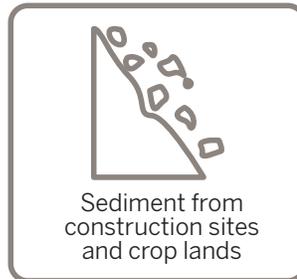
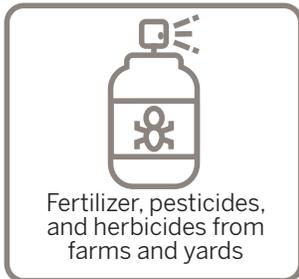


# Nonpoint Source Pollution in Indiana

Nonpoint source (NPS) pollution is the leading cause of water quality problems in the state, affecting Hoosiers' drinking water supplies, recreation, fisheries, and wildlife. NPS pollution does not come from a single, identifiable source but occurs when surface runoff carries natural and human-made contaminants into wetlands, lakes, rivers, and ground waters.

While some NPS pollution is caused by natural sources, human activity is responsible for the majority of NPS pollution. Common contaminants include:



## What strategies can be used to manage NPS pollution?

Although the many sources of NPS pollution complicate the problem of controlling it, a number of strategies exist to prevent pollutants from reaching waterways:

1. **Reduced use of chemical pollutants**
2. **No-till or reduced-till farming to prevent soil erosion**
3. **Use of grass “buffer strips” to absorb pollutants before they reach water**
4. **Use of porous paving materials in parking lots and sidewalks to reduce water runoff**
5. **Planting trees and native plants**



**2,500** Indiana streams impacted by NPS pollution in 2020 <sup>1</sup>

**7,000** acres of Indiana lakes and reservoirs contain nitrogen or phosphorous from excess fertilizers <sup>1</sup>

**100** percent of Indiana's Great Lakes shoreline contains bacteria from human and animal waste <sup>1</sup>

**\$3,900,000** awarded to Indiana NPS pollution control projects by the Clean Water Act in 2019 <sup>1</sup>



For more information, visit [eri.iu.edu](http://eri.iu.edu), or contact the Environmental Resilience Institute at [eri@iu.edu](mailto:eri@iu.edu) or 812-855-8539

## How can Hoosiers help address NPS pollution?

Preventing nonpoint source pollution from contaminating Indiana waterways requires the cooperation of many groups and agencies at the federal, state, and local level. Every Hoosier who cares about the condition of their local watershed can also make a difference by following a few key practices:

- **Keep litter, pet wastes, leaves, and debris out of street gutters and storm drains.**
- **Apply lawn and garden chemicals sparingly and according to directions.**
- **Dispose of used oil, antifreeze, paints, and other household chemicals properly.**
- **Clean up spilled brake fluid, oil, grease, and antifreeze.**
- **Control soil erosion on your property by planting ground cover and stabilizing erosion-prone areas.**
- **Encourage local government officials to develop construction erosion and sediment control ordinances in your community.**
- **Have your septic system inspected and pumped, at a minimum every three to five years, so that it operates properly.**
- **Purchase household detergents and cleaners that are low in phosphorous.**

Source | EPA

## ERI Initiatives

ERI supports a number of initiatives to raise awareness about NPS pollution and monitor the health of waterways in the state of Indiana.



### Water Quality on Farms

IU Assistant Professor Landon Yoder and his team are working with Indiana farmers to monitor nutrient runoff from their fields. The team is analyzing water samples collected from participating farms and providing farmers with reports on how much nitrogen they may be losing from their fields. The data could help inform strategies that maximize nutrient efficiency and limit NPS pollution.



### Modeling Farm Management Practices

IU Associate Professor Adam Ward and his collaborators are partnering with an Indiana-based farming cooperative to investigate variables that affect farm productivity and environmental impact. Researchers are collecting data on soil quality, fertilizer and pesticide application, crop yield, and more, and using it to create a high-resolution model to better understand agriculture's environmental footprint.



### Improving Waterways

Researchers from IUPUI and IU Bloomington and the City of Indianapolis are assessing the environmental, social, and health impacts of changes along Pleasant Run Creek, a 27-mile urban watershed on the east side of Indianapolis. The research team is working to quantify the impacts of greenways on human and environmental health and testing for positive feedbacks between urban biodiversity restoration, citizen engagement, and ecosystem resilience.