

PROJECT CATEGORY	TITLE	YEAR FUNDED
LAND MANAGEMENT		
Cover Crops	Soil measurement in cover crop grazing trial	FY16
	Influence of spatial planting arrangement of a winter cereal rye cover crop on corn productivity	FY19
	Enhancing the value of cover crops through integration of row crop and cattle enterprises	FY19
	Perennial Turfgrass Cover Crops in Maize Production Systems	FY20
	Impacts of Cover Crops on Phosphorus and Nitrogen Loss with Surface Runoff	FY20
	Interseeding grass and legume cover crops into early vegetative stage corn	FY20
Prairie	Water Quality Performance of Prairie Strips	FY16
	Building cost-effective prairie for multiple nutrient reduction practices	FY17
	Water Quality Evaluation of Prairie Strips across Iowa	FY18
	Improving outcome predictability, multifunctionality and cost-effectiveness in nutrient reducing prairie strips	FY20
Land Use	Non-Point Source Nitrogen and Phosphorous Loads at Implementation Scale: Direct Agricultural Nutrient Loads to Surface Waters in Relation to Land Use and Management	FY14
	Development of Remote Sensing Protocols for Inventory of Nutrient Management Practices: Permanent Vegetative Practices	FY15
	Drainage Water Quality Impacts of Current and Future Agricultural Management Practices	FY15
	Linking nutrient reduction practices with biomass energy: quantifying thermal energy demand and supply capacity from	FY16
	Improving the Effectiveness of Conservation Programs through Innovative Reverse Auctions and Sensible Enrollment Restrictions	FY18
New Technology	Evaluating the potential for drainageways at the Kirkwood Community College farm to serve as test sites for innovative grass waterway designs	FY20

Phosphorus	Phosphorus loss from ephemeral gully formation and sediment transport	FY15
	Amounts and Forms of Dissolved Phosphorus Lost with Surface Runoff as Affected by Phosphorus Management and Soil Conservation Practices	FY18

PROJECT CATEGORY	TITLE	YEAR FUNDED
NUTRIENT MANAGEMENT		
Cover Crops	Investigating the Causes of Corn Yield Decreases Following Cereal Rye Winter Cover Crop	FY14
	Impacts of Cover Crops on Phosphorus and Nitrogen Loss with Surface Runoff	FY14
	Cover crops Influence Nutrient Cycling, Yield and Diseases of Corn and Soybeans	FY16
	Impacts of Cover Crops on P and N loss with surface runoff a project continuation request	FY16
	Limiting Nitrogen Immobilization in Cover Crop Systems	FY18
	Impacts of Cover Crops on Phosphorus and Nitrogen Loss with Surface Runoff	FY18
	Corn management following cereal rye cover crop with strip tillage and in-row fertilization	FY19
	Improving cereal rye cover crop BMPs to increase adoption of cover crops by Iowa farmers	FY19
	Mitigating reduced yields of corn following a winter rye cover crop: what role does allelopathy play?	FY20
Management Practices	Development of Remote Sensing Protocols for Inventory of Nutrient Management Practices	FY15
	Stream Nitrate Trends Affected by Farming Practices in the Walnut Creek Watershed	FY15
	2015 Reducing nutrient losses while increasing farm profit through precision conservation	FY16
	Evaluation of Stacked Conservation Practices on P and Sediment loss	FY16
	Conservation Inventory Project	FY16
	Baseline Assessment of Geisler Farm Site: Collection of Pre-BMP Monitoring Data	FY18
	Assessing the effectiveness of individual versus multiple nutrient reduction practices on water quality and economic viability	FY20
	The Root of the Matter–Are Changes in Corn Root Morphology Responsible for Improved Yield and Higher Nitrogen Use Efficiency in Diversified Cropping Systems?	FY20
Nitrogen and Phosphorus	Quantifying temporal and spatial variability in NO3-N leaching across Iowa	FY16

	Impacts of prairie pothole hydrology on field-scale losses of nitrogen and dissolved phosphorus	FY17
	Evaluation of Measurement Methods as Surrogates for Tile-Flow Nitrate-N Concentrations	FY17
	Evaluation of Measurement Methods as Surrogates for Tile-Flow Nitrate-N Concentrations	FY18
	Quantifying hotspots of nitrate and dissolved phosphorus losses from cropped depressions and their impacts at the catchment scale	FY19
	Evaluation of Measurement Methods as Surrogates for Tile-Flow Nitrate-N Concentrations	FY19
	New Technologies to reduce Barriers to implementation of Nutrient Loss Reduction Strategies	FY19
Soil Health	Investigating the Double-Impact of Soil Health Promoting Practices on Water Quality	FY20

