



Helping People Help the Land

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TECHNICAL GUIDE
NOTICE #223 (electronic)

Purpose: To transmit information regarding the electronic NRCS Field Office Technical Guide (eFOTG).

Effective Date: This notice is effective upon receipt.

Notice of Changes:

SECTION IV: Standards and Specifications

The following is a description of the activities involving **Engineering** conservation practice standards, Operation and Maintenance (O&M) Plans, and Statements of Work:

REVIEW ONLY

The practice standards below are only being reviewed this year; they are not being updated with revised criteria. There is no updated national version of these practice standards, but the 5-year cycle requires that we at least review them. There were no changes at all made to the standards, O&M Plans or Statements of Work.

- Access Road (560)
- Structure for Water Control (587)
- Subsurface Drain (606)

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DIST: All Holders of the Field Office Technical Guide

NEWLY ADOPTED NATIONAL STANDARD

The practice standard below is being adopted in Michigan for the first time.

➤ Solid/Liquid Waste Separation Facility (632)

Solid/Liquid Waste Separation Facility (632)

- New practice standard for Michigan
- Adopted most recent national standard in its entirety with the exception of the Plans & Specifications and Operation & Maintenance sections. Used the standardized Michigan text for those sections.
- Developed new O&M Plan
- Developed new Statement of Work

UPDATED STANDARDS

The following standards have been updated to address new national standards or to provide clarification of intent. A description of the revisions for each standard is provided.

- Aquaculture Pond (397)
- Irrigation System, Microirrigation (441)
- Irrigation System, Sprinkler (442)
- Irrigation Water Management (449)
- Pond Sealing or Lining – Flexible Membrane (521A)
- Vegetated Treatment Area (635)
- Waste Transfer (634)
- Water and Sediment Control Basin [WASCOB] (638)
- Well Decommissioning (351)

Aquaculture Pond (397)

- Revisions made to address updates from most recent national standard.
- Minor word changes in Definition and Conditions Where Practice Applies.
- Added clarification that required permits must be obtained prior to construction and stocking.
- Updated name of applicable Michigan Generally Accepted Agricultural and Management Practices for the Care of Farm Animals.
- Revised criteria that design shall “prevent” rather than “minimize” the escape of harmful fishery species.
- Added criteria that “Water released from the aquaculture impoundment shall receive adequate treatment to ensure that the State designated use of the receiving waters is not degraded.”
- Added criteria that following a CNMP or Nutrient Management plan is required if wastewater from the pond is land applied.

- Added criteria that conduits shall be designed in accordance with the Pond (378) practice standard.
- Added criteria the where harvesting occurs by seining along the edges of the pond, the edges shall be deepened to provide at least 3 feet of water.
- Added criteria that removal of trees, stumps and other vegetation is not required where harvest is by trapping.
- Added criteria that “access ramps, and other areas used by people and vehicles shall be treated, if necessary, to maintain a stable surface under the anticipated load.”
- Revised Considerations section as follows:
 - Added consideration related to aquatic nuisance or aquatic invasive species and properties of underlying soils.
 - Added consideration related to soil properties
 - Added consideration related to recordkeeping
 - Removed “Application of practical pond management techniques should achieve the desired level of production.” because this is a given and does not need to be stated.
- Changed wording in Plans and Specifications and Operation and Maintenance sections to be consistent with other NRCS-Michigan engineering practice standards.
- Added “Stocking plan” and “Fish management plan” to Support data documentation requirements.
- O&M Plan revisions are as follows:
 1. Added “Follow Comprehensive Nutrient Management Plan (CNMP), waste utilization plan and/or nutrient management plan if the wastewater from the pond is land applied.”
 2. Added “Follow fish stocking plan and fish management plan.”
 3. Added “Periodically assess species composition and population levels to determine if objectives are being met. Adapt management measures as necessary.”
- No change to Statement of Work.

Irrigation System, Microirrigation (441)

- Adopted most recent national standard in its entirety with the exception of the Plans & Specifications and Operation & Maintenance sections. Used the standardized Michigan text for those sections.
- No change to O&M Plan.
- No change to Statement of Work.

Irrigation System, Sprinkler (442)

- Added furrow diking and dammer diking to the additional conservation measures in the Design Application Rate paragraph of the General Criteria Applicable to All Purposes section.
- Added “where applicable” to the Construction drawings/specifications Support data documentation requirements list in the Plans and Specifications section.

- No change to O&M Plan.
- No change to Statement of Work.

Irrigation Water Management (449)

- Added sentence “Appropriate field adjustments shall be made for seasonal variations and field variability.” to Additional Criteria to Manage Soil Moisture to Promote Desired Crop Response.
- Removed sentence from Operation and Maintenance section “The above aspects are covered in the NRCS-Michigan Conservation Sheet, Irrigation Water Management to Protect Ag Resources.” because this conservation sheet is already cited in the References section.
- Minor word changes to Support data documentation requirements lists in Plans and Specifications section to better clarify intent and to better reflect that this is not a structural practice:
 - Added “prevailing wind direction, crops, historical frequency of irrigation, environmental considerations, and other relevant features” to Resource inventory list.
 - Removed “pump/well location” from Resource inventory list.
 - Added “location” to Water source list.
 - Changed “System design and components” to “System components”.
 - Removed “system evaluation” from System components examples.
 - Added “inspections” for delivery system in Maintenance guidance and records list
- No changes to Statement of Work.
- NRCS-Michigan Conservation Sheet, Irrigation Water Management to Protect Ag Resources, functions as the O&M Plan.

Pond Sealing or Lining – Flexible Membrane (521A)

- Revisions made to address updates from most recent national standard.
- Minor word changes in Definition, Purpose, and Conditions Where Practice Applies.
- Clarified that 12 inches of soil cover is required for PVC and GCL liners.
- Added clarification that purpose of soil cover is for proper performance, protection and durability of the installