



Minutes of the NREC Research Committee  
November 14, 2016  
Brandt Consolidated – Springfield, IL  
10:00 a.m.

DRAFT

Committee Members Present: Dale Hadden, Ed Corrigan, Cindy Skrukrud, Chuck Cawley, Matt Duncan, Jenny Mennenga, Jessica Dexter, Robert Mullen, Ted Mottaz, Amy Walkenbach, Paul Jeschke, Curt Zehr, Terry Pope, Dean Campbell, and Linda Kull. Robert Mullen and German Bollero joined via conference call. Also present were Dr. Robert Hoeft (NREC Research Advisor), Julie Armstrong (NREC Executive Director), Jeff Kirwan (incoming NREC Council member), and Lauren Lurkins (Illinois Farm Bureau Staff)

Chairman Hadden called the meeting to order at 10:03 a.m.

After asking for introductions, Julie Armstrong reviewed the purpose of the meeting which is to review ongoing research projects and evaluate new proposals to determine which projects will be funded in 2017. Julie reviewed the conflict of interest policy and indicated that Illinois Corn Growers had submitted a proposal and pointed out that both Ted Mottaz and Paul Jeschke serve on that board. As they do not have any personal financial interest in the outcome of that project – it was determined that they were able to discuss and vote on that proposal. In addition, Amy Walkenbach pointed out that her agency, Illinois EPA, does support some of the organizations who submitted proposals via 319 grants. It was the consensus of the group, that she also does not have a conflict which would prevent her from discussing/voting on proposals.

Julie reviewed the updated voting procedures.

Chairman Hadden then introduced possible language to be used around the consideration of funding projects that include the purchase of capital items. Since the inception of NREC, it has been the preference of the Council to avoid funding Capital equipment that will extend beyond the life of the proposed project. Examples of these types of expenditures have included tractors, tile equipment, gators, etc. In addition, the Council has been extremely cautious about funding the installation of tile on private farm ground. In a couple of rare instances the Council has voted to pay for tile installation but this was because of extenuating circumstances. Dale suggested that a policy be added to the "Policies and Procedures" document which addresses this issue.

He suggested the following language for consideration of the committee: "The Council shall exercise extreme diligence in awarding research grant funds to be used for the purchase of Capital equipment and/or paying for tile installation on private farm ground. Ownership, transferability, and liability may be associated with such type purchases and the Council shall seek legal guidance on any such potential expenditures."

Matt Duncan asked how this would impact NREC Priority #6 which is: Tile Drainage: Evaluate drainage water management practices such as managed drainage (controlling flow) and the impact of tile spacing and depth on nutrient loss from a field. Dale clarified that this would be specific to private ground and not public ground. Dr. Hoeft added that the interest in pattern tile may improve the ability to use land for tile project. Curt Zehr asked if this same policy would apply to the installation of bioreactors/saturated buffers where the practice involves a land-use change. Dr. Hoeft also added that equipment purchases is difficult with the state/federal funds but that leasing may be an option. Dr. Bollero added that some equipment can be bought with indirect cost recovery. The consensus of the group was to add this policy as a guideline but not in a way that limits the ability to be flexible.

Secretary Chuck Cawley reviewed the minutes from the October 11, 2016 committee meeting. Curt Zehr moved to approve the minutes as presented and Matt Duncan seconded. The minutes were approved.

Julie Armstrong presented the financial update.

Dale Hadden reviewed the process of reviewing proposals. The proposals were originally divided into renewals and new proposals but within the renewals were a group of projects that were asking for additional time on a project that was previously funded. There was discussion around what is the actual classification for these projects with the understanding that there several different reasons for the extensions. Some of the projects were asking for additional time because they had not answered the questions in their initial proposals and are needing more time to finish the intended research. Some had accomplished their initial goals but were looking to either expand their scope or collect more data points. There needs to be more thought into how those projects are classified going forward. For this meeting, the proposals were discussed in two different groups – 1) True renewals and 2) Extensions/Renewals.

Dale also asked the group to consider the projects on their merits and that budgets will be reviewed after the rankings have been done. Jessica Dexter added that we should still consider individual budgets and if they are line with what we would expect. And she also asked if we are able to go back to proposals with questions or clarifications before the Council meets. Dr. Hoeft clarified that this has been done in the past and is appropriate for the process.

**Renewal Project reviews** – These projects are ones that were funded in 2016 and who are still within the original timeline proposed. Unless otherwise determined by the committee, these projects will not be ranked but will be recommended for funding as a group.

