

Science and Art of Stream Restoration: The Eel River Journey



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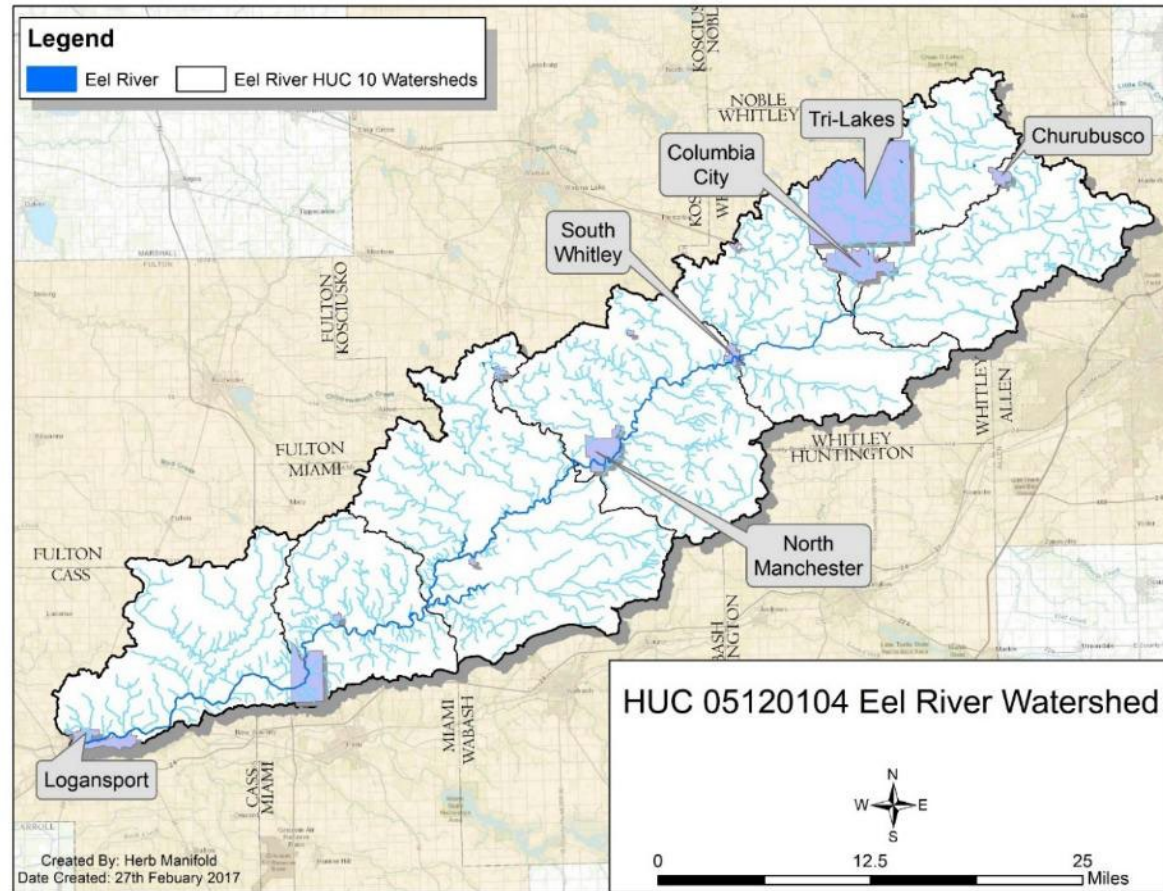
ECI Scientists and one Social Worker

- Melinda Sweeten, President
- Jerry Sweeten, Senior Research Scientist
- Herb Manifold, Environmental Scientist
- Kyle Boone, Environmental Scientist
- James Heimlich, Historian/Archaeologist



