Research, Education, and Service University of Iowa: IIHR—Hydroscience & Engineering

Iowa Nutrient Research Center: Work Completed by University of Iowa-IIHR

January 17, 2018





FY 2017 and 2018 Funding

Project	FY 2017	FY 2018
Roadside Ditches for Nutrient Processing*	\$50,000	
Giesler Farm Project*		\$60,000
Phosphorus Loading from Streambank Erosion*		\$80,000**
HUD/Iowa Watershed Approach Monitoring	\$270,000	
INRC-Iowa Nutrient Center	\$467,000	\$367,000
IDNR-Turbidity Monitoring		\$48,000
Total	\$787,000	\$555,000



*Competitive proposal research project **\$70,000 funded for FY 2019

Funded Research on non-point source nutrients FY '17-18

- Giesler Farm-Calhoun County
- Roadside Ditches for Nutrient
 Processing
- Phosphorus Loads from Streambank Erosion









http://iwqis.iowawis.org/







IIHR Sensors

- ~65 sites in 2018
- Collaborators
 - Agricultural Research Service (USDA-ARS)
 - Coe College
 - Grinnell College
 - Iowa DNR
 - Iowa State
 - Drake Univ.
 - Buena Vista Univ.











Sensor Network Projects: Urban Projects

- Cedar Rapids WWTP: Nitrate and Phosphorous Monitoring
- Coralville Storm Sewer
- Cedar Rapids Storm Sewer
- Iowa City Wastewater
 Treatment Plant









Sensor Network Projects: Practice Assessment

- Slough Creek Wetland
- Grinnell College (CERA)
- Water Quality Initiative (WQI) projects (IDALS)
- Rapid Creek (Johnson County)













Sensor Network Projects: Iowa DNR Turbidity

Quantify Phosphorus and Sediment Loading using Turbidity Data

Upper Iowa River

Skunk River

50

R

Yellow River

Wapsipinicon River

100 Kilometers

- **5** Mississippi River Tributaries
- **5 Missouri River Tributaries**



Des Moines R. at Keosauqua

Published Research: 2017-2018

- Wetland Research: 5 papers
- Nitrate dynamics within streams and reservoirs: 3 papers
- Farm Practice Assessment: 3 papers
- Hydrograph Separation: 1 paper
- Phosphorus Transport: 3 papers
- Golf Course Nutrients: 2 papers
- Statewide Nitrate Loading: 1 paper
- Policy: 2 papers



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