2014-3-360114-466	UI	Villamil	Updating P and K response and crop removal numbers for Illinois	year four of four year request	\$ 56,542.00
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This project is about a year behind it's original target due to sample collection being slower than planned. The analysis of the data also got a slow start. However, the project is on target now and will be wrapping up in 2017. Dale pointed out that the results are not tied to yield and questioned how this data will be useful. Terry Pope also asked how this data will be utilized. Dr. Hoeft indicates that preliminary data indicates that project may be beneficial from economic and environmental standpoint.

2014-5-360112-241	UI	Lovell	Multifunctional buffers on marginal farmland to improve the environmental profile of agriculture and diversify production opportunities	year four of five year request	\$ 120,667.00
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As initially proposed project was established at three Research Centers in 2014. Unfortunately, in 2015, announcement was made that 2 of the locations included in the initial proposal would be terminated in 2015. In 2016, Researchers began summarizing data from these two locations and also began the establishment of a replacement location for one of the 2 lost. Prior to initiating the closure of research center, flooding well in excess of expectation resulted in loss of some of the plantings. These species were removed from further consideration in the newly established site. Even with all the adversity experienced by this project, the researchers have taken advantage of the situation and utilized the data as a learning experience and are creating publications that will be of use to others trying to do similar work. Ed Corrigan and Julie Armstrong shared that they participated in a field day at the site and learned a great deal about the work that is being done. Dale also added that additional outreach needs to be done on this project.

2015-3-360276-251	UI	Pittelkow	An agronomic assessment of soil nitrous oxide emissions in Illinois: increasing nutrient utilization while reducing impacts on air quality	year three of three year request	\$ 84,482.00
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The major environmental thrust of NREC has been on water quality. However, it is well known that interfering with the nitrification reaction may result in production of nitrous oxide, a toxic air-pollutant. NREC needs to insure that the funded research does not trade one form of pollution for another. This project, funded in 2015 expended its time commitment in the first year to establishing and testing the equip to monitor N loss from different N source. In 2016, PIs were on schedule as proposed to collect data from existing NREC studies. This project is progressing well and was able to deliver results quickly. Dale mentioned that he appreciate the detail of the mid-year report and looks forward to seeing the results.

2015-3-360422-56	UI	Nafziger	tracking soil nitrogen loss and availability	year three of three year request	\$ 187,572.00
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While it was not the intent to have this be a dual function project, it has turned out that way in some years of the program. The dual function comes about with the data being used by producers in the spring to determine whether or not adequate N remains in soil to optimize yield that year; and the second function is accumulation of data into a large pool for assimilation into a predictive model. Work is in progress on Model development. This project is tracking well.

Dean Campbell wanted to note that the soils in Carbondale would be better suited for this type of project versus Bellville as there is little diversity of soils as it is now.

2015-5-360350-374	UI	Gentry	Evaluating nutrient loss reduction strategies: longer rotation with cover crops and bioreactor	year three of five-year request	\$ 160,973.00
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This project looks at a three crop rotation and is coming up with some great data. Initially funded in 2015, this project has confirmed the expectation that cover crops and bioreactors would reduce nutrient loss. Additional years of data will be needed to confirm coefficients for use in models to predict efficacy of these processes. While NREC has contributed significant funding for this project, additional in-kind as well as financial contributions have been received from the farmer/landowner and the contributions of labor and council have been invaluable. There have been some issues with sourcing woodchips but Lowell is addressing that concern.

2016-2-360190-386	UI	Kent	Dissimilatory nitrate reduction to ammonium: An unexplored microbial pathway for nitrate retention in agricultural soils	Year two of two-year request	\$ 28,035.00
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Initiated process of identifying situations that lead to genetics that have ability to work with microorganisms that convert nitrate to ammonium. This is an innovate project that is on track to deliver the anticipated results.

2016-3-206333-423	SIU	Schoonover	The two stage saturated buffer: Integrating the use of cover crops into saturated buffer designs for nitrogen mitigation	year two of three year request	\$ 82,453.00
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Site has been selected and tile are being monitored to establish uniformity. Treatments will be established in fall 2016 or spring 2017. The two stage buffer that drains into a cover crop strip first and then into a grassed buffer is previously untested. Dean Campbell noted that this is being well received in Southern Illinois and should help to answer some questions that they are seeing down there.

2016-4-360276-980	UI	Pittelkow	Assessing synergies and tradeoffs of recommended BMPs to reduce nutrient loss	year two of four year request	\$ 131,640.00
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Tile were installed in fall 2016 and cover crops have been seeded. Data collection will begin shortly. This project was running behind as there were issues with the office of procurement at UofI. However, tile has been installed and they have begun collecting data.

