

# Indiana Science Assessment



## Gulf of Mexico Hypoxia Task Force Meeting

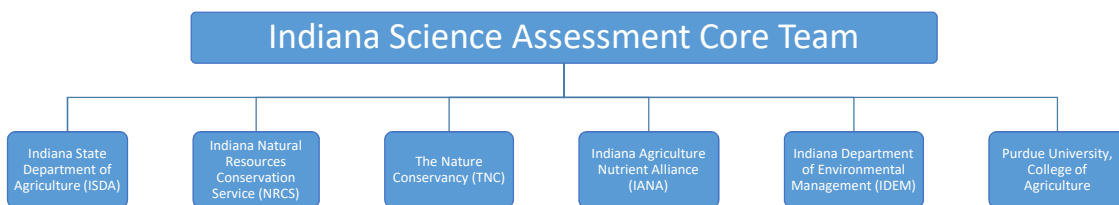
Washington, D.C.  
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*Julie Harrold, Indiana State Department of Agriculture (ISDA)*  
*Jordan Seger, Indiana State Department of Agriculture (ISDA)*



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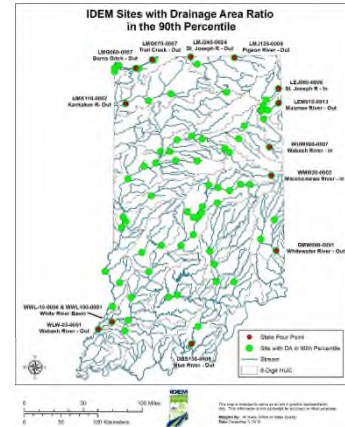
- The Indiana Science Assessment was born out of the desire of the Indiana Conservation Partnership (ICP) and other conservation partners wanting to improve and strengthen the existing method of capturing sediment and nutrient load reductions from the implementation of conservation practices, including adding the component of dissolved nutrients.



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▪ **Component #1: Determine historic and ongoing nutrient loads leaving the state, and also by basins used in the State Nutrient Reduction Strategy.**

- Component #1 is being carried out internally among the partners; ISDA, IDEM and USGS.
- Goal is to determine baseline load of nutrients leaving the state (Baseline period will be 1980-1996).
- Have analyzed existing IDEM and USGS data at 7 pour points along state borders, and at pour points within Indiana’s major basins
- We will utilize the USGS Weighted Regressions on Time, Discharge, and Season (WRTDS) model to determine loads.
- The Science Assessment underpins the SNRS by helping to determine loads and concentrations in each of the basins in the state, which further helps in prioritizing HUC 12 watersheds for more targeted conservation efforts in the future. (Section 3 of the SNRS).



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

- EPA funds for Hypoxia Task Force States will be used to help carry out Component #2, to hire a research associate who will conduct research on:
  - Identifying and/or developing a standard tool and procedures for estimating nutrient load reductions from conservation practices (first step is for 10 practices) (second step is for at least 25 more practices)
  - Determining the percent efficiency of conservation practices on reducing nitrogen and phosphorus loads.
- The research associate will work at Purdue University, under Dr. Jane Frankenberger with direction provided by the Science Assessment Core Team and a team of cooperating researchers.
- Includes having a collective list of and consistent definitions of best management practices.
- A Tangible result will be a table showing percent efficiencies of conservation practices.



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- Through the development of the Indiana Science Assessment, public-private partnerships will benefit by working together to improve water quality from non-point source pollution.
- The work of the Indiana Science Assessment to improve the method of determining nutrient load reductions could in-turn provide assistance/information to the other Hypoxia Task Force states who are working on how to gather conservation practice implementation data, and moving toward determining nutrient load reductions.