Iowa Nutrient Research Center Advisory Council

August 23, 2016

Hansen Ag Student Learning Center, Room 1128

2516 Mortensen Road, Ames, Iowa

2:30 pm – Wendy Wintersteen called the meeting to order.

Introductions

1. John Lawrence, interim Director, Iowa Nutrient Research Center (and Associate Dean, College of Agriculture and Life Sciences, ANR Director, ISU Extension and Outreach, Iowa State University)
2. Jamie Benning, ANR Extension representing Greg Brenneman, Agricultural Engineering Extension Field Specialist, Iowa State University Extension and Outreach
3. James Gillespie, Director, Division of Soil Conservation, Iowa Department of Agriculture and Land Stewardship
4. Mike Naig, Deputy Director, IDALS representing Bill Northey, Iowa Secretary of Agriculture
5. Keith Summerville, Deputy Provost, Drake University
6. Larry Weber, Director, Iowa Institute of Hydraulic Research (IIHR) – Hydroscience and Engineering, Professor of Civil and Environmental Engineering and Edwin Green Chair in Hydraulics, University of Iowa;
7. Wendy Wintersteen, Dean, College of Agriculture and Life Sciences, Iowa State University

Approval of the 2015 minutes

Larry Weber moved to approve the minutes and Mike Naig seconded the motion. The August 2015 minutes were approved by the Council. The minutes are on the Center website - https://www.cals.iastate.edu/sites/default/files/misc/183759/inrc083115.pdf

Budget Review

Lawrence reviewed the budget showing funds allocated to projects and operating funds.

2015 Project Update

Lawrence encouraged the Advisory Council members to review the 2015 project reports on the Center's website - https://www.cals.iastate.edu/nutrientcenter

2016 RFP and proposal review

See attached information.

2016 Funded Projects

See attached information.

Council Discussion

John Lawrence and Larry Weber provided an update on the HUD project.

The Iowa HUD project included $650,000 one-time funding for the Iowa Nutrient Research Center to conduct research relevant to the project. Three categories were identified and a targeted RFP was issued. Proposals are being reviewed and work will begin in early 2017. The categories are:
Category 1: Develop a framework to monetize the on-site and off-site economic benefits of reducing nutrient loads from implementing conservation practices.
Category 2: Develop alternative scenarios to account for different landform regions in Iowa to better understand linkages from field-scale, micro-watershed-scale, to HUC 12 scale.
Category 3: Determine alternative approaches to incorporate changing hydrologic patterns, driven by changing temperature and precipitation trends, into hydrologic modeling in Iowa for water quantity and quality.

Larry Weber moved to adjourn the meeting, Jim Gillespie moved to 2nd the motion, and all members voted yes to adjourn the meeting. Meeting adjourned at 3:50 pm.

Iowa Nutrient Research Center Request for Proposals 2016

Iowa Nutrient Research Center is requesting proposals from faculty and staff at Iowa State University, University of Iowa and University of Northern Iowa to address nutrient losses to surface water. The Center at Iowa State University is an Iowa Board of Regents center established in legislation passed by the 2013 Iowa Legislature which states: *The purpose of the center shall be to pursue a science-based approach to nutrient management research that may include but is not limited to evaluating the performance of current and emerging nutrient management practices, and using an adaptive management framework for providing recommendations for the implementation of nutrient management practices and the development of new nutrient management practices.*

Proposals must address the purpose of the legislation. This year preference will be given to proposals in the follow themes:

- Evaluation of current and emerging practices to improve their effectiveness and predictability including adaptive management strategies and tools to assist farmer decision making. Examples may include: water quality impact of variable rate and sensor technology; precision placement of nutrients and conservation; and relationship between soil health and nutrient cycling and loss.

- Assessment of barriers to practice implementation including quantifying barriers and incentives to practice adoption; assessing management of least productive areas of fields and impact on nutrient loss and profitability; evaluate methods to monetizing conservation and ecosystem services and prioritize public investment on private lands such as reverse auctions, environmental benefits indices.

- Evaluation and modeling of the effectiveness of multiple or stacked nutrient reduction practices at delivery scale including sub-watershed levels; modeling of practice and water quality data in priority watersheds to better understand impact of practices on in-stream concentration and loads of nutrients or nutrient processing in non-productive lands such as road ditches, flood plains, drainage ditches or ponds.

- Identify and quantify emerging contaminants and their relationship to existing practices including but not limited to dissolved reactive phosphorus and methanol bromide.

In addition to ongoing projects, the Center has approximately $465,000 for new competitive projects. Budgets can be for up to two years. Proposals should be no more than two pages and identify the title, investigators, justification, objectives, predicted deliverables and budget. Investigators whose proposals are selected for funding may be asked for more details. Proposals are due close of business June 15, 2016 to jdlaw@iastate.edu. Investigators funded in 2015 for multiple years do not have to reapply. Investigators requesting funding to continue monitoring on a project funding by INRC earlier should submit formal proposal. Questions should be directed to John Lawrence at 515.294.7801 or jdlaw@iastate.edu.

Iowa Nutrient Research Center proposals 2016 (FY17) approved for funding.

Title	Principal Investigators	Request Year 1	Request Year 2	Total
Improving the capacity to detect load reductions	Castellano, M., A. Sotirios, B. Crumpton, M. Helmers, C. Jones, F. Miguez, K. Schilling	79,659	79,659	159,318
Potential Monomethylmercury Production in Bioreactors and Wetlands Intercepting Elevated Nitrate Loads in Iowa	Crumpton, W., M. Soupir, C. Judge	67,730		133,660
Impacts of prairie pothole hydrology on field-scale losses of nitrogen and dissolved phosphorus	Hall, S.J., A. Kaleita, M. Soupir, A. VanLoocke	30,242	30,950	61,192
Evaluating the Nutrient Processing Capacity of Roadside Ditches	Schilling, K., M. Streeter, L. Jackson, M. St. Clair	50,000	0	50,000
Phosphorus contributions from eroding Iowa stream banks	Moore, P., T. Isenhart, J. Thomas, K. Schilling, C. Wolter, J. Kovar, R. Schultz, J. Palmer	43,000	43,000	86,000
Woodchip Bioreactors for Improved Water Quality	Soupir, M. N. Hoover, T. Moorman, T. Isenhart	49,925	0	49,925
Establishment and Monitoring of Saturated Buffers	Isenhart, T., D. Jaynes	24,000	24,000	48,000
Land Tenure and Nutrient Management Practices: Identifying Economic Barriers and Incentives for Landowners and Tenants to Meet Growing Soil and Water Conservation Needs	Zhang, W., A. Plastina	47,206	22,687	69,893
Building cost-effective prairie for multiple nutrient reduction practices	Dr. Justin Meissen Co-PI: Ashley Kittle	55,150	56,850	112,000
Evaluation of Measurement Methods as Surrogates for Tile-Flow Nitrate-N Concentrations	Sawyer, J., M.J. Helmers	43,023	36,521	79,544
	Sum of approved projects	489,935	293,667	849,532
	IIHR FY2017 project	467,000		
	Year 2 of 2016 projects funded in FY17	$392,986		
	Commitments	1,349,921		
	Allocated	1,325,000		
	Balance	-24,921		
	Approximate carry over from FY16	17,000		