2016-3-360498-549	UI	Christianson	Dissolving uncertainty: A comprehensive evaluation of dissolved P in tile drainage	year two of three year request	\$ 42,153.00
2016-4-360347-203	UI	Arai	Understanding mechanisms and processes of dissolved reactive phosphate (DRP) loss in Illinois tile-drained fields	year two of four-year request	\$ 167,151.00

These two projects were discussed together as the two researchers have been cooperating and sharing data.

549 - This is a literature review project that has identified several new publications that qualify for inclusion as a standalone table in MANAGE called the "Drain Concentration" table following existing tables already a part of this system. Strict criteria are established for a peer-review process in the system. Included in the table will be a listing of controllable and uncontrollable factors affecting drainage P and crop yield. This project is on schedule as outlined in the original proposal.

203 - PI's have proposed an aggressive field work schedule to attempt to answer questions that they have proposed to answer questions about P loss via surface and subsurface movement. While the questions they are raising will have minimal impact on producers, finding solutions to these questions should have major impact on limiting regulations that might be associated with these questions should they go unanswered. This work will compliment that of project 549 listed above and the work of 549 will provide possible solutions to these loss patterns.

Terry Pope asked questions around procuring woodchips and if this will be a problem going forward. Are there any groups looking at the market/availability of chips and are there certain types of woods that are better than others? Amy Walkenbach added that there was a methyl mercury issues with some of the soft woods but all hard woods seem to have similar success.

Dean Campbell moved and Terry Pope seconded to move these 10 projects forward in discussions. The motion was approved.

**Renewal/Extension Projects** – These are projects that had already completed their initial funding request but were submitted for additional years. Each project will be discussed and then the committee will vote to determine if they should be treated as renewals (automatically recommended for funding) or treated as new and ranked with the other new projects.

2014-3-360422-398	UI	Nafziger	A comprehensive corn nitrogen research program for Illinois	Previous three year project. Extended for 2 additional years	\$ 114,234.00
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This project was initiated into the NREC program in 2014 to evaluate the 4R's of rate, time, method, and source of N on production of corn and potential for N loss to the environment. The rate portion of the study was a continuation of work being done under FREC. As new products became available for testing from industry or practices were suggested by producers, they were quickly introduced into this on-farm testing project. Results of this work have been rapidly assimilated into practice on many thousands of acres across the state. Emerson has announced his plan to retire end of 2017. This request is to establish a program that will have potential to continue into the future to continue to bring useful new information to NREC. Understanding how outreach will be completed in the absence of Emerson is the largest concern for this project moving forward.

There were 4 votes to treat this project as “new” and 12 votes to treat as “renewal”.

2014-3-882664-38	ISU	O'Reilly	The effect of cover crops on surface water quality: A paired watershed experiment in the Lake Bloomington watershed	Year one of three year request (Second round of three year funding request)	\$ 172,159.00
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Proposal first funded in 2014, but for various reasons, data collection did not begin until 2016. Inclusion of local individuals on the project team that had the trust and respect of the local farming community moved the project forward in late 2015. Preliminary results reported at 2016 field day provided encouragement that system may contribute significantly to reducing off-site N load. The importance of farmer engagement and understanding impacts of these practices at a watershed level were discussed.

The committee voted unanimously to move this project forward as a renewal.

2014-5-360847-320	UI	David	Nitrogen management systems in tile-drained fields: Optimizing yields while minimizing losses	Year four of six year request (originally 5 year request)	\$ 245,573.00
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First funded by NREC in 2014, project has completed its second year of data from the project. During first year of funding, expenditure of time and funds were consumed with establishment of sampling system and with developing contract with farmer, land-owner, and University. While there has been a change in the farmer, the Land Owner and his partners remain very enthusiastic about the project and have expressed an interest in continuing the arrangement for more years to come. Data from the first two years of the study have identified practices and products that increase nutrient utilization. Additional years of data collection will allow NREC to establish with reasonable certainty the amount of reduction in nutrient loss that can be expected. Dale Hadden asked about the potential of adding another treatment of cereal rye to add an additional data point or at least an observation point. There was also discussion around the protentional of adding another measurement to look at yield impact of cover crop ahead of corn.

The committee voted unanimously to move this project forward as a renewal.

