

**STATEMENT OF WORK**  
**Comprehensive Nutrient Management Plan**  
**Manure and Wastewater Handling and Storage**  
**Facility Assessment**  
**Minnesota**

***NOTE: A comprehensive nutrient management plan (CNMP) addresses all land units that the animal feeding operation (AFO) owner and/or operator owns or has decision-making authority over and on which manure and organic by-products will be generated, handled, and stored (Feedlots and Production Areas), and on which manure will be applied.***

**A CNMP addresses 6 elements: a. Manure and Wastewater Handling and Storage; b. Land Treatment Practices including needed soil erosion control practices to reduce the transport of nutrients; c. Nutrient Management; d. Record Keeping; e. Feed Management; and f. Other Utilization Activities.**

**This Statement of Work addresses the Facility Assessment portion of the Manure and Wastewater Handling and Storage element. It does not address the requirements for design and implementation of any practices implemented as a result of this assessment.**

Deliverables:

I. Onsite Investigation

- A. An onsite review of the facility and interview of the producer is required. Adequate information must be gathered to be able to complete the assessments required in the and Report sections of this Statement of Work. The producer must be available to provide information that is needed as part of the report and assessments.

II. Report

A. Facility Description

- 1. Producer name, facility location, date of onsite review
- 2. Type of operation and permitted animal numbers and type
- 3. Physical description of buildings and lots (photos are recommended, but not required)
- 4. If applicable, include description of drainage areas, flow paths to receiving waters, etc. Show sheet flow and concentrated flow areas. Describe general geologic setting and soils at the site. The level of detail here is limited to information that can be obtained from the owner and a soil survey. If the facility is located in the Karst area, additional effort may be needed to visually identify sinkholes found within a ½ mile radius of the facility on aerial photos or in the field.
- 5. Current manure handling equipment used by the operator

B. Assessment Results

C. Support Documents

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III. Assessments

A. Surface Water Pollution Assessment

1. Describe the surface water situation related to clean and contaminated water runoff including drainage areas, slope, ground cover, flow path to receiving water, receiving water location and description. Include a plan view sketch, quad sheet, etc. to show drainage areas and flow path. Run and include Feedlot Evaluation (FLEVAL) model<sup>1</sup> results if there is a surface water pollution issue. This would not be required if all animals are housed under roofs or all runoff is contained.
2. Minimum recommended alternatives to correct any noted problems

B. Odor Assessment

1. Describe possible odor sources and distance and direction of neighbors
2. If odors are an issue at the site, run and include Odor From Feedlots Setback Estimation Tool (OFFSET)<sup>2</sup> results
3. Recommend alternatives to correct any noted problems

C. Storage Facility Assessment

1. Based upon a visual inspection of the structure, review of available engineering plans, owner interview, etc. provide a professional opinion on structural and lining adequacy. This is not intended to be a definitive determination on storage facility adequacy. Merely point out items that are in question and warrant further follow-up unless a conclusion can be drawn from the visual inspection.
2. For liquid manure storage, compare expected manure and wastewater production with storage volumes and pumping frequencies to see if they balance. Large discrepancies may indicate seepage outflow or inflow problems.

D. Storage Facility Capacity

1. Summarize storage facility volume
2. From producer interview, estimate current storage period (months or days)

E. Ground Water Pollution Potential

1. This evaluation is only intended to identify potential ground water issues that may need to be followed up on later. It is NOT intended to be a definitive assessment of ground water contamination from the site. Items such as well location, well

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construction, general soils and geology, water test results, manure storage lining, sinkhole proximity, etc. may be used to support this section.

F. Mortality Disposal

1. Assess the environmental suitability of the producer's mortality disposal operation. Base comments upon producer interview and inspection of any disposal facilities.

G. Milk Parlor Wash Water Disposal (if applicable)

1. For dairy operations, provide an assessment of current milk parlor washwater disposal methods. If a septic system is utilized, the producer should be asked if the drain field is attached to a tile drain that leads to a surface outlet.

H. Silage Leachate Disposal (if applicable)

1. This assessment will be made by interviewing the producer, looking at vegetation, viewing the storage facility, etc.

I. Manure Storage/Handling Safety Issues

1. Based upon observations made at the facility provide any follow-up recommendations that are appropriate regarding safety barriers, warning signage, confined spaces etc. Comments can be limited only to manure collection, transfer, and storage facilities.

J. Emergency Response plan

1. Determine if the producer has an Emergency Response Plan or not. If they do have one, provide any recommendations that are appropriate for revisions or updates. If they do not have one, provide a standard template (available from the NRCS) as a starting point and recommendations for items to be covered.

REFERENCES

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- <sup>1</sup> USDA – Agricultural Research Service, ARM-NC-17, An Evaluation System To Rate Feedlot Pollution Potential, April 1983, Library of Congress ISSN 0193-3787
- <sup>2</sup> Midwest Plan Service, MWPS-18 Manure Management Series, Outdoor Air Quality, Iowa State University, Ames, Iowa, 2002, ISBN 0-89373-096-3
- NRCS National Planning Procedures Handbook (NPPH) (CNMP Technical Guidance)
- NRCS-Minn. Amendment 19 to NPPH (Nutrient Management and CNMP Planning Policies)