

Environmental Quality Incentives Program

2013 EQIP Signup

Minnesota Supplement for:

Practice Standard 366 – Anaerobic Digester Controlled Temperature

Supplemental Criteria

1. **Consult General Provision 15 for Ag Waste System payment cap information.**
2. Applications for this practice will not be approved unless a feasibility study has already been completed by a person competent in digester design.
3. Payment is limited to where the implementation of this practice will correct an existing air and/or water quality problem **and only if a Comprehensive Nutrient Management Plan (CNMP) is developed and implemented.**
4. Consult General Provision 13 for **Comprehensive Nutrient Management Plan (CNMP) requirements.**
5. Consult General Provision 14 for requirements related to manure application land base and/or manure applications on land not owned or controlled by the EQIP contract holder
6. AU measurement is each 1000# of live weight contributing to the digester.
7. Payment includes the digester vessel, cover, internal equipment, controls, gas piping and flare.
8. Operations of less than 100 animal units will receive \$0 payment.
9. Participants are required to acquire their own technical assistance for this practice. (No NRCS or TSP design).

Scenarios

Small Plug Flow <1000 AU

A plug flow anaerobic digester can be part of a waste management system. It provides biological treatment of the waste in the absence of oxygen. This process for manure and other byproducts of animal agricultural operations will manage odors, reduce the net effect of greenhouse gas emissions, and/or reduce pathogens. This scenario is for a plug flow digester with less than 1,000 animal units. Selection of digester type will be based on effluent consistency. Energy generation is not included with this scenario.

Potential Associated Practices: Fence (382), Critical Area Planting (342), Nutrient Management (590), Waste Transfer (634), Heavy Use Area Protection (561), Roof and Covers (367), Solid/Liquid Waste Separation Facility (632), Waste Treatment Lagoon (359), and Waste Storage Facility (313).

Medium Plug Flow 1000-2000 AU

A plug flow anaerobic digester can be part of a waste management system. It provides biological treatment of the waste in the absence of oxygen. This process for manure and other

byproducts of animal agricultural operations will manage odors, reduce the net effect of greenhouse gas emissions, and/or reduce pathogens. This scenario is for plug flow digesters with livestock operations between 1,000 and 2,000 animal units. Selection of digester type will be based on effluent consistency. Energy generation is not included with this scenario.

Potential Associated Practices: Fence (382), Critical Area Planting (342), Nutrient Management (590), Waste Transfer (634), Heavy Use Area Protection (561), Roof and Covers (367), Solid/Liquid Waste Separation Facility (632), Waste Treatment Lagoon (359), and Waste Storage Facility (313).

Large Plug Flow >2000 AU

A plug flow anaerobic digester can be part of a waste management system. It provides biological treatment of the waste in the absence of oxygen. This process for manure and other byproducts of animal agricultural operations will manage odors, reduce the net effect of greenhouse gas emissions, and/or reduce pathogens. This scenario is for plug flow digesters with more than 2,000 animal units. Selection of digester type will be based on effluent consistency. Energy generation is not included with this scenario.

Potential Associated Practices: Fence (382), Critical Area Planting (342), Nutrient Management (590), Waste Transfer (634), Heavy Use Area Protection (561), Roof and Covers (367), Solid/Liquid Waste Separation Facility (632), Waste Treatment Lagoon (359), and Waste Storage Facility (313).

Small Complete Mix <1000 AU

A complete mix anaerobic digester can be part of a waste management system. It provides biological treatment of the waste in the absence of oxygen. This process for manure and other byproducts of animal agricultural operations will manage odors, reduce the net effect of greenhouse gas emissions, and/or reduce pathogens. This scenario is for complete mix systems with less than 1,000 animal units. Selection of digester type will be based on effluent consistency. Energy generation is not included with this scenario.

Potential Associated Practices: Fence (382), Critical Area Planting (342), Nutrient Management (590), Waste Transfer (634), Heavy Use Area Protection (561), Roof and Covers (367), Solid/Liquid Waste Separation Facility (632), Waste Treatment Lagoon (359), and Waste Storage Facility (313).

Medium Complete Mix 1000-2500 AU

A complete mix anaerobic digester can be part of a waste management system. It provides biological treatment of the waste in the absence of oxygen. This process for manure and other byproducts of animal agricultural operations will manage odors, reduce the net effect of greenhouse gas emissions, and/or reduce pathogens. This scenario is for complete mix systems between 1,000 and 2,500 animal units. Selection of digester type will be based on effluent consistency. Energy generation is not included with this scenario.

Potential Associated Practices: Fence (382), Critical Area Planting (342), Nutrient Management (590), Waste Transfer (634), Heavy Use Area Protection (561), Roof and Covers (367), Solid/Liquid Waste Separation Facility (632), Waste Treatment Lagoon (359), and Waste Storage Facility (313).

Large Complete Mix >2,500 AU

A complete mix anaerobic digester can be part of a waste management system. It provides biological treatment of the waste in the absence of oxygen. This process for manure and other byproducts of animal agricultural operations will manage odors, reduce the net effect of greenhouse gas emissions, and/or reduce pathogens. This scenario is for complete mix systems with more than 2,500 animal units. Selection of digester type will be based on effluent consistency. Energy generation is not included with this scenario.

Potential Associated Practices: Fence (382), Critical Area Planting (342), Nutrient Management (590), Waste Transfer (634), Heavy Use Area Protection (561), Roof and Covers (367), Solid/Liquid Waste Separation Facility (632), Waste Treatment Lagoon (359), and Waste Storage Facility (313).

ATTACHMENT E

MANURE AND WASTEWATER STORAGE AND HANDLING EVALUATION CHECKLIST	Checked ✓	Concern Identified ✓
1. Facility Description	NA	NA
2. Surface Water Pollution Assessment		
<ul style="list-style-type: none"> • Is all contamination runoff stored or adequately treated? (NRCS Standard) 		
<ul style="list-style-type: none"> • Are all roofs and drainage areas to open lots diverted away or included in storage volume computations? (NRCS Standard 313) 		
3. Odor Assessment		
4. Storage Facilities:		
<ul style="list-style-type: none"> • Is the manure storage volume adequate to meet Manure Management Plan requirements? (NRCS Standard 313) 		
<ul style="list-style-type: none"> • Are there apparent structural concerns? 		
<ul style="list-style-type: none"> • Is there loss of manure due to excessive seepage? 		
<ul style="list-style-type: none"> • Do water tests from well indicate any potential seepage issues? 		
<ul style="list-style-type: none"> • Does perimeter tile discharge indicate seepage (discoloration, odor)? 		
<ul style="list-style-type: none"> • Is there proper setback from wells? (MN Rules Chapter 4725.4450) 		
<ul style="list-style-type: none"> • Are safety signs, fences, grates, etc., present where needed? 		
<ul style="list-style-type: none"> • Are temporary stockpiles properly sited? (MPCA Guidelines) 		
<ul style="list-style-type: none"> • Is livestock watering equipment in good repair and not leaking? 		
5. Ground Water Pollution Potential		
<ul style="list-style-type: none"> • Are special geologic conditions accounted for? (NRCS Standard 313, MPCA Karst Guidelines) 		
6. For dairy operations, is the milk parlor wash water properly handled? (NRCS Standard)		
7. Is silage leachate properly handled? (NRCS Standard)		
8. Are animal mortalities handled properly?		
9. Does the O&M Plan address operational and safety aspects of the planned structures (NRCS Standard 313)?		
10. Does the facility have an Emergency Response Plan?		