



Indiana Water Resources Association

Annual Symposium, June 25-27, 2025
Abe Martin Lodge, Brown County State Park

“Foundations and the Future”

HOSTED BY IDNR AND THE IWRA

Wednesday, June 25, 2025

12:00-1:00 Registration / Poster setup

1:00	Welcome to the 2025 IWRA Symposium	Garth Lindner, <i>IWRA President</i> Indiana Department of Natural Resources
1:10	Legislative and Executive Order Updates	Ryan Mueller & David Knipe, Indiana Department of Natural Resources

Theme: Understanding the Fundamentals | Moderator:

2:00	Update on Indiana Mesonet	Beth Hall, Indiana State Climate Office
2:20	Changing Rainfall Variability and Precipitation Effectiveness Implications for Agricultural and Ecological Drought	Trent Ford, Illinois State Water Survey
3:00	Break with Snacks	
3:20	Developing a Watershed Management Plan for Lake Monroe	Maggie Sullivan, Friends of Lake Monroe
3:40	Chemical features that differentiate Crawford Uplands and Mitchell Plateau Springs	McKailey Sabaj, Indiana Geological & Water Survey
4:00	Where do Southern Indiana Mineral Springs Originate?	Tracy Branam, Indiana Geological & Water Survey
4:20	U.S. Geological Survey real-time water quality supergauge network: Accessing data and case studies	Aubrey Bunch & David Lampe, United States Geological Survey
4:40	Aquifer “Safe Yield” Evaluations Based on Site-Specific Testing and Potential Regional Interactions	Luke Johnstone, Mundell & Associates
5:00	Poster Presentation Overview and 1-minute Introductions	Moderator: Laura Esman, IWRRC

5:10-6:00 Social Hour / Poster Presentation / Cash Bar		
Poster Presentations	Nitrate loss from a drained agricultural watershed in central Indiana: effects of crop type and hydrologic flow path	*Dibya Chakraborty, Indiana University Indianapolis
	Evaluation of a Novel Open-Source Three-Dimensional Groundwater Borehole Flow Sensor	*Ayobami Oni, Purdue University
	Investigating reactor geometry and hydraulic retention time in algal-bacterial treat	*Karthik Shivaram, Purdue University
	Drainage Water Recycling Impacts on Amphibian Population in a Wetland Ecosystem	*Ronnie Bernard, Purdue University
	Assessing Potential Water Stress from Increasing Technology on the Wabash River Basin	*Ayomide Adepeju, Purdue University
	Assessing and addressing the quality of Indiana's most sensitive aquatic habitats, using mayflies as an indicator	Luke M Jacobus, Indiana University Columbus
	Fish assemblages of the Wabash River prior to modification of upstream dam releases	Mark Pyron, Max Stafford, Noah Dilley, Ball State University
6:00	Awards Banquet and Cash Bar	Mark Basch, Indiana Department of Natural Resources
8:00	Social and Networking	

Thursday, June 26, 2025

Breakfast Served from 8:00-9:00 AM in Melodeon Hall

9:00

Keynote: Sujay Kaushal, University of Maryland

Freshwater Salinization Syndrome: A Small Story about Salt and Its Big Global Impacts

Theme: Collaborative Solutions | Moderator: David Lampe

10:00

A Novel Water Quality Index from Long-term Water Quality Monitoring in the Western Lake Erie Basin

Gabriel L. Curtis & Julie Davis Good, **Allen Co. SWCD**

10:20

Evaluating Bank Restoration and Stabilization in the Yellow River in Northern Indiana: Mitigating Sediment and Nutrient Transport

Aleia M Dumond,
United States Geological Survey

10:40

Farmers Helping Hellbenders RCPP: Landscape Conservation

Eliza Hudson,
Purdue University

11:00

Break

11:30

A Strategic Path Forward: Indiana's Water Monitoring Network

Jill Hoffmann,
White River Alliance

11:50

Strengthening Local Watershed Management: 20 Years of the Indiana Watershed Leadership Academy

Jane Frankenberger,
Purdue University

12:10

Water Governance Models: A Multi-state Synthesis

Theresa Landewe, Jack Wittman, & Erik Anderson, **INTERA, Inc**

12:30

Lunch in Melodeon Hall

Theme: Innovative Technology | Moderator:

1:30

Climate-Resilient Irrigation: UAS-Based Approaches for Estimating Crop Water Requirements

Takhellambam Bijoychandra Singh,
Purdue University

1:50

Constructed Ponds As Common, Understudied Habitats on Agricultural Landscapes

Tyler Hoskins,
Purdue University

2:10

Estimating Biogeochemical State of Inland Water Bodies with Remote Sensed Parameters and Machine Learning Methods

Isaac Bradford*,
Purdue University

2:30

Effects of Long-Term Storage on the Isotopic Compositions of Different Types of Environmental Waters

Carlynn Diersing*,
Indiana University Indianapolis

2:50

Break with Snacks

Theme: Future Challenges | Moderator:

3:20	Building a Resilient Indiana: Harnessing Green Practices to Tackle Future Development Challenges	Maria Iturbide-Chang, Hoosier Environmental Council
3:40	Safeguarding Water While Storing Carbon Dioxide: A Case Study from the Midwest	Babak Shabani, INTERA, Inc.
4:00	Characterization of Primary Microplastics Collected from US Shorelines	Mathew Simpson, Ball State University
4:20	Microplastics in the Himalayas: A Deep Learning-Based Approach for Environmental Monitoring in Sagarmatha (Mt. Everest) National Park	Simon Baniya*, Ball State University
4:40	Dinner on your own.	
7:30	Social and Networking	

* Student presentation

Friday, June 27, 2025

Breakfast Served from 8:00-9:00 AM

9:00-9:30 Ogle and Stahl Dams Field Trip Introduction

Joe Miller, **Banning Engineering**

10:00-12:30 Field trip to Ogle and Stahl Dams,
Dave Nance (IDNR (Retired) and Joe Miller

Thank you to our sponsors!

