Telling the story of Indiana lake water quality with interactive web-based mapping and data visualization

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Background

1. Public outreach and education
2. Technical assistance
3. Volunteer lake monitoring
4. Lake water quality assessment
5. Coordination with other state and federal lake programs.
LWQA Timeline

Site Selection

Sampling

Data Analysis

Training

Data Entry

Fast Forward 4 years

Reporting
Interactive Figures with Shiny
R Shiny Basics

- R package from R Studio
- Free & Open-source!
- Make web apps, dashboards, and much more
- Find more info @ shiny.rstudio.com
Reports only go so far…

- 63 pages
- 12,000 words
- 35 figures
Individual Web Apps
Indiana Clean Lakes Program

Lake Water Quality Assessment: 2015-2018

Parameter:
- pH

Lake Type
- Natural Lake
- Impoundment
- Surface Mine Lake

Download Plot
Download Data
Indiana Clean Lakes Program

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Shiny Dashboards
Interactive Reports with Story Maps
Esri Story Maps

• Combine mapping and reporting
• Wide variety of pre-made templates
• No knowledge of programming required
• Find more info @ www.esri.com
Indiana Clean Lakes Program - 2019 Lakes

The Indiana Clean Lakes Program monitors lakes throughout the state every summer as part of the Lake Water Quality Assessment reporting. You can use this map to follow our field crew’s journey across Indiana and see information about each lake we sampled!

Rivir lake is a natural lake located in the Chain of Lakes State Park, Noble County. The lake has a surface area of 9.71 hectares and a max depth of 9.76 meters. The most recent sampling was on 6/25/19.
Slides, code, and further questions

- Happy to provide my slides, code, or answer any questions relating to the talk:
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Questions?