<b>2015-2-206333-342</b>	SIU	Schoonover	Nitrate leaching in cover crops and corn/soybean systems in Southern Illinois With N15	Year one of three year request (following a completed two year request)	\$ 95,907.00
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Initiated in 2015 in response to encouragement from NREC Council to establish a study comparable to the ISU watershed project. Fortunately, land was available that had been used for a paired watershed study and was already instrumented to collect water samples. Data available from the previous study allowed them to position treatments on those portions of the previous experiment that had similar runoff characteristics. Unfortunately, the first year of the study was excessively wet, resulting in problems with using tension lysimeters for water collection throughout much of the first year of the study. In 2016, the lysimeters provided an excellent technique for collection of soil water. Responding to a request from NREC, PI's have established an N rate study using N15 to determine the fate of N in a corn/soybean rotation in Southern Illinois.

The committee voted unanimously to move this project forward as a renewal.

2015-3-860638-62	TWI	Kostel	Demonstration and monitoring of nutrient-removal wetlands in the Big Bureau Creek watershed (Northern/Central Illinois)	Year one of a two year request (already funded for two years)	\$ 140,000.00
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Objective of this NREC funded project was to demonstrate the process of constructing wetlands in low value (low productivity) portions of the field or farm and to monitor efficacy of the wetlands by measuring input and output of N and P from the wetlands. Two wetlands have been installed in Bureau County, one in 2015 and another in 2016. During the first year of the study, SRP was reduced by 62%, but only a small amount of inorganic N was removed.

The committee voted unanimously to move this project forward as a renewal.

2016-1-833929-252	IFCA	Schaefer	Ind./University Partnership & KIC 4R Programs	Continuation of previous year project - two year request	\$ 447,002.00
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While this is listed as a 2016 initial proposal, portions of the work have been ongoing since the start of NREC in 2013. The cooperation between public and private researchers has been extremely beneficial to the advancement of several projects. With funding going through the private sector, some of the bureaucracy can be avoided while still retaining accountability of funds, thus reducing cost to the program. In addition with the combination of public and private, those that have been working in private sector have an established relationship with clientele and those in public sector have a strong understanding of the scientific process, the combination which works well together. The accomplishments that have been documented in the area of 4R's have returned multiple dollars per dollar invested through more efficient use of nutrients. Curt expressed his concern about the amount of money going here and asked if the Council should just hire Dan. There was discussion around how that work to have someone in that role with the Council but concerns were raised about how the Council would show equity in funding decisions if we had our own staff working on some projects and not others. Dale asked about the role that Extension play in the outreach effort and German noted that staffing and budget limits don't allow for Extension to play the role that they once did. Dale asked for better breakdown of the cost/project that Dan supports as part of this proposal.

The committee voted unanimously to move this project forward as a renewal.

Ted Mottaz moved and Jenny Mennenga seconded to move these 6 projects forward as renewals in discussions. The motion was approved.

**NEW PROJECTS**

2017-1-160849-336	Champaign Co. SWCD	Manual	What I Can Do To Get Five Stars	year One of One	\$ 35,000.00
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The committee was uncomfortable with the idea of ranking farmers. The committee consensus was to remove this project from consideration.

2017-1-256629-369	Illinois Corn/Zea Mays	Wade	Illinois Cover Crop/Soil Health Training and Demonstration Farm	one year request	\$ 77,000.00
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This project will support the continuation of the Cover Crop Specialist program by CBMP. Dr. Hoeft questioned where they are getting their data for the trainings that they are wanting to do. Dale Hadden expressed concern around NREC "promoting" a specific practice when the impact on corn yields are not fully understood. Matt Duncan added that there may be issues with teaching practices before the data is understood but Jessica Dexter added that we need to be careful about waiting for "final determination" when these practices have been identified as part of the strategy. Paul Jeschke added that it is important to help farmers visualize cover crops and evaluate how they will work for their own operations.

The consensus of the committee is to move this project forward for a ranking.

2017-1-361358-123	AISWCD	Stierwalt	Strategic Planning: Engagement and Development for the Illinois Soil & Water Conservation Districts	Year One of One	\$ 10,000.00
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The consensus of the committee is that this project does not fit within the requirements of a project that NREC would support through the grant program.

2017-1-740467-396	Illini FS	Brown	GROWING A SUSTAINABLE APPROACH TO PRODUCTION AGRICULTURE THROUGH SECONDARY EDUCATION IN EDGAR COUNTY	one year request	\$ 30,110.00
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While the committee appreciates the outreach efforts of this program, the consensus is that the program would be more appropriate for a Community College and that the return on investment would be less than what would be needed to fund.

Recommended for no funding and no ranking.

2017-2-880446-270	Trees Forever	Ramsay	Public/Private Partnership to Reduce Nutrient Load in Four Targeted Rural and Urban Watersheds	Year one of two-year request	\$ 118,095.59
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The consensus of the committee is that with no water quality tie-in and no applied research, this is not a project that fits within the guidelines of NREC funded projects.