Eel River

- 110 miles
- 842 mi²
- Geologic Boundary
- 80% agriculture

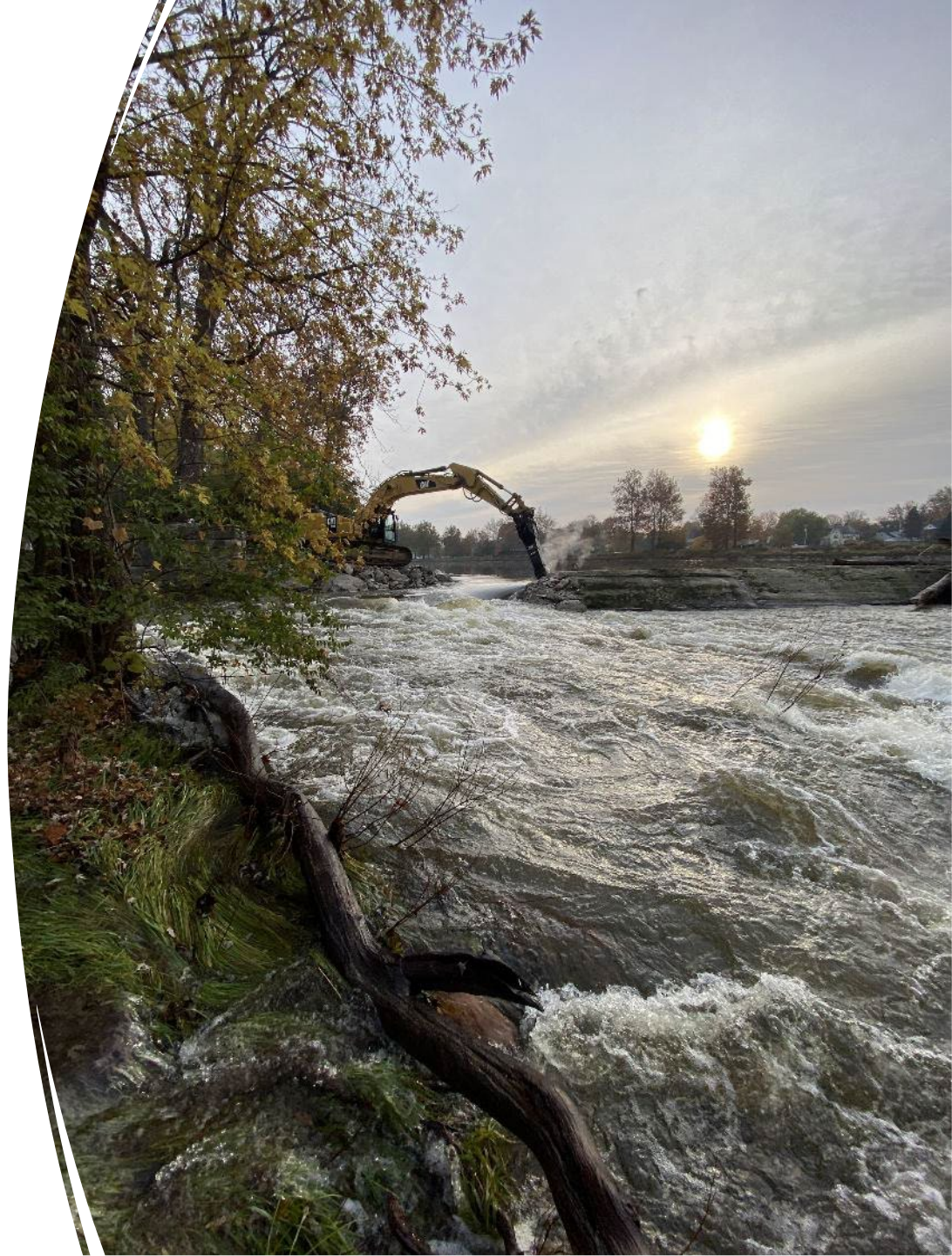


Jay Taylor

“Some of the communities up stream discharged sewage without treatment. In 1965 this writer piloted a youth canoe camp for the Indiana North Evangelical United Brethren Church. Foul conditions were much more evident at that time. It seemed every farmer had a hillside overlooking the river where the family trash was dumped. Several dead livestock carcasses lay at the water's edge. There was a massive fish kill below North Manchester.”

