professional Development Seminar at Purdue University
- Climate Services Summit
- Continuing Education programs for well drillers and pump installers
- County SWCD Open Houses
- Dam Information, Research and Training (DIRT) Conference
- Girl Scouts of Central Indiana Circle the City
- Indiana Geographic Information Office GIS Day
- IN Association for Floodplain and Stormwater Management
- Indiana Association of Building Officials
- Indiana Association of Soil and Water Conservation District Summer Summits
- Indiana Conservation Partnership
- Indiana Environmental Health Association
- Indiana Farm Bureau Drainage School
- Indiana Groundwater Association
- Indiana Lakes Management Society Conference
- Indiana Section of American Water Works Association
- Indiana Silver Jackets
- Indiana Society of Professional Land Surveyors
- Indiana State Fair
- Indiana Water Summit
- INDOT & DNR HEC-RAS Training
- Job Fairs at Ball State University and Indiana University Indianapolis
- Maumee River Basin Commission
- Michiana Irrigation Association
- Operation Stay Afloat
- Professional Geologists of Indiana



A visitor chats with DOW staff members Mark Basch (left), Christina Spielbauer (center), and Kristiana Cox (right) during the DOW Open House.



Natural Resources Inspector Scott Dean shares information about Permitting & Compliance at the September 2024 Open House.



TAKING THE LEAD

Organizations in which division staff have been elected to serve on boards and advisory committees:

- Association of State Dam Safety Officials
- Ball State University Geology Alumni Board
- Indiana Association for Floodplain and Stormwater Management
- Indiana Lakes Management Society
- Indiana Mesonet Advisory Committee
- Indiana Silver Jackets
- Indiana Water Resources Association
- Pigeon Creek Watershed Development Commission
- Professional Geologists of Indiana
- State of Indiana Employee Veteran's Military Family Resource Group



Division of Water staff Suzie Delay (left), Celena Langlois (center) and Savannah Meyer (right) use a model to demonstrate the effects of upstream land use on downstream flooding during an event organized for Girl Scouts.



Technical Services section manager Alysson Olinger engages with DOW Open House attendees to address specific property concerns.



Engineering Service Center manager Adam Bales presents at the 2024 Stay Afloat conference.



FEATURE: Groundwater Monitoring Initiative- Network Expansion and New Technologies

Introduction

Indiana's economy depends heavily on its water resources, with energy production, industry, agriculture, and public water supply as major consumers (Indiana Chamber of Commerce, 2014, 2024). The state draws water supplies from both surface waters and groundwater reserves. To effectively manage these resources, Indiana maintains monitoring programs that track conditions in streams, lakes, aquifers, and precipitation. However, experts and stakeholders across multiple sectors have identified a pressing need to expand Indiana's hydrologic monitoring network to better support the state's future economic growth. In response, the DNR is implementing new technologies and developing initiatives to broaden the scope and capabilities of Indiana's water monitoring infrastructure.



Telemetry pilot site HD5 in Hendricks County. The equipment is designed to receive data wirelessly from the site's monitoring well and relay that information to the online dashboard system (depicted on page 10)

Current Monitoring Efforts

The Division of Water is responsible for funding long-term hydrologic monitoring stations throughout Indiana. These include streamgages on our rivers and streams, groundwater monitoring wells in targeted aquifer systems, and water level gages on freshwater lakes. The division's annual commitment of nearly \$500,000 leverages matching funds from USGS to support two monitoring networks:

1. USGS current conditions (real-time) monitoring network
 - 46 Streamgages
 - 43 Groundwater wells
 - 4 Lake level gages
2. Statutory Indiana DNR Groundwater Voluntary Monitoring Program (VMP) well network consisting of 60 wells

Under the real-time network, DNR funds USGS to fully operate and maintain (O&M) the monitoring sites, with data available for near real-time access through USGS web portals. This arrangement operates under a current 5-year contract where the division pays \$450,000 annually.

The Voluntary Monitoring Program (VMP) operates differently under IC 14-25-7-12.5, with the division covering the initial equipment and well launch costs and managing network O&M. For the VMP, DNR staff collects data through quarterly site visits, after which they send the data to USGS for processing and web hosting. USGS provides data QA/QC and hosting services for the VMP under a separate \$50,000 annual contract. Unlike the real-time network, VMP data is not streamed continuously but rather collected and processed in batches.

Emerging Technologies and Network Expansion

To address current network needs and to expand the network as identified by experts, the Division of Water has initiated a pilot project using wireless data streaming technology at groundwater monitoring wells. A commitment to long-term hydrologic monitoring is important to ensure reliability of the resource in the future. Estimates indicate that the state needs dozens to hundreds of new monitoring wells to satisfactorily characterize water availability, the costs of which can vary depending on site characteristics, objectives, needs, and funding levels. The integration of

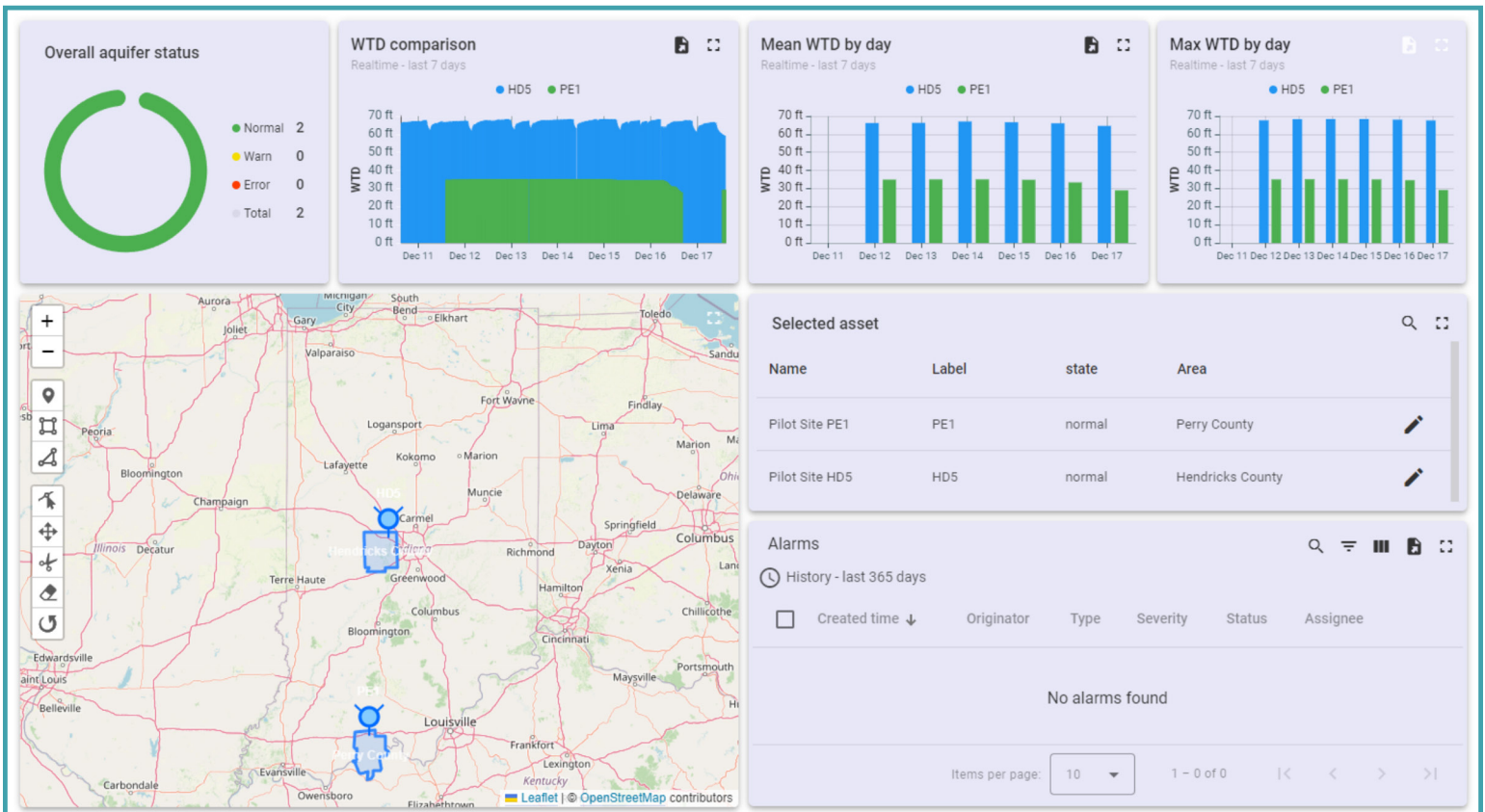


new technologies enables DNR to explore various solution combinations across different cost levels. Enhanced solution combinations offer efficient and strategic decision-making in water resource management to identify cost-saving and beneficial alternatives, such as additional funding to surface and weather monitoring stations.

Collaborating with DNR’s Mapping and Information Systems (MIS) Department, Indiana’s Office of Technology (IOT), Verizon, Senzary LLC, the DNR Division of Forestry, and Brownsburg Utilities, the division has successfully designed, installed, and operated two groundwater monitoring wells featuring wireless data streaming capabilities. This monitoring platform offers several advantages, such as real-time data access for assessing instrument functionality or local water levels, as well as enhanced efficiency and safety for staff. For network expansion on the order identified by experts, the wireless technology in this DNR initiative may provide considerable savings and offer decision-making alternatives over current practices.



Resource Assessment section manager Garth Lindner (on ladder) and staff geologist Randy Maier install a solar panel to supply power to the telemetry pilot site in Perry County.



The telemetry dashboard presents monitoring data from two pilot study wells (PE1 in Perry County and HD5 in Hendricks County). The interface includes four main components: 1) A circular gauge showing overall aquifer status, 2) Three water table depth (WTD) visualizations comparing measurements between sites - including raw data, daily means, and daily maximums, 3) An interactive map showing the locations of both monitoring sites, and 4) A data panel displaying selected asset details and system alarms. The dashboard allows for temporal comparison across a 7-day period and provides real-time monitoring of critical water level thresholds.



FEATURE: Low Head Dams

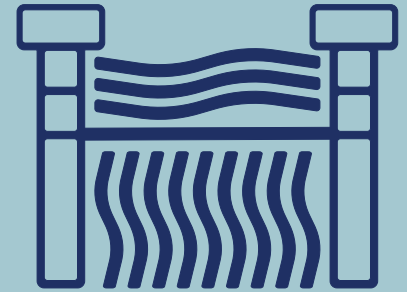
The removal of dangerous low head dams is an ongoing collaborative effort in Indiana that has gained momentum in recent years, particularly with the adoption of legislation detailing state responsibilities. In 2024, the state, dam owners, and stakeholders continued working together to improve public safety and ecological health along waterways.

Low head dams are human-made obstructions spanning river or stream channels from bank to bank. Often deteriorated, privately owned, and poorly funded, these structures are particularly dangerous due to their turbulent and recirculating currents. While seemingly mild during low stream flow, high water conditions can create powerful currents that trap people caught in them in a deadly cycle, pushing them underwater and repeatedly pulling them back to the dam's face. These structures pose significant safety risks for recreational river users, including swimmers, anglers, kayakers, canoeists, and rafters.

Indiana has been proactively working with stakeholders to remove or modify historically dangerous low head dams across the state. The dual goals are to enhance river safety for recreational use and restore natural river ecosystems and fish migration. The DNR has identified more than 200 low head dams, with ownership known for approximately 100 structures and ownership status unclear for the remaining dams.

Low head dam removals in 2023 and 2024

Name of Dams	River	County	Removed
Old Mill/Charles Mill	Mississinewa River	Grant	2023
Markle Mill	Otter Creek	Vigo	2023
Hickey-Martin	Henderson Creek	Lawrence	2023
Indian Creek 1	Indian Creek	Harrison	2024
Seymour Water	East Fork White River	Jackson	2024
Thompson Mill	Big Blue River	Bartholomew	2024



In October 2024, crews removed the Thompson Mill Dam from the Big Blue River in Edinburgh. This dam, built more than 150 years ago, was the cause of three deaths due to an incident in 2014. By fall 2023, extensive deterioration had caused significant water flow through the dam's limestone construction, often dramatically reducing the water pool behind it.

Funding and removal decisions are ultimately made by dam owners. In this case, the town of Edinburgh chose to remove the dam, leading a project supported by public and private partners, including a private consulting firm. The U.S. Fish & Wildlife Service and the DNR Division of Fish & Wildlife's Lake and River Enhancement (LARE) program provided crucial funding support.

With the dam's removal complete, the project promises to improve stream flow and habitat for multiple aquatic species, including fish, eels, and mussels, while significantly increasing safety for river users.



Water cascades through and over the deteriorating Thompson Mill Dam in Edinburgh in autumn 2023.



The low head dam removal in October 2024 reinstated flow to the stream channel of the Big Blue River.



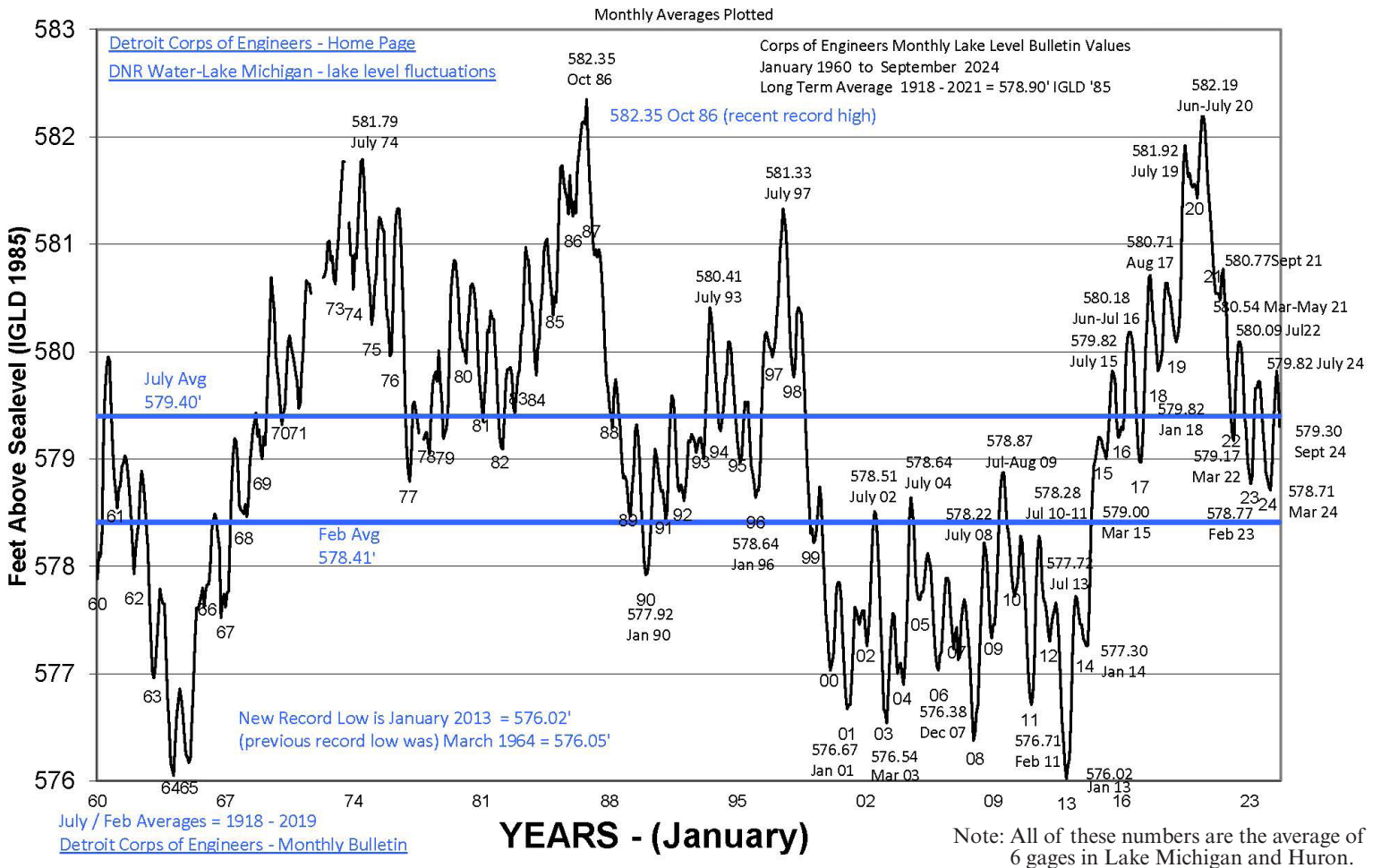
Lake Michigan Program

The Division of Water continues its efforts for monitoring and researching water levels in Lake Michigan. Water levels have remained at near-average levels in 2023 and 2024. Each month the division's Lake Level Fluctuations web page is updated so the public has access to the collected data. To learn more about the lake level fluctuations, visit in.gov/dnr/water/lake-michigan/lake-level-fluctuations/

The division assisted the DNR Lake Michigan Coastal Program (part of the Division of Nature Preserves) on several initiatives, including establishing future Lake Michigan shorelines erosion monitoring stations, the Coastal Imagery Viewer, and the establishment of an Ordinary High-Water Mark along the Indiana shoreline. The division also assisted DNR Law Enforcement in identifying a historical slag deposit.

FIGURE 4

Lake Michigan Levels 1960-2024



Lake Michigan Water Level Monitoring Website
[IN.gov/dnr/water/lake-michigan/lake-level-fluctuations/](http://in.gov/dnr/water/lake-michigan/lake-level-fluctuations/)



Program Accomplishments and Highlights

Water Rights and Use

The Water Rights and Use section coordinated the collection, processing, and review of annual water use reports submitted by registered Significant Water Withdrawal Facilities (SWWFs) for the 2023-2024 year with approximately 87% reporting compliance. Approximately 3,750 of 4,300 registered SWWFs submitted reports for 2023, and about 1.9 trillion gallons of water withdrawals were reported, primarily from surface water sources for energy production and industry.

The section conducted on-site investigations of approximately 150 water rights complaints under the provisions of IC 14-25-4 during fiscal year 2023.

Section staff conducted 65 investigations of well failures in the town of Brownsburg, Hendricks County, during 2023, and approximately 33 wells were required to be replaced or upgraded due to groundwater level impacts believed to be caused by the pumping operations of the town of Brownsburg and to a limited extent, the West Chase Golf Club and the town of Pittsboro. Liability for the costs of the well replacements and upgrades were distributed between the three SWWFs.

Section staff conducted 22 investigations of domestic well failures in Greenfield, Hancock County, during 2023. The well failures were believed to be caused by test pumping operations conducted by NineStar Connect, and costs for upgrading or replacing wells were paid by the water utility.

Two Sale of Water Contracts were presented for renewal before the Natural Resources Commission by section staff during the 2023-2024 year. Contracts between the State and the city of Brookville for water supply from Brookville Lake, and between the State and the Stucker Fork Conservancy District for water supply from Hardy Lake were approved by the NRC at its July 16 and Nov. 19, 2024, meetings, respectively.

In 2024, the Division of Water partnered with the Indiana Geological and Water Survey (IGWS) to digitize water well records. The division annually receives 8,000-10,000 records that document critical details about well construction, including depth, capacity, and soil formation. The ongoing digitization effort creates a valuable database that provides important groundwater resource information for citizens, drillers, consultants, and other stakeholders. With grant funding secured in 2024, the IGWS is helping maintain the digitization pace, and they have already processed approximately 4,000 records to date.



Continuing Education

Staff conducted or participated in 11 continuing education programs required for driller and/or pump installer license renewal.



Administering Licenses

Licensed approx. 850 water well drillers and pump installers in 2023 by section staff.



Resource Assessment

The Resource Assessment section continues to serve as a water availability monitoring and assessment service within the Division of Water. Its roles include:

- Operating and maintaining 60 wells in the Voluntary Monitoring Program network
- Publishing weekly and monthly hydrologic summaries
- Performing lake level vulnerability reviews (16)
- Providing information and interpretations for over 40 information requests
- Coordinating site selection and contracts with the U.S. Geological Survey for the statewide hydrologic monitoring network (streams, groundwater, and lakes)

The section hired two additional full-time geologists. The section also added an intern under the Governor’s Summer Intern program, who has since transitioned to an intermittent employee to continue projects.

The increase in staff improves efficiencies for existing workload and provides additional capacity for enhancing programs and developing new initiatives, including:

- Expansion and adoption of new technologies for the Groundwater Voluntary Monitoring Network
- Conducting statistical analyses on groundwater and surface water networks to determine water availability trends
- Developing a new groundwater monitoring page for the division’s website

Additionally, section staff participate in several state and regional partnerships, initiatives, and committees focused on water resource management, including:

- A collaborative working group with the White River Alliance and U.S. Geological Survey to optimize hydrologic monitoring locations in Indiana
- Weekly interagency meetings led by the Indiana State Climate Office for Indiana’s contribution to the National Drought Monitor
- The Indiana Mesonet Advisory Committee, comprising state agency, private, and academic representatives
- The Indiana Water Resources Association Groundwater Focus Committee

Technical Services

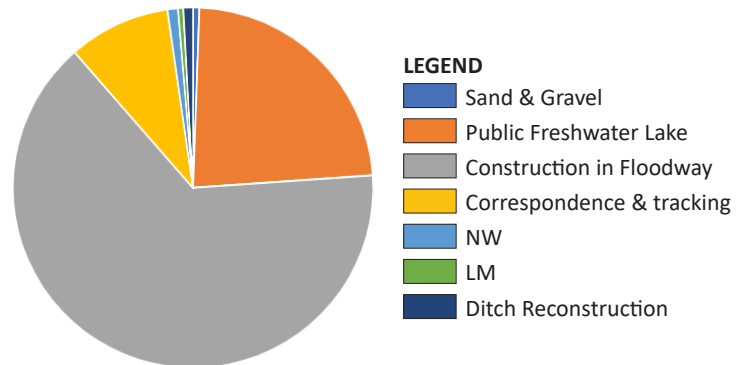
The Technical Services section received a total of 1205 permit applications, permit amendments, and CTS file requests in the period of July 1, 2023, through Sept. 30, 2024. Most permit applications are received under the Flood Control Act (65%) with applications submitted under the Lake Preservation Act the next most common type of application received (23%).

In addition to reviewing applications and requests for authorization, the section responds to hundreds of early coordination review requests and Waterways Inquiry requests each year. More about the Waterways Inquiries can be found at on.IN.gov/waterways. The section serves customers from all over the state daily, responding to more than 100 phone calls and emails regarding questions about permitting, floodplain information, and other general inquiries each month.

In 2024, the permit application form for construction near waterways was updated and a new online version of the permit application assistance manual was released to the public. Both can be found on the division’s website. In addition, the logjam removal guide was updated to align with the legislative changes to the Flood Control Act effective July 1, 2024. The section also updated the permit exemption webpage with the other legislative changes: in.gov/dnr/water/regulatory-permit-programs/exemptions/ and assisted in the creation of a new handout that outlines permit exemptions, as well as a handout on the benefits of floodplains.

FIGURE 5

Files by type without amendments



Learn if a permit is needed
on.IN.gov/waterways



Dam and Levee Safety

Program staff participated in eight functional exercises of Incident and Emergency Action Plans (IEAPs). Under IC 14-27-7.5-18, owners of high-hazard dams are required to develop an Emergency Action Plan (EAP) to help protect lives and property in downstream communities. Although statute does not mandate plan exercises, ensuring that IEAPs or EAPs are understood and practiced by dam owners, operators, and local and state emergency management officials is highly encouraged and leads to more efficient implementation during incidents or emergencies.

The annual Dam Information, Resources, and Training (DIRT) conference was held on June 4, 2024. In cooperation with the Association of State Dam Safety Officials (ASDSO), division staff and private sector volunteers involved with dam safety conducted education and training sessions for dam owners, local and state government officials, and those interested in dam safety. Several division staff presented at the conference.

The program received two federal grants from FEMA under the National Dam Safety Program. These awards will fund program improvements to update the state's dam inventory through remote geospatial screening and analysis, increase the number of high-hazard dams with IEAPs, support planned initiatives, and provide staff training. Program staff have taken advantage of numerous training opportunities, including Dam Construction Inspection, DSS-Wise breach inundation mapping, and other trainings offered by ASDSO.

Staff have increased their involvement with dam safety leadership through the Association of State Dam Safety Officials. The section manager was elected to the ASDSO Board of Directors, and one of the program's engineers serves on the ASDSO Public Safety Around Dams subcommittee.

With three deaths occurring this year at low head dam sites, public safety remains a critical concern. The section continues to establish the low head dam program as directed by IC 14-27-7.3 (in effect since 2020) and has been involved in reviewing permit applications for low head dam removals.

The section continues to review proposals for dam and levee rehabilitation or construction, conduct inspections of privately owned low and significant hazard dams and state-owned high-hazard dams, review submitted inspections for privately owned high-hazard dams, develop dam breach inundation maps, and monitor ongoing projects such as stream bank erosion of the Whitewater River at the state historical site in Metamora, which was presented to the governor.

Engineering Service Center

The Engineering Service Center (ESC) section reorganized staff in 2023, forming two teams: FEMA Program Partners and State Engineering Resources. FEMA Program Partners focus on reviewing LOMR and CLOMR applications in the state on behalf of FEMA and complete studies designated under the Cooperative Technical Partner grants. The State Engineering Resources group reviews permit applications, Indiana Floodplain Information Portal (INFIP) requests, completes approximate modeling for INFIP requests, and participates in meetings and site visits for County Drainage Board projects pursuant to Senate Enrolled Act 368 (SEA meetings).

The FEMA Program Partners completed 15 Letters of Map Revision (LOMR) cases, with additional cases in the queue. DNR was awarded an additional \$100,000 through the LOMR Partners Program to review cases in the upcoming year.

Through the FEMA Cooperating Technical Partners program, DNR and the Polis Center were jointly awarded \$1 million to continue updating FEMA's Flood Insurance Rate Maps. This funding will be used to produce final map products for nine counties, including Knox County, which is one of the three remaining counties yet to receive digital maps.

Preliminary Flood Insurance Rate Maps (FIRMs) were issued for Pike County. ESC and Floodplain Management section staff participated in open houses, providing the public with opportunities to comment on the maps. Additionally, FEMA has released new Flood Insurance Rate Maps (FIRMs) for portions of Carroll, Morgan, and Allen counties.

The State Engineering Resources group has seen an increase in the number of permits to review this year, with permit assignments to staff rising from three to four at a time to up to nine permits per engineer. They have completed more than 113 permit reviews, 155 INFIP inquiry requests, and more than eight SEA meetings.

ESC has updated its permit review process to accommodate FEMA's increased scrutiny of the no-rise policy for projects in floodways. The division has enhanced communication with applicants and agents to raise awareness of local and federal regulations that may be stricter than state standards. This approach allows applicants to consider modifying their proposed projects to potentially save time and money by designing for local, state, and federal standards simultaneously.

In line with the 2024 addition to the Floodplain Management Act, ESC is distributing notifications and educational materials to property owners impacted by changes to the state's Best Available Floodplain Layer.

GIS staff within ESC established a new process for calculating Peak Discharges. Permit application agents can now request Peak Discharges on the division website, which ESC staff then complete.



Floodplain Management

The Floodplain Management section partnered with the Indiana Department of Homeland Security (IDHS) to host the 10th biennial Operation Stay Afloat Conference with 128 attendees. Attendees were able to interact with staff from multiple agencies at their booths. The daylong conference included presentations covering topics such as floodplain management, building codes, disaster recovery, and insurance. The presenters included DNR, IDHS, Indiana Geographic Information Office, National Weather Service, Purdue Climate Office, USACE, and Federal Emergency Management Agency (FEMA) staff.

The section offered four in-person and three virtual sessions of “Indiana’s NFIP 101,” a workshop which covered basic NFIP information, mapping, fundamental duties of the floodplain administrator, building protection standards, and flood-related regulations.

The section conducted topical in-person and virtual workshops for local floodplain administrators and other professionals on:

- New FEMA Elevation Certificate
- Substantial Damage and Substantial Improvement Requirements
- Variances and the NFIP
- Violations and Compliance

The section also partnered with the Association of State Floodplain Managers (ASFPM) to host the L0273 course: Managing Floodplain Development Through the NFIP in August 2024. This course meets the training requirement of the floodplain management act (SEA 242). Eighteen individuals attended the four-day course.

Section staff participated in a joint project with other state and federal agencies as part of the Indiana Silver Jackets to develop and present the Indiana Flooding & Flood Tools Awareness Workshop (three in-person and one virtual).

Section staff reviewed and proposed edits to the draft Indiana Building Code that were approved by the IDHS building code committee.

In FY23 (July 1, 2023 – June 30, 2024), section staff completed NFIP Compliance Audits with 26 communities. FEMA has increased the requirement for community compliance and now requires states to audit 60% of the NFIP participating communities in a five-year period. Staff are now completing 57 NFIP Compliance Audits for FFY24, which is more than double what was completed in the previous fiscal year.

