Indiana's State Nutrient Reduction Strategy – Milestones and Action Items Table

Goals & Actions

Work with a sub-committee of the SNRS Workgroup to determine the "Progress Indicators" for each of the goals and actions items listed in this table (where applicable and as needed).

Indiana Science Assessment

Overarching Goal

Improve scientific understanding and quantification of nutrient reductions to guide data-driven conservation decisions.

Actions Items

Collect USGS Stream gage data and IDEM Fixed Station water quality data in order to continue to run the trend analysis of nutrient loads on sites chosen as part of the Indiana Science Assessment Component 1 using the WRTDS model on an annual basis.

Periodically evaluate the chosen WQ monitoring sites for the trend analysis to see if any sites need to be removed or added.

Monitor water quality trends in nitrogen and phosphorus to assess reductions.

Continue the work of the Indiana Science Assessment to improve the method to quantify nutrient reductions from conservation practices, including dissolved nutrients, and determine efficiency of practices in reducing loads. This includes the development of a tool for calculating nutrient load reductions and determining the efficiency of certain conservation practices on reducing nitrogen and phosphorus loads to Indiana waters.

Have a collective list and consistent definitions of conservation practices that are analyzed as part of the Indiana Science Assessment.

Develop list of the most effective Nitrogen reduction practices
- Urban vs. Rural
- Soil Health
- Nutrient Management
- Agricultural Drained Lands

Develop list of the most effective Phosphorus reduction practices
- Urban vs. Rural
- Soil Health
- Nutrient Management
- Erosion Control

Communicate the results of the conservation practice analyses completed from the work of the Indiana Science Assessment.

Continue to work with and collaborate with other states in the Midwest who are also working on Science Assessments and analyzing research studies and data for conservation practices effectiveness.

Water Quality Monitoring & Planning

Overarching Goal

Enhance Indiana's water quality monitoring network through coordinated monitoring efforts, permitting, and investment.

Actions Items
Determine WQ monitoring gaps that exist in order to expand or enhance water quality monitoring networks that can be used to evaluate nutrient trends and BMP effectiveness.
Prioritize new monitoring sites statewide and determine funding needs and funding sources for any new monitoring sites.
Determine existing monitoring locations that need continued funding in order to continue long-term water quality monitoring.
IDEM will continue to monitor (through monthly discharge monitoring reports) and require that all major wastewater treatment plants have 1mg/L phosphorus limits in their NPDES permits and are discharging at that limit or below.
Support upgrades to wastewater treatment facilities and municipal stormwater systems to reduce nutrient discharges through improved infrastructure and updated permits.
The Indiana Water Monitoring Council (InWMC) is having conversations with the Indiana Water Resources Association (IWRA) to combine efforts and become a water monitoring committee under IWRA, with the continued commitment of working together to communicate, coordinate, share data, and collaborate on water monitoring efforts around the state.
Assess the Funding needs and Research needs and gaps within Indiana for WQ monitoring both surface and groundwater, and for In-field and Edge-of-Field practice effectiveness.
Work with the State Department of Health and Indiana Finance Authority on addressing septic tank issues throughout the state, such as septic tank failures, cost needs for repairs and/or upgrades, and educational needs.

Measuring Impacts

Overarching Goal
Demonstrate and communicate the measurable impacts of conservation practices on sediment, nitrogen, and phosphorus reductions statewide.

Actions Items
Continue to inventory conservation practices implemented through conservation programs and show impacts of the *assisted* conservation practice implementation statewide.
Show impacts of assisted conservation practice implementation using the Region 5 model and the newly developed model that will come from the work of the Indiana Science Assessment. These models will show the sediment, nitrogen and phosphorus load reductions from practice implementation.
Use this inventory of implemented conservation practices to guide decisions on priority watersheds and work on the Indiana Science Assessment.
Continue to conduct the conservation and cover crop transect survey statewide, and to use the data results from these transects.
Continue to prepare annual one-page reports on load reductions in significant waterbodies within Indiana.
Use GIS Story Maps and interactive watershed tools to improve transparency, strengthen local engagement, show progress of NLRs, and tell the story of conservation going on in Indiana.
Continue to implement performance measures monitoring on BMP projects around the state to see if implementation has improved water quality.

Conservation Implementation and Program Implementation

Overarching Goal

Accelerate and increase conservation practice adoption to reduce nutrient and sediment loads and advance water quality improvements across priority watersheds.

Actions Items

- Promote and implement conservation practices that are effective in reducing nitrogen loads.
- Promote and implement conservation practices that are effective in reducing phosphorus loads.
- Target priority watersheds with BMP implementation.
- Explore funding opportunities for implementation of streambank stabilization projects.
- Encourage and promote the use of cover crops with the result of seeing an increase in acres planted statewide.
- Encourage and promote the use of no-till and conservation tillage implementation across the state in order to see an increase based on tillage transect results.
- Increase the promotion of strip-till since it has many of the same benefits as no-till and can get nutrients injected below ground.
- Encourage and support the use and implementation of nutrient management plans by Indiana farmers.
- Provide technical assistance and funding support to farmers and landowners to perform regular soil sampling that aids in nutrient management on ag land.
- Provide technical assistance and program support to landowners for implementing wetland restorations.
- Promote and implement bottomland timber floodplain restorations (tree plantings).
- Encourage and support SWCDs to use CWI funding as they increase the number of joint sediment and nutrient reduction projects.
- Provide technical assistance and program support to landowners and participants wanting to enroll acres into the Indiana Conservation Reserve Enhancement Program (CREP).
- Provide federal pass-through funding for watershed planning and implementation projects: provide CWA 319 and 205j funding with IDEM and other ICP staff technical assistance and grant management.
- Work with landowners and participants to address natural resource concerns and enroll them in the right federal, state, or local program that will meet the landowner's conservation and stewardship needs: provide technical assistance, financial assistance and write conservation plans for landowners.
- Support the work of conservation watershed organizations, watershed and river basin commissions, etc. that are doing work to promote, encourage, and educate on wildlife habitat, wetland restorations, edge-of-field practices, river-floodplain connection, and many other conservation practices.

Education and Outreach

Overarching Goal

Increase awareness and participation in conservation practices through strategic education, outreach, and professional development.

Actions Items

Explore opportunities to work with Certified Crop Advisers (CCAs) and private sector to help promote agronomic conservation practices and technologies. Support CCA Annual Meeting in December, hold field days and invite CCAs, and develop possible grant opportunities to work with CCAs.
Promote 4R Nutrient Stewardship Certification Program across Indiana, and the 4R of nutrient stewardship when working with ag landowners.
Expand cover crop use among farmers by promoting the new Cover Crop Premium Discount Program for growers.
Support the SWCDs around the state that provide educational events and field days to students, landowners, and the public on topics that include practice implementation, practice effectiveness, water quality, soil health, or other conservation related topics.
Promote Conservation Cropping Systems Initiative (CCSI) events to ICP staff for professional development opportunities.