Recommended for no funding and no ranking.

2017-3-219807-23	Illinois State Water Survey	Getahun	Decision Support Tool for Evaluating Nutrient Loss Reduction Strategies at Aggregated Field Unit and Watershed Scales	year one of three	\$ 111,585.00
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This project was sent for peer review and Dr. Hoeft reported that the peer review team gave this project a fairly low probability of success (60% or less) and that with the larger scale model the results may be more valuable to policy makers than farmers. Amy Walkenbach reviewed her understanding of the tool and shared that it will be valuable in watershed level planning. Terry Pope questioned if farmers will actually use this tool. And Linda Kull added that farmers sometimes look to find data that supports what they already know. Jessica Dexter asked the group if farmers know the BMP's well enough to use this tool.

The consensus of the committee is to move this project forward for ranking.

2017-3-360574-222	UI	Coppess	Web-based Decision Support Tool for Cover Crop Management	year one of three year request	\$ 135,589.00
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This project was sent for external peer review. The Peer Review team gave it favorable feedback with some questions around which models are going to be used to populate the tool and what data is going to be needed in order for this tool to be successful. German Bollero gave favorable feedback and indicated that of the two modeling projects, he has a greater confidence in this one. Dale Hadden felt that this is a practical project and Linda Kull indicated that this answers some very basic questions.

The consensus of the committee is to move this project forward for ranking.

2017-3-360298-443	UI	Guan	Optimizing in-season nitrogen management for corn by near-ground sensing, machine	Year one of three year request	\$ 93,632.00
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This project was sent for peer review and Dr. Hoefft reviewed the feedback from the reviewers. The reviewers feel that there is merit in this type of research but don't give a very high likelihood of success and question if the funding is adequate. There is also some concern about this being a proprietary product. Matt Duncan pointed out that many farmers and retailers are looking at this so it may be worth looking at to see if there is value. Ed Corrigan added that the best data is local data with local expertise and wonders if this project could be used to debunk some of the theories floating around. German Bollero added that this is a new technology and is innovative so something to look at.

The consensus of the group is to move it forward for ranking.

2017-3-360350-314	UI	Gentry	Cereal Rye Ahead of Corn: N Catch and Release	year one of three year request	\$ 58,653.00
2017-3-833929-271	IFCA	Schaefer	Cereal Rye Ahead of Corn: N Catch and Release	Year one of three	\$ 22,635.00

This project is a UofI project being supported by Dan Schaefer at IFCA. It was sent for peer review and the peer review team gave very positive feedback on the design and for the anticipated answers that will come from this research. Dean Campbell told the committee that this project will not be well received in Southern Illinois as cereal rye ahead of corn has been generally dismissed as an option. Dale added that this would be another opportunity to observe the impact of cereal rye ahead of corn and could answer some of the questions that are out there.

The consensus of the committee is to move both of these forward for ranking.

2017-3-882186-86	ISU	Armstrong	A Long-term Evaluation of Nitrogen Application Timing and	Year one of three	\$ 210,095.00
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This project was sent for peer review and Dr. Hoefft shared the feedback from the reviewers. The general feeling of the reviewers was that this is a good proposal and that the project has a high likelihood of success. They also had some concerns with the lack of some details but the feeling is that those issues can be easily addressed with feedback from the committee. Dale asked about the possibility that this could offer a long-term solution.

The consensus of the group is to move this project forward for ranking.

2017-3-882458-325	ISU	Robinson	Effects of Nitrogen Timing and Rate on Nitrogen Use Efficiency, Environment, and Economics	year one of three year request	\$ 82,319.00
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This project was sent for peer review and received very poor feedback. There were lots of concerns around the design of the project, around the ability to answer the questions posed. Dr. Hoeft added that it was not innovate or unique and would not be a good investment.

The committee moved it forward for ranking.

2017-4-360498-302	UI	Christianson	Bioreactors for Illinois: Smaller, Better, Faster	year one of four year request	\$ 158,992.00	\$ 419,268.00
2017-4-360498-168	UI	Christianson	Drainage water management and saturated buffers for achieving NLRS goals	year one of four year request	\$ 115,749.00	\$ 499,992.00
2017-5-360818-160	UI	Lee	Diverting Drainage Water and Harvesting Nutrients in Perennial Grasses: Harvestable Saturated Buffers and Seasonal Wetland in Central Illinois	year one of five-year request	\$ 86,412.00	

These three projects were evaluated and discussed as a group. And all three were sent for peer review.

