

ILLINOIS STATEMENT OF WORK
Anaerobic Digester (366)

These deliverables apply to this individual practice. For other planned practice deliverables refer to those specific Statements of Work.

DESIGN

Deliverables:

1. Design documentation that will demonstrate that the criteria in NRCS practice standard have been met and are compatible with other planned and applied practices.
 - a. Practice purpose(s) as identified in a comprehensive nutrient management plan
 - b. List of required permits to be obtained by the client
 - c. Compliance with NRCS national and state utility safety policy (NEM Part 503-Safety, Subpart A - Engineering Activities Affecting Utilities 503.00 through 503.06)
 - d. Practice standard criteria related computations and analyses to develop plans and specifications including but not limited to:
 - i. Geology and soil mechanics (NEM Subpart 531a)
 - ii. Storage volume and hydraulic retention time
 - iii. Structural, mechanical and appurtenance design
 - iv. Environmental considerations, such as air quality and bio-security
 - v. Safety considerations (NEM Part 503-Safety, Subpart A, 503.10 through 503.12)
 - vi. A process flow diagram detailing flow rates, volumes, and energy transfer
2. Plans and Specifications including construction drawings sufficient in detail to install the practice, including but not limited to:
 - a. Location map with legal description.
 - b. Plan view drawing showing locations of the practice to be constructed.
 - c. Detail drawings for appurtenances, including valves and thrust blocks.
 - d. Table of quantities and quality requirements, including appurtenances.
 - e. Construction and material specifications.
 - f. Construction notes as needed to clarify components and provide directions for installation.
 - g. Utility safety statement requiring notification of the Illinois One-Call System prior to construction.
 - h. Additional notes as necessary to identify avoidance and protection areas and boundaries associated with cultural resources, threatened or endangered species, or other resources needing temporary protection during installation.
 - i. Signature/initials and date for design and design check. Design check to be completed by an individual other than the designer.
3. Design Report and Inspection Plan as appropriate (NEM Part 511, Subpart B Documentation, 511.11 and Part 512, Subpart D Quality Assurance Activities, 512.30 through 512.32).
4. Operation and Maintenance Plan for the system developed in accordance with the requirements of IL NRCS Conservation Practice Standard 366, Anaerobic Digester.
5. Emergency Action Plan, including emergency contact information
6. Certification that the design meets practice standard criteria and comply with applicable laws and regulations (NEM Subpart A, 505.03 (a) (3))
7. Detailed list of any design modifications during installation.

INSTALLATION

Deliverables

1. Preconstruction conference with client/cooperator and contractor (NEM Part 512, Subpart B, IL 512.13(d)).
2. Verification that client/cooperator has obtained required permits
3. Staking and layout according to plans and specifications including applicable layout notes
4. Installation inspection (according to inspection plan as appropriate)
 - a. Actual materials used (NEM Part 512, Subpart D Quality Assurance Activities, 512.33)
 - b. Inspection records such as notes, photographs, etc.

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5. Facilitate and implement required modifications with client and designer
6. Advise client/NRCS on compliance issues with all federal, state, tribal, and local laws, regulations and NRCS policies during installation
7. Certification that the installation process and materials meets design and permit requirements.

CHECK OUT

Deliverables

1. As-Built documentation.
 - a. Extent of practice units applied
 - b. As-built drawings showing deviations from approved plans
 - c. Final quantities
2. Certification that the installation meets NRCS standards and project design specifications and is in compliance with any required permits (NEM Subpart A, 505.03 (c) (1)).
3. Progress reporting.

REFERENCES

NRCS:

- NRCS Field Office Technical Guide (eFOTG), Section IV, Conservation Practice Standard - Anaerobic Digester (366)
- NRCS National Engineering Manual (NEM)
- NRCS National Environmental Compliance Handbook
- NRCS National Cultural Resources Procedures Handbook
- [Technical Note 1, An Analysis of Energy Production Costs from Anaerobic Digestion Systems on U.S. Livestock Production Facilities](#), October, 2007

OTHER:

- [Guide to Anaerobic Digesters](#), US EPA AgSTAR Program
- [Methane Recovery from Animal Manures: The Current Opportunities Casebook](#), P. Lusk, Resource Development Associates, Washington, DC, September 1998, NREL/SR-580-25145