

## Stockdale Fish Ladder

A one of a kind fish ladder was installed during August 2017 at the Stockdale Mill dam in Roann, IN. This was made possible by a collaboration of the Manchester University Environmental Studies Department with fish biologist Dr. Boyd Kynard of B.K. Riverfish, LLC, the U.S. Fish and Wildlife Service, and the Stockdale Mill Foundation. Fish ladders are typically built to allow passage of fish species, such as salmonids, to travel safely around a dam. This prototype fish ladder however is different due to its ability to allow fish as small as three inches to swim upstream around the dam. The fish ladder is made of metal and has an eight percent slope along with angled baffles to aid in the fish passage. Since very little is known about the migration patterns of Midwestern fish species, approximately 2,000 fish will be tracked using passive integrated transponders (PIT tags) implanted directly under their skin. An antenna system consisting of two antennas placed at the entrance and exit of the fish ladder along with seven antennas spanning the width of the river downstream from the dam will help track the movement of the PIT tagged fish. The fish ladder has been opening and running since mid-November 2017. There is now over 500 stream miles reconnected within the Eel River and its tributaries. The data collected by the antennas will give a better understanding of fish migration in Midwestern streams.



# Fish ladder at Stockdale Dam



# Call to Action in Beargrass Watershed:

In the Eel River Watershed and in the state of Indiana we've come a long way from the Dust Bowl days of the 1930's, when years of drought and wind erosion scoured the topsoil off the face of the land. But even as recently as the 1970's, thousands of tons of topsoil eroded every year from our farm fields through surface runoff from rainfall and snowmelt. Farmers have implemented conservation practices to address soil losses and continue to do so today, as many of these are still needed. However, there is another less visible loss occurring – loss of nitrogen and phosphorus fertilizers through surface runoff and tile drainage. We realize there are other sources of contaminants reaching our streams, but we would like to help you incorporate practices into your farming system that would reduce the source being your farm. All of these losses affect the water quality of our streams and rivers, leading to impairments and drinking water concerns.

In 2009, Agriculture Secretary Tom Vilsack announced that a change was needed to improve water quality in the Mississippi River Basin – where the Eel River watershed is located. The change is needed because nutrients are still washing from farm fields and compounding problems like the Lake Erie algae blooms, the Gulf of Mexico dead zone and nitrates in drinking water. In fact, some Iowa conservation districts are being sued by downstream cities because of nitrates from upstream farms getting into the city drinking water supply.

Our local Middle Eel River Watershed Initiative was formed in 2010, a collaborative effort between Manchester University, local Soil & Water Conservation Districts, Natural Resources Conservation Service (NRCS) and several other partners to improve the water quality of the Eel River. An Indiana Department of Environmental Management (IDEM) Section 319 Grant was awarded to the university and a Watershed management plan was developed with four components.

- 1) Develop a Watershed Management Plan to give us direction
- 2) Conduct Water Quality Monitoring to have baseline data
- 3) Provide Cost-Share Opportunities to farmers and landowners
- 4) Host Education and Outreach events for both farmers and the general public.

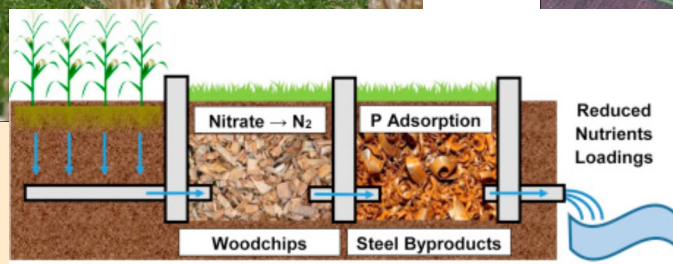
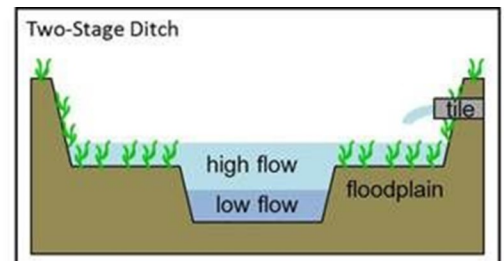
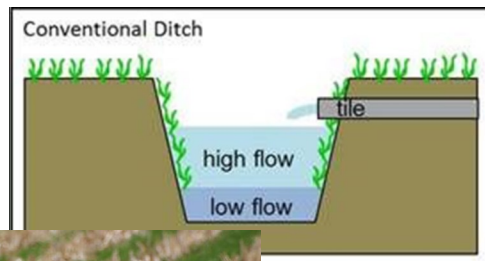
The plan was finished in 2011 and since that time we have spent \$658,954.73 in cost-share funds to local farmers. From the beginning the staff and students in the Environmental Studies Department at Manchester University began water sampling and today their water quality monitoring program is above and beyond IDEM requirements. We have held nine very successful canoe floats, river clean-ups and Annual Meetings, bringing in speakers from across the nation. (continue on next page)

# Call to Action in Beargrass Watershed:

Cont.

From 2010 – 2015, farmers in Kosciusko, Miami and Wabash County have received over \$5 million in federal funding through the Mississippi River Basin Initiative (MRBI) to implement conservation practices on their land. The MRBI is administered by the Natural Resource Conservation Service (NRCS). Farmers are stepping up to the plate to do their part, but more funds and more conservation practices are needed to improve the quality of land for future generations.

In 2016 The Middle Eel River Watershed Initiative and Manchester University received \$833,000 in funding through a second IDEM Section 319 Grant for implementation dollars in the Beargrass Creek Watershed. This 3-year grant is coming to an end in December of 2018. This grant allows Wabash Co. SWCD to cost-share a variety of conservation practices, Grassed Waterways, Filter Strips, WASCOD, Drainage Management, Cover Crops, Nutrient Management, Manure Storage, Two Stage Ditches, Precision Technology, Bioreactors and many more. If you own or operate land in this watershed, take action while you still can. If this article did not mention a project you would like to implement, please stop in or call the Wabash SWCD office with any questions: 260-563-7486 ext. 3. The Wabash County SWCD, and our partners, would like to provide assistance to you to increase the soil health on your farm.



Two-Stage Subsurface Drainage Treatment System

Surface Water



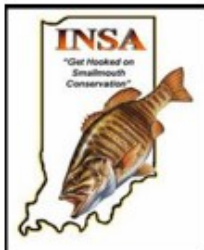
THANKS TO ALL OUR PARTNERS!!!



Local Farmers/Land Owners



Miller's Canoe Rentals



North Manchester Center for History

County Highway Departments



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