All three projects were given positive feedback from the reviewers and were given a high likelihood of success. One of the big advantages of 168 is that it does include an economic analysis that can help farmers determine the financial impact of embracing these types of practices.

302 – this project was given very high remarks and the smaller/more compact design adds to the options available for using these in practical farm applications. The committee discussed easements and asked about any potential contractual obligations around these types of practices.

160 – Dean Campbell indicated his interest in harvestable results but understands that saturated buffer research may not offer that. Matt Duncan asked about wetlands classifications and how that could impact that type of research. Jessica Dexter added that this is a treatment wetlands so should not be impacted.

The consensus of the group is to move all three projects forward for ranking.

2017-3-160849-277	Champaign Co. SWCD	Manual	No-till continuous corn residue management and yield response to cover crops	Year one of three	\$ 37,966.00
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Dr. Hoeft shared the design of this project is inadequate to obtain results to meet the defined objectives and that the funds requested would not be enough to pay for the cost of plant and soil analysis. In addition, the purchase of equipment is an overly large percentage of the budget. Amy Walkenbach added that they work quite often with them and that they do great work but may be in over their heads with this project.

The consensus of the committee is to not move this project forward.

2017-3-360114-422	UI	Villamil	LONG TERM NITROGEN FERTILIZATION EFFECTS ON SOIL QUALITY AND MICROBIAL N CYCLE	Year one of three year request	\$ 74,033.00
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Dr. Hoeft shared this the results of this project would have academic interest but not much from a practical farm use. German Bollero added that this is good research but that the funding would be more appropriate from another source.

The consensus of the committee is to not move this forward.

2017-3-882274-593	ISU	Barrowclough	Best Management Practices of Illinois Farmers: A Special Focus on Conservation Practices, Cover Crops, and Nutrient Management Across State Watersheds	year one of three year request	\$ 54,247.00
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Dr. Hoeft shared his concerns about the project that center around evaluating questions that may not show much movement. And, he also pointed out that we already fund the NASS survey and this may duplicate efforts being done as part of NLRs. Terry Pope expressed concerns that farmers would answer this. German Bollero also pointed out that there is a large amount of overhead for this project as well.

The consensus of the committee is to move this forward for ranking.

2017-4-206939-77	SIU	Willard	Water quality and agronomic impacts of gypsum applications in Southern Illinois	year one of four year request	\$ 99,967.00
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This project was also submitted for consideration and was sent to peer review at that time. There is interest in learning more about this project but there were lots of questions around the methodology and research design. German Bollero told the group that the design will not answer the questions proposed. Ted Mottaz shared that he think that we do owe this group some answers and support on a research project but wants to make sure that it is well designed. Robert Mullen indicated that much of the research that is cited in the proposal was rather contentious and was done in a lab versus a field setting and so many not be adequate basis for the research. Jenny Mennenga and Curt Zehr asked about the best way to handle these types of situations and how to move forward. There was discussion about how to provide feedback and what was the most appropriate way to communicate with the PI's. Dr. Hoeft will work with Matt Duncan, Robert Mullen and

Ed Corrigan to review the protocols and help the PI's come up with a working proposal which will be looked at in 2018. The consensus of the group was to rank the project on its merits as presented.

This completed the review of the projects and the committee moved into the ranking process.

2017 Proposal Number	PI	Project Title	2017	Ranking	
2013-5-360114-99	Villamil	Agronomic and environmental assessment of cover crops in Illinois	\$ -	5	\$ -
2014-3-360114-466	Villamil	Updating P and K response and crop removal numbers for Illinois	\$ 56,542	5	\$ 56,542
2014-3-360422-398	Nafziger	A comprehensive corn nitrogen research program for Illinois	\$ 114,234	5	\$ 170,776
2014-3-882664-38	O'Reilly	The effect of cover crops on surface water quality: A paired watershed experiment in the Lake Bloomington watershed	\$ 172,159	5	\$ 342,935
2014-5-360112-241	Lovell	Multifunctional buffers on marginal farmland to improve the environmental profile of agriculture and diversify production opportunities	\$ 120,667	5	\$ 463,602
2014-5-360847-320	David	Nitrogen management systems in tile-drained fields: Optimizing yields while minimizing losses	\$ 245,573	5	\$ 709,175
2015-2-206333-342	Schoonover	Nitrate leaching in cover crops and corn/soybean systems in Southern Illinois With N15	\$ 95,907	5	\$ 805,082
2015-3-360276-251	Pittelkow	An agronomic assessment of soil nitrous oxide emissions in Illinois: increasing nutrient utilization while reducing impacts on air quality	\$ 84,482	5	\$ 889,564
2015-3-360422-56	Nafziger	tracking soil nitrogen loss and availability	\$ 187,572	5	\$ 1,077,136
2015-3-860638-62	Kostel	Demonstration and monitoring of nutrient-removal wetlands in the Big Bureau Creek watershed (Northern/Central Illinois)	\$ 140,000	5	\$ 1,217,136