Fertile Collaborations

- IDNR-LARE
- USFWS/NFPP
- ORBFHP
- IDNR Nongame Program
- IDNR Division of Water
- IDEM
- The Nature Conservancy
- Wabash County Community Foundation
- BK RiverFish
- Private Donations



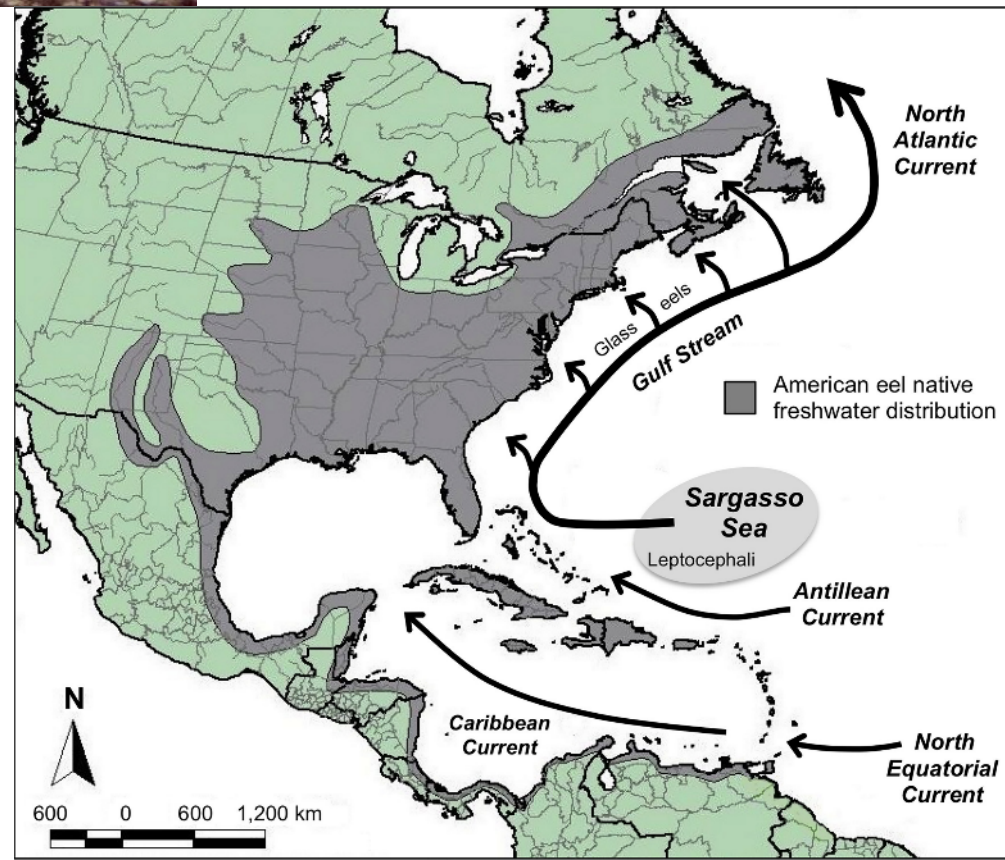
Restoration Priorities

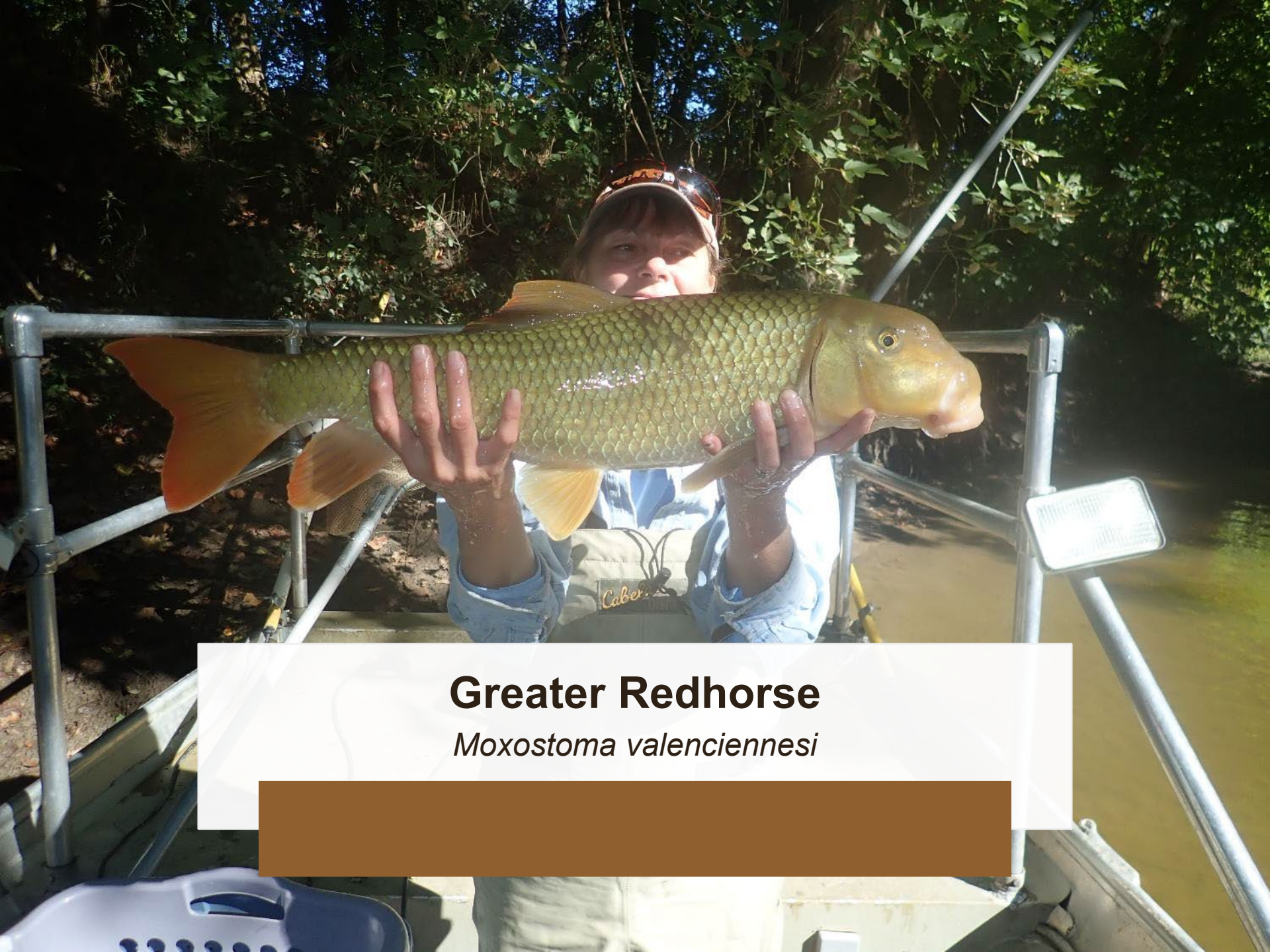
- Water Quality
- Fisheries
- Fish passage
- Reintroductions
- Education/Outreach





American Eel (*Anguilla rostrata*)





Greater Redhorse

Moxostoma valenciennesi



Freshwater Mussels

- 28 species
 - 26 live
 - 2 shells only



Plain Pocketbook



Clubshell Reintroduction

- 50 in three locations, 2015
- 149 alive, 2016
- 1,000 in three locations, 2016
- 90% survival
- Muskrat attack 2021



Special thanks to Brant Fisher!