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EDGE OF FIELD		
Bioreactors	Bioreactor Research & Assessment of Woodchip Tile Denitrification Bioreactors: Optimal Design/Performance and Experimental Bioreactor Installation and Study	FY14
	<u>Augment 2013 proposal:</u> Bioreactor Research & Assessment of Woodchip Tile Denitrification Bioreactors: Optimal Design/Performance and Experimental Bioreactor Installation and Study	FY15
	Woodchip Bioreactors for Improved Water Quality	FY16
	Potential Monomethylmercury Production in Bioreactors and Wetlands Intercepting Elevated Nitrate Loads in Iowa	FY17
	Woodchip Bioreactors for Improved Water Quality	FY17
	Woodchip Bioreactors for Improved Water Quality	FY18
	Corn cobs as an alternative carbon source to enhance bioreactor performance for improved water quality	FY19
Saturated Buffers	Establishment and Monitoring of Saturated Buffers within High-priority HUC-12 Watersheds	FY14
	Establishment and Monitoring of Saturated Buffers	FY17
	Evaluation of Saturated Buffers as a Conservation Drainage Practice for Treating Agricultural Subsurface Drainage	FY19
Oxbows	Identifying and Quantifying Nutrient Reduction Benefits of Restored Oxbows	FY16
	Evaluating the water quality benefits of reconstructed multi-purpose oxbows	FY20
Stream Banks/ Road side Ditches	Phosphorus Transport in Iowa Streams: The Importance of Stream Bed and Bank Erosion	FY14
	Evaluating the Nutrient Processing Capacity of Roadside Ditches	FY17
	Phosphorus contributions from eroding Iowa stream banks	FY17
	Total Phosphorus Loads in Iowa Rivers and Estimation of Stream Bank Phosphorus Contribution	FY18
	Before the streams: Modeling the effectiveness of in-field and edge-of-field practices in reducing nitrogen loads	FY19
	Watershed-Scale Phosphorus Inputs from Streambanks	FY20
Prairie	General versus custom designed prairie seed mixes for contour buffer strips: on-farm demonstration and workshops for technical providers	FY15

PROJECT CATEGORY	TITLE	YEAR FUNDED
MULTI-OBJECTIVE		
Monitoring and Modeling	IIHR-Hydrosience & Engineering Work Plan 2013-15	FY14
	Workplan for Iowa Nutrient Research, IIHR - Hydrosience & Engineering, University of Iowa. Four separate objectives	FY15
	Modeling of nitrate loads and concentrations in the Raccoon River	FY15
	Work Plan for INRC, IIHR-Hydrosience & Engineering	FY16
	Quantification of Nutrient Reduction Practices Benefits from the Hillslope to the Watershed Scale	FY16
	Post-doc support to leverage FFAR/HGBF planning grant	FY16
	Advancing Longitudinal, Multilevel, and Spatial Analysis of the Iowa Nutrient Reduction Strategy Farmer Survey Data	FY17
	Work Plan for INRC, IIHR-Hydrosience & Engineering	FY17
	Improving the capacity to detect load reductions	FY17
	Delivery-Scale Evaluation and Modeling of Nutrient Reduction Practices	FY18
	Work Plan for INRC, IIHR-Hydrosience & Engineering	FY18
	Work Plan for INRC, IIHR-Hydrosience & Engineering (2018-2019)	FY19
	IIHR Core Project 2019	FY20
Socio-Economic	Establishing a pragmatically dynamic program for extending water quality BMP financial information: Farmer tools for the Iowa Nutrient Reduction Strategy	FY14
	Social-Economic Research Work plan	FY14
	Nutrient trading in Iowa: a pilot study in the Catfish Creek Watershed	FY15
	Land Tenure and Nutrient Management Practices: Identifying Economic Barriers and Incentives for Landowners and Tenants to Meet Growing Soil and Water Conservation Needs	FY17
	Successful Voluntary Watershed Improvement Projects: Do Short-Term Adoption and Outreach Lead to Attitude Changes and Long-Term Sustainable Practice Adoption?	FY18

	Understanding farmer and landowner decision-making and message preference concerning conservation practice adoption in the Clear Creek Watershed	FY19
	Monetizing Soil Health: An innovative strategy to drive greater adoption of cover crops and no-till	FY19
	Using the ACPF to Optimize the Allocation of Scarce Conservation Funding	FY19
	Evaluating rotations of cover crops and summer annual forages for yield, nutritional value, effect on soil nutrient profile, and economic sustainability as forage resources for beef cattle	FY20
	Increasing farmer engagement with conservation practices through more effective communication strategies: A media content analysis, stakeholder survey, and digital message test	FY20
	Integrating Social and Biophysical Indicators of Nutrient Reduction Progress in Iowa Watershed Projects	FY20
Nitrogen and Phosphorus	Distribution, transport and biogeochemical transformation of agriculturally derived nitrogen and phosphorus in Cedar River watershed	FY14
Management Practices	Measuring the effectiveness of stacked nutrient reduction practices using a paired watershed approach at the sub-watershed scale	FY15
	Does Quantity and Quality of Tile Drainage Water Impact In-stream Eutrophication Potential? Evidence from a Long-term Biofuel Cropping Systems Experiment	FY18
	Quantifying the Effects of BMPs on Sediment and Phosphorus Delivery to a Range of Eastern Iowa Rivers	FY19
Soil Health	Correlation of a Soil Health Assessment Tool and Phosphorus Loss with Surface Runoff in Agricultural Fields	FY19