2015-5-360350-374	Gentry	Evaluating nutrient loss reduction strategies: longer rotation with cover crops and bioreactor	\$ 160,973	5	\$ 1,378,109
2016-1-833929-252	Schaefer	Ind./University Partnership & KIC 4R Programs	\$ 447,002	5	\$ 1,825,111
2016-2-360190-386	Kent	Dissimilatory nitrate reduction to ammonium: An unexplored microbial pathway for nitrate retention in agricultural soils	\$ 28,035	5	\$ 1,853,146
2016-3-206333-423	Schoonover	The two stage saturated buffer: Integrating the use of cover crops into saturated buffer designs for nitrogen mitigation	\$ 82,453	5	\$ 1,935,599
2016-4-360276-980	Pittelkow	Assessing synergies and tradeoffs of recommended BMPs to reduce nutrient loss	\$ 131,640	5	\$ 2,067,239
2016-3-360498-549	Christianson	Dissolving uncertainty: A comprehensive evaluation of dissolved P in tile drainage	\$ 42,153	5	\$ 2,109,392
2016-4-360347-203	Arai	Understanding mechanisms and processes of dissolved reactive phosphate (DRP) loss in Illinois tile-drained fields	\$ 167,151	5	\$ 2,276,543
2017-4-360498-302	Christianson	Bioreactors for Illinois: Smaller, Better, Faster	\$ 158,992	4.0625	\$ 2,435,535
2017-4-360498-168	Christianson	Drainage water management and saturated buffers for achieving NLRs goals	\$ 115,749	4	\$ 2,551,284
2017-3-882186-86	Armstrong	A Long-term Evaluation of Nitrogen Application Timing and	\$ 210,095	3.666667	\$ 2,761,379
2017-3-360350-314	Gentry	Cereal Rye Ahead of Corn: N Catch and Release	\$ 58,653	3.5625	\$ 2,820,032
2017-3-833929-271	Schaefer	Cereal Rye Ahead of Corn: N Catch and Release	\$ 22,635	3.5625	\$ 2,842,667
2017-3-360574-222	Coppess	Web-based Decision Support Tool for Cover Crop Management	\$ 135,589	3.125	\$ 2,978,256

2017-5-360818-160	Lee	Diverting Drainage Water and Harvesting Nutrients in Perennial Grasses: Harvestable Saturated Buffers and Seasonal Wetland in Central Illinois	\$ 86,412	2.666667	\$ 3,064,668
2017-1-256629-369	Wade	Illinois Cover Crop/Soil Health Training and Demonstration Farm	\$ 77,000	2.625	\$ 3,141,668
2017-3-360298-443	Guan	Optimizing in-season nitrogen management for corn by near-ground sensing, machine	\$ 93,632	2.0625	\$ 3,235,300
2017-3-219807-23	Getahun	Decision Support Tool for Evaluating Nutrient Loss Reduction Strategies at Aggregated Field Unit and Watershed Scales	\$ 111,585	1.625	\$ 3,346,885
2017-4-206939-77	Willard	Water quality and agronomic impacts of gypsum applications in Southern Illinois	\$ 99,967	1.4	\$ 3,446,852
2017-3-882458-325	Robinson	Effects of Nitrogen Timing and Rate on Nitrogen Use Efficiency, Environment, and Economics	\$ 82,319	1.133333	\$ 3,529,171
2017-2-880446-270	Ramsay	Public/Private Partnership to Reduce Nutrient Load in Four Targeted Rural and Urban Watersheds	\$ 118,096	1.0625	\$ 3,647,267
2017-3-882274-593	Barrowclough	Best Management Practices of Illinois Farmers: A Special Focus on Conservation Practices, Cover Crops, and Nutrient Management Across State Watersheds	\$ 54,247	1	\$ 3,701,514
2017-1-160849-336	Manual	What I Can Do To Get Five Stars	\$ 35,000	0	\$ 3,736,514
2017-1-361358-123	Stierwalt	Strategic Planning: Engagement and Development for the Illinois Soil & Water Conservation Districts	\$ 10,000	0	\$ 3,746,514