Eelgrass Restoration

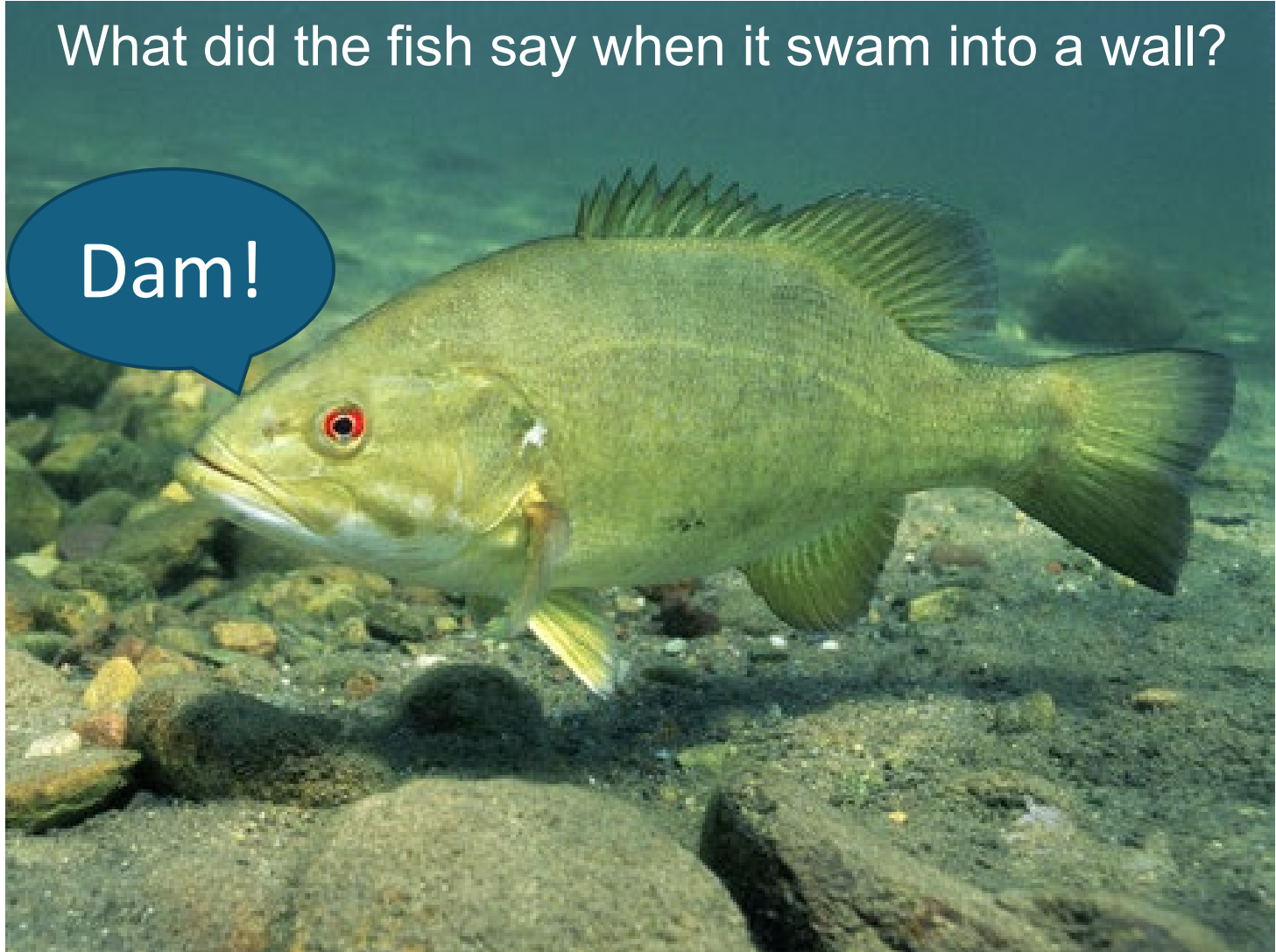


What did the fish say when it swam into a wall?

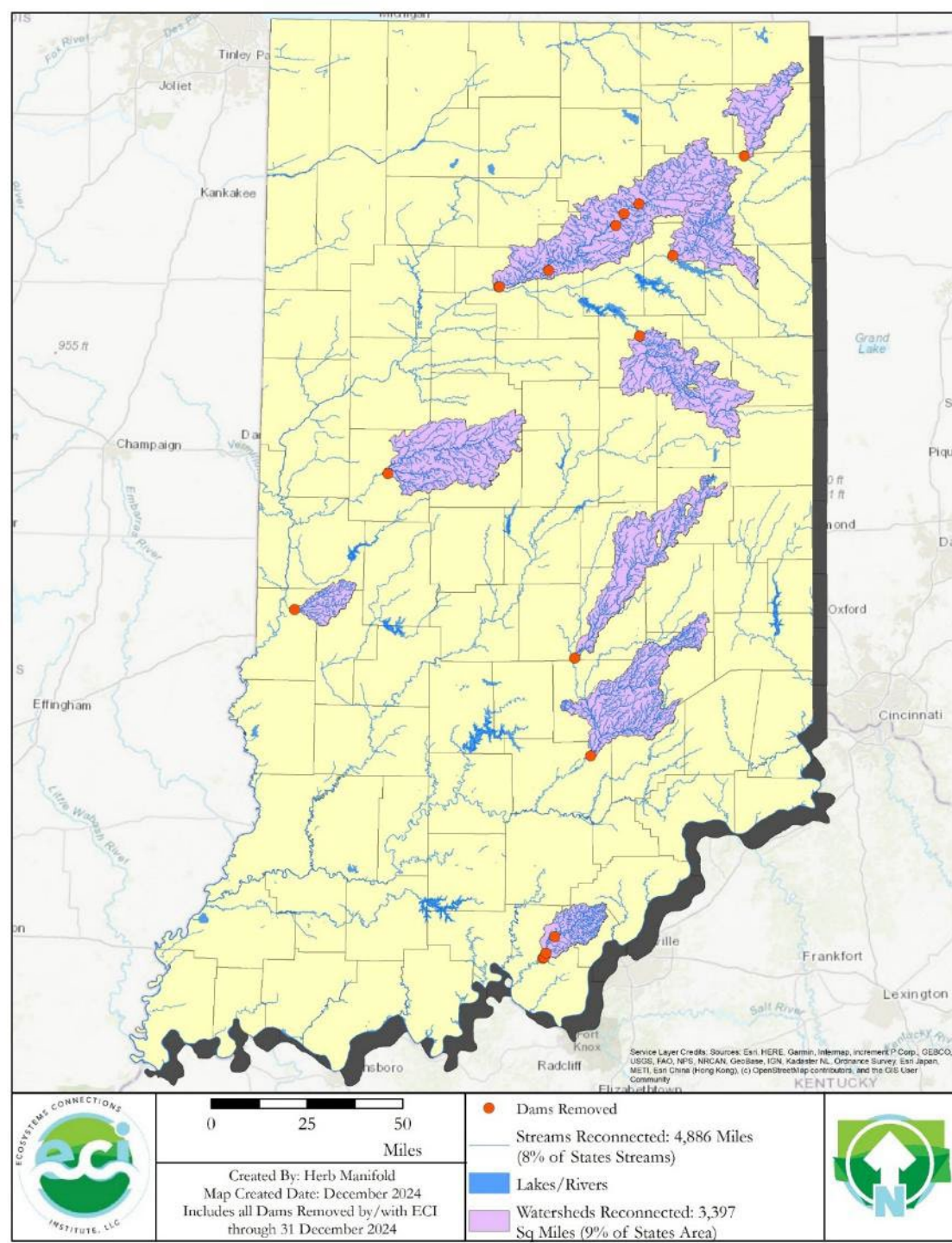


What did the fish say when it swam into a wall?

Dam!



