

# Innovative Manure Management Feasibility Study

LCC Meeting Draft 7/18/17

## REQUEST FOR PROPOSAL (RFP)

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Producers within the Yahara River Watershed can submit a project proposal to conduct a feasibility study addressing innovative and non-traditional ways of managing manure including: collection, storage, transfer, nutrient removal, nutrient concentration, transport and land application. Producers are encouraged to work with engineers, consultants and professionals within the manure management industry to develop and submit proposals. Producers and their collaborators can submit a preproposal requesting funding for the development and submittal of a feasibility study that would contain detailed information on who, what, where, when and how the proposed manure management strategy would be implemented. Completed feasibility studies would then be reviewed for potential funding for implementation.

### SUBMITTAL PROCESS & TIMELINE— TENTATIVE

- Dane County will announce the request for preproposals by August 31, 2017.
- Producers can work with individuals, organizations, industry professionals, etc. on developing and submitting a preproposal describing the general manure management strategy to be implemented (see Preproposal Criteria for information to be submitted).
- All preproposals are due to Dane County by October 31, 2017.
- Dane County will review and rank preproposals.
- Projects with the highest ranked preproposals will be contacted to move forward with funding to conduct a feasibility study will be notified by December 31, 2017.
- Full proposals are then due to Dane County by August 31, 2018 (see Full Proposal Criteria for information to be submitted).
- Full proposals will be reviewed and ranked by Dane County.
- Projects that rank the highest will be contacted by Dane County (by December 1, 2018) to develop funding agreements for project implementation (contingent on available funds).

#### *Timeline*

<b>Activity</b>	<b>Date</b>
<b>RFP Preproposal Announcement</b>	August 31, 2017
<b>RFP Preproposals Due</b>	October 31, 2017
<b>Preproposal Projects Selected &amp; Notified</b>	December 31, 2017
<b>Feasibility Study(s) Due</b>	August 31, 2018
<b>Feasibility Study(s) Selected &amp; Notified</b>	December 31, 2018

## PREPROPOSAL CRITERIA

The following information is requested as part of the preproposal project submittal.

- Introduction of facility, operation, landowners, and producers involved in the project.
- Organization capabilities of any consultants or firms assisting with the project including personnel information and qualifications.
- Overview of farm(s) participating in the proposal including location, current manure management systems, animal numbers, nutrient management and acres, and 10-year horizon on future manure management and handling.
- Description of the types of processes and/or technology being considered for implementation. Examples may include but are not limited to:
  - Community storage
  - Anaerobic digestion including methane gas recovery and/or generation of electricity
  - Solids separation and recovery
  - Combustion (i.e. pyrolysis or gasification)
  - Nutrient removal and recovery (nitrogen, phosphorus, potassium, etc.)
  - Ultrafiltration
  - Reverse Osmoses
  - Composting
  - Other
- Evaluation of by-product markets to be included in analysis
- Proposed budget and funding alternatives.
- Business structures being proposed for analysis.
- A timeline for developing fall proposals not to exceed August 31, 2018.

### *Pre-proposal Scoring Criteria*

<b>Description</b>	<b>Percent</b>
<b>Producer &amp; Consultant Capabilities</b>	15%
<b>Project Description</b>	10%
<b>Innovation in Manure Management</b>	25%
<b>By-product Analysis</b> (including export of nutrients)	20%
<b>Budget &amp; Funding</b>	15%
<b>Business Structure</b>	10%
<b>Timeline for Feasibility Study</b>	5%
<b>TOTAL</b>	100%

## FULL PROPOSAL CRITERIA

Preproposals that are awarded funding are required to submit full proposals containing detailed information regarding technologies, products, management strategies and business plans for the innovative manure management system being proposed. Information needed in full proposal submittals include:

- A general introduction to the overall approach and technology that will be used to store, manage and redistribute manure, nutrients and by-products.
- Technical information regarding the strategy proposed including:
  - Specific process details such as treatment processes, handling processes, etc.
  - Interconnection details between various treatment processes and equipment.
  - Equipment details such as tank sizes, retention time, mixing equipment, pumps, chemical feed equipment and solids separation equipment. Include materials of construction and electrical specifications for each piece of equipment supplied.
  - Composition, volumes and quantities for all end products produced by the system including phosphorus, solids, nitrogen, chlorides concentrations, flow rates or volumes and temperature.
  - Utility needs of the system including sizing and location of incoming power and process connections.
  - Installation, start-up and operation needs of the system.
  - Any equipment components that must be regularly changed out or replaced, including required change-out frequency and replacement costs/disposal requirements.
  - Any chemicals used for process or cleaning of the system should be described along with consumption rates, annual estimated usage, and chemical costs.
  - Parasitic load for each system component in terms of electrical demand (kWh/operating hour), gas and/or therm use.
  - Total life expectancy of all system components.
  - Labor/manpower requirements for operation and for routine and preventative maintenance and costs.
  - General specifications for any buildings that would need to be constructed to house the equipment including dimensions, power requirements and floor load requirements.
  - System control details
- Costs for both the equipment and installation as well as ongoing operation and maintenance
- Maintenance plans and strategies including routine maintenance protocols and emergency response procedures should equipment fail.
- Management procedures on how manure and products would be handled both before and after treatment.
- Process and product flow diagrams showing how manure and products move through the system.
- End product use descriptions.
- Permitting requirements.
- Economic feasibility and financial modeling including both capital/equipment and operation/maintenance costs.
- Timeline and budget for implementation.

***Feasibility Study Criteria***

<b>Description</b>	<b>Percent</b>
<b>Project Description</b>	15%
<b>Technical Description &amp; Plans</b>	25%
<b>Proposed Costs/Budget</b>	10%
<b>Operation, Maintenance &amp; Management Plan</b>	20%
<b>Economic Feasibility &amp; Financial Modeling</b>	15%
<b>By-products &amp; Permits</b>	10%
<b>Implementation Timeline</b>	5%
<b>TOTAL</b>	100%

**FUNDING**

Funds are not available for preproposals. Funding for feasibility studies as well as project implementation will vary and be contingent upon the total costs of each project and availability of funds.

- Funding for feasibility study projects not to exceed \$100,000.
- Funding for project implementation is contingent on funding availability.