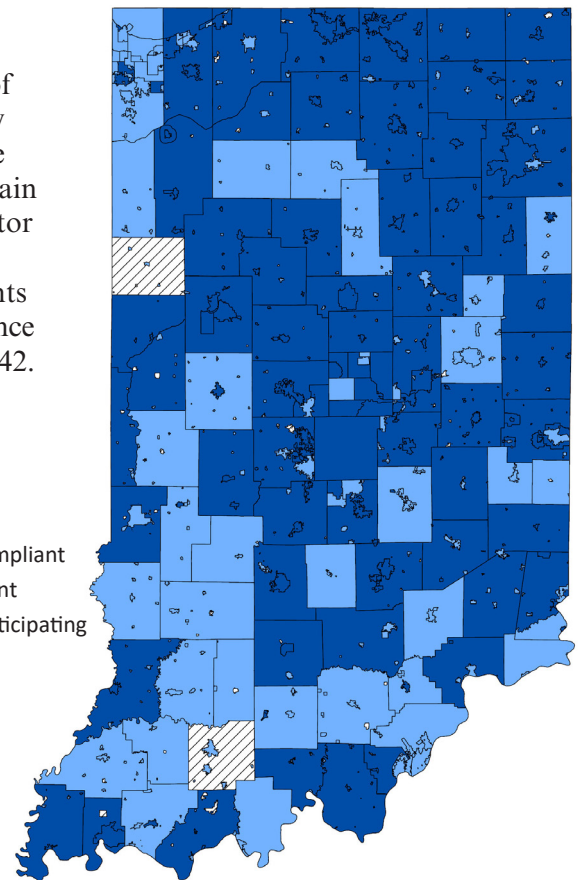
FIGURE 6

Training Compliant Communities of Indiana

This map illustrates the Status of Community Compliance for Floodplain Administrator Training Requirements in Accordance with SEA 242.

LEGEND

- Non-Compliant
- Compliant
- Non-Participating



Floodplain Management Training Videos
[IN.gov/dnr/water/events-and-training/](https://www.in.gov/dnr/water/events-and-training/)



Watershed Stewardship

The Watershed Stewardship Section was officially established in 2024 and fully staffed with the hire of a section manager and two water planners. The section's primary focus this past year was establishing and building relationships with conservancy districts, river basin commissions, and watershed development commissions. Key accomplishments include:

- Regularly attending river basin commission meetings
- Updating the conservancy district directory (not updated since 2019) and establishing a dedicated newsletter for conservancy districts
- Establishing one new conservancy district and the first watershed development commission
- Creating outreach flyers for open house and public events
- Revising existing conservancy district guidance and drafting guidance for watershed development commissions
- Presenting at three statewide conferences and one river basin commission meeting
- Collaborating with Indiana Association of Soil and Water Conservation Districts (IASWCD) and other partners to develop and present sessions on watershed development commissions at six summer summit sessions

Compliance

The Compliance section has added a fourth Natural Resources Inspector position to cover the northern region of the state. This new position is specifically responsible for public freshwater lakes in the region, replacing the previous two-inspector approach. In addition to public freshwater lakes oversight, this inspector also manages floodway issues within their designated area, among other statutory issues. The other regional inspector territories have been realigned to provide more time for public assistance visits and compliance checks.

INDIANA ASSOCIATION FOR FLOODPLAIN AND STORMWATER MANAGEMENT (INAFSM) AWARDS

2023

In 2023, division staff received two recognitions at the INAFSM Annual Conference.

Anita Nance, who was serving as manager of the Floodplain Management section at the time, was honored with the INAFSM Lifetime Achievement award, marking her 27-year career with the division before her retirement in spring 2024.

Darren Pearson received the Excellence in Floodplain Management Award while serving as the National Flood Insurance Program state coordinator. Pearson, who now manages the Floodplain Management section, was recognized for his work in improving Indiana's standing in FEMA's Tiered State Framework, which brought additional funding to the state.

2024

The 2024 Annual Conference brought more accolades for division staff.

Suzie Delay, a Hydraulic Engineer, was presented with the 2024 Chairman's Award for Outstanding Service in Support of INAFSM, acknowledging her longstanding commitment to organizing the annual silent auction that supports the Greg Main and Toni Cecil memorial scholarship funds.

The division's Engineering Service Center achieved recognition through the 2024 Outstanding Floodplain Project Award, shared with the Kankakee River Basin and Yellow River Basin Development Commission and Christopher B. Burke Engineering. This collaborative project successfully expanded floodwater storage capacity in the Kankakee basin by approximately 600 acres.



Scenic photo of
Cagles Mill Dam