2017-1-740467-396	Brown	GROWING A SUSTAINABLE APPROACH TO PRODUCTION AGRICULTURE THROUGH SECONDARY EDUCATION IN EDGAR COUNTY	\$ 30,110	0	\$ 3,776,624
2017-3-160849-277	Manual	No-till continuous corn residue management and yield response to cover crops	\$ 37,966	0	\$ 3,814,590
2017-3-360114-422	Villamil	LONG TERM NITROGEN FERTILIZATION EFFECTS ON SOIL QUALITY AND MICROBIAL N CYCLE	\$ 74,033	0	\$ 3,888,623

Matt Duncan raised a question around the minimum level of ranking. And the committee discussed the need to make decisions based on merits and then look at the budget.

Terry Pope moved and Jenny Mennenga seconded to recommend all renewal projects and all projects ranked 3 and above for funding for a total cost of \$2,978,256.00.

German Bollero amended the motion to add project 160 to the list of projects recommended for funding for a total funding level of \$3,064,000. Jessica Dexter seconded this amendment.

Discussion: German feels that it fits well with the other projects related to drainage projects and received good feedback from peer reviewers. It fits well with the other projects. Matt Duncan expressed concern about the small amount of difference between 160 and 369.

Ted Mottaz amended the amendment to add project number 369 to the list of projects recommended for funding for a total funding level of \$3,141,668. Paul Jeschke seconded. The amendment failed by a vote of 4 (yes) to 10 (no).

A vote was then taken on the original amendment to add project 160 to the list of projects to be funded. The amendment was defeated by a vote of 6 (yes) to 7 (no).

A vote was then taken on the original motion to fund all projects ranked 3 and above. That motion passed unanimously.

The recommended funding is summarized below.

2017 Proposal Number	PI	Project Title	2017	Ranking	
2013-5-360114-99	Villamil	Agronomic and environmental assessment of cover crops in Illinois	\$ -	5	\$ -
2014-3-360114-466	Villamil	Updating P and K response and crop removal numbers for Illinois	\$ 56,542	5	\$ 56,542

2014-3-360422-398	Nafziger	A comprehensive corn nitrogen research program for Illinois	\$ 114,234	5	\$ 170,776
2014-3-882664-38	O'Reilly	The effect of cover crops on surface water quality: A paired watershed experiment in the Lake Bloomington watershed	\$ 172,159	5	\$ 342,935
2014-5-360112-241	Lovell	Multifunctional buffers on marginal farmland to improve the environmental profile of agriculture and diversify production opportunities	\$ 120,667	5	\$ 463,602
2014-5-360847-320	David	Nitrogen management systems in tile-drained fields: Optimizing yields while minimizing losses	\$ 245,573	5	\$ 709,175
2015-2-206333-342	Schoonover	Nitrate leaching in cover crops and corn/soybean systems in Southern Illinois With N15	\$ 95,907	5	\$ 805,082
2015-3-360276-251	Pittelkow	An agronomic assessment of soil nitrous oxide emissions in Illinois: increasing nutrient utilization while reducing impacts on air quality	\$ 84,482	5	\$ 889,564
2015-3-360422-56	Nafziger	tracking soil nitrogen loss and availability	\$ 187,572	5	\$ 1,077,136
2015-3-860638-62	Kostel	Demonstration and monitoring of nutrient-removal wetlands in the Big Bureau Creek watershed (Northern/Central Illinois)	\$ 140,000	5	\$ 1,217,136
2015-5-360350-374	Gentry	Evaluating nutrient loss reduction strategies: longer rotation with cover crops and bioreactor	\$ 160,973	5	\$ 1,378,109
2016-1-833929-252	Schaefer	Ind./University Partnership & KIC 4R Programs	\$ 447,002	5	\$ 1,825,111
2016-2-360190-386	Kent	Dissimilatory nitrate reduction to ammonium: An unexplored microbial pathway for nitrate retention in agricultural soils	\$ 28,035	5	\$ 1,853,146

2016-3-206333-423	Schoonover	The two stage saturated buffer: Integrating the use of cover crops into saturated buffer designs for nitrogen mitigation	\$ 82,453	5	\$ 1,935,599
2016-4-360276-980	Pittelkow	Assessing synergies and tradeoffs of recommended BMPs to reduce nutrient loss	\$ 131,640	5	\$ 2,067,239
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Amy Walkenbach asked about how much of the proceedings of the meeting are required to be included in the official minutes of the meeting. Julie will follow up with our legal representation for clarification.

Terry Pope moved and Paul Jeschke seconded to adjourn the meeting at 4:34 p.m.