21 Dams removed





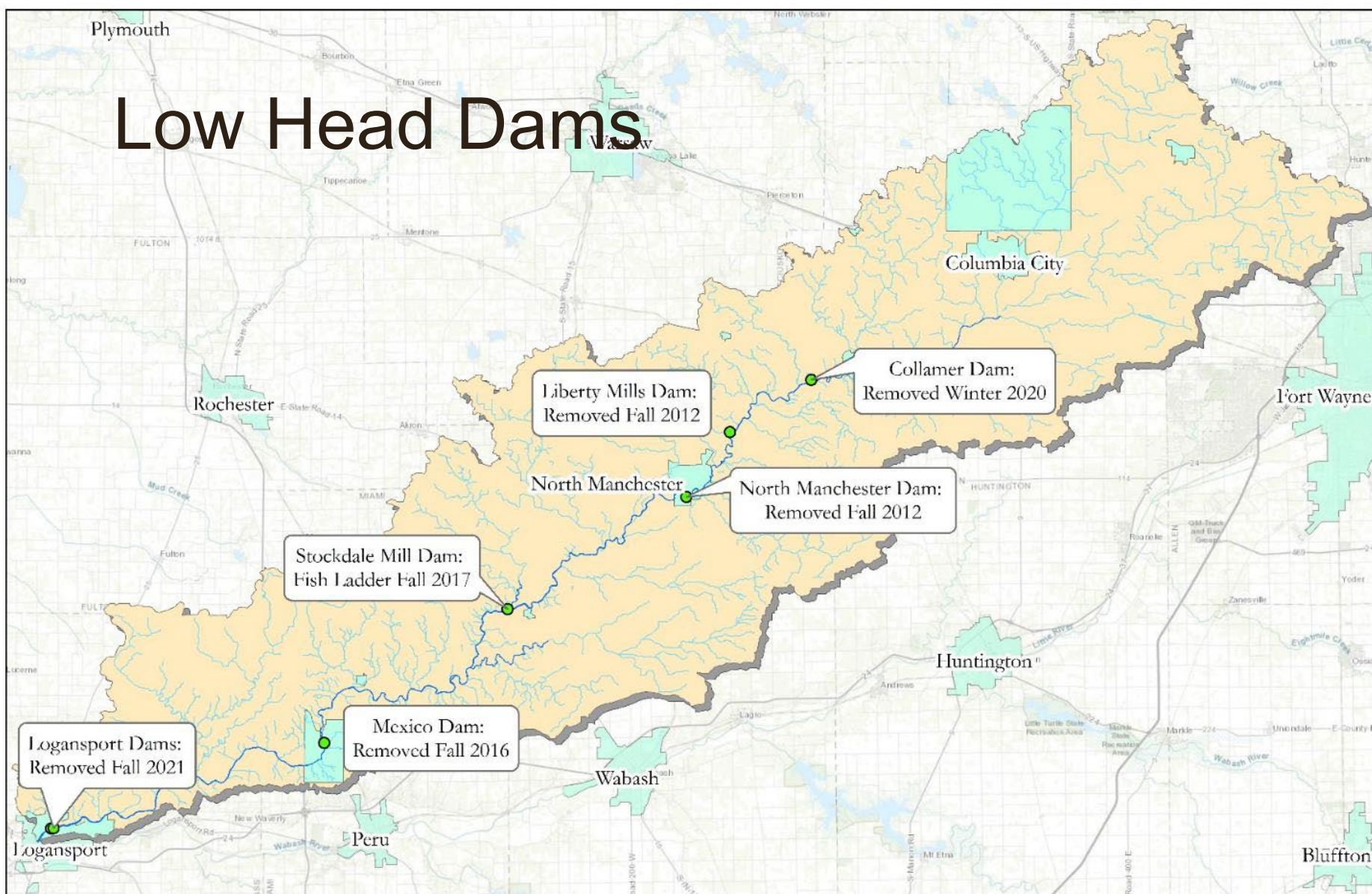
Removal of Dams

- It is simply complicated...
- Institutional Challenges
- Conservation cultural world views
- Funding-Funding-Funding

Number one concept. Connect critical upland processes with water... Gravity!



Low Head Dams



0 5 10
Miles

Created By: Herb Manifold
Date Created: June 2023

Legend

- Dams
- El River
- Cities
- El River Watershed: HUC 05120104







Summer 2017















Logansport

Length: 425-feet

Height: 12-feet

Pool Length: 1-mile

Flood reduced: 25-Acres

48 fish species

15 mussel species

1,200 stream miles



November 8, 2021















Research Technicians



My Fish



Thank you!

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River Restoration Through Innovation and
Conservation Partnerships

