Indiana Conservation Partnership Region 5 Model Load Reductions

Introduction

The Indiana Conservation Partnership is comprised of eight Indiana agencies and organizations who share a common goal of promoting 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.

In 2013, members of the Indiana Conservation Partnership (ICP) began using the Environmental Protection Agency's (EPA) Region 5 Nutrient Load Reduction Model to determine the impact of installed conservation practices implemented by the ICP Conservation Delivery Teams on Indiana's water quality.

The ICP adopted the Region 5 Nutrient Load Reduction Model to analyze conservation practices funded by state programs such as the Indiana State Department of Agriculture's Clean Water Indiana Program and the Indiana Department of Natural Resources' Lake and River Enhancement Program, as well as federally funded programs including EPA's Section-319 Program and USDA's Farm Bill Program.

The Region 5 Nutrient Load Reduction Model, estimates annual reductions of sediment, as well as nitrogen and phosphorus tied to sediment erosion (brown, green and blue maps, respectively). These reductions continue for the life of the practices modelled (e.g., grassed waterways are designed to be 10-year practices, while cover crops are 1-year practices, established annually). Reductions in dissolved nutrients, such as dissolved reactive phosphorus (DRP) and nitrate (NO3), are not accounted for by the Region 5 Nutrient Load Reduction Model. In addition, ICP conservation practices not associated with sediment loss, or not covered by the Region 5 Nutrient Load Reduction Model, are not analyzed.

This effort does not include the many unassisted practices designed and installed solely by a private landowner without ICP assistance.

Indiana is the only state in the country to adopt a model among so many partners to estimate conservation impact on a statewide scale. As part of Indiana's Nutrient Reduction Strategy, this modeling effort illustrates the continued success and challenges of conservation and serves as a tool to help set watershed priority and reduction targets, manage conservation resources, and to further stakeholder involvement at all levels of government within and across Indiana.

For more information about Indiana's Nutrient Reduction Strategy, visit the Indiana State Department of Agriculture's website at http://www.in.gov/isda/2991.htm.

Data Provided By:

ICP Website: http://icp.iasWCD.org
ISDA Website: http://www.in.gov/isda
IDEM Website: http://www.in.gov/idem
NRCS Website: http://www.nrcs.usda.gov/programs/cstc/stcfrhome

Analysis Conducted By:

Deb Fairhurst, ISDA Program Manager
May 19, 2015

2014 Indiana Conservation Accomplishments

Implemented by Indiana Conservation Partnership

January 1 thru December 31, 2014
Conservation Practices Completed - 21,012
Conservation Practices Underway - 1,079

Data: Provided by Indiana State Department of Agriculture, Indiana Department of Environmental Management, Indiana Department of Natural Resources, Indiana's Soil and Water Conservations Districts and USDA Natural Resources Conservation Service.

March 23, 2015
Deb Fairhurst, ISDA Program Manager

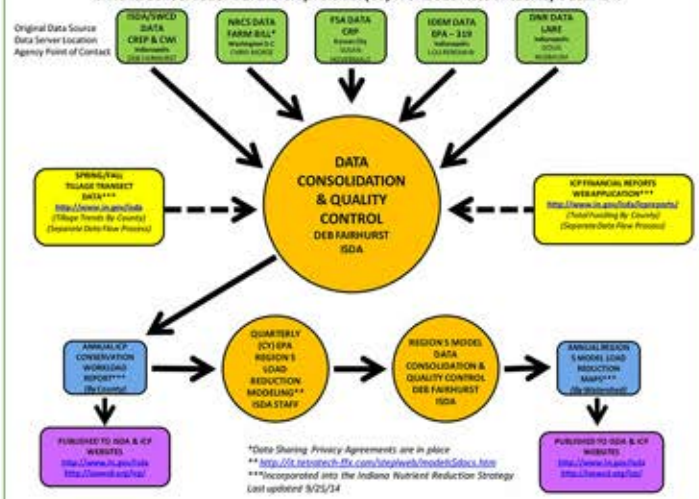
2014 Conservation Accomplishments

Total Practices

- 1 - 106
- 114 - 233
- 241 - 361
- 430 - 666
- 673 - 1,178

Methodology

Indiana Conservation Partnership Annual (CY) Workload Accountability Data Flow



*Data Sharing Privacy Agreements are in place
** http://ir.tetratech-ffx.com/stepiweb/modelGDocs.htm
***Incorporated into the Indiana Nutrient Reduction Strategy
Last updated 9/25/14

2013-14 Cumulative Nutrient Load Reductions
Sediment

Based on Region 5 Model analyses conducted on 15,042 conservation practices installed by the Indiana Conservation Partnership January 2013 thru December 2014. This effort does not include the many unassisted practices designed and installed solely by a private landowner without ICP assistance.

Reductions in dissolved nutrients, such as dissolved reactive phosphorus (DRP) and nitrate (NO3), are not accounted for by the Region 5 Model.

May 18, 2015
Deb Fairhurst, ISDA Program Manager

A total reduction of 1,209,756 tons of sediment statewide.

Sediment Reduction (tons)

- 1 - 25,000
- 25,001 - 100,000
- 100,001 - 175,000
- No Reported Reductions

2013-14 Cumulative Nutrient Load Reductions
Nitrogen

Based on Region 5 Model analyses conducted on 15,042 conservation practices installed by the Indiana Conservation Partnership January 2013 thru December 2014. This effort does not include the many unassisted practices designed and installed solely by a private landowner without ICP assistance.

Reductions in dissolved nutrients, such as dissolved reactive phosphorus (DRP) and nitrate (NO3), are not accounted for by the Region 5 Model.

May 18, 2015
Deb Fairhurst, ISDA Program Manager

A total reduction of 2,513,693 pounds of nitrogen statewide.

Nitrogen Reduction (pounds)

- 1 - 50,000
- 50,001 - 200,000
- 200,001 - 300,000
- No Reported Reduction

2013-14 Cumulative Nutrient Load Reductions
Phosphorus

Based on Region 5 Model analyses conducted on 15,042 conservation practices installed by the Indiana Conservation Partnership January 2013 thru December 2014. This effort does not include the many unassisted practices designed and installed solely by a private landowner without ICP assistance.

Reductions in dissolved nutrients, such as dissolved reactive phosphorus (DRP) and nitrate (NO3), are not accounted for by the Region 5 Model.

May 18, 2015
Deb Fairhurst, ISDA Program Manager

A total reduction of 1,350,592 pounds of phosphorus statewide.

Phosphorus Reduction (pounds)

- 1 - 25,000
- 25,001 - 100,000
- 100,001 - 175,000
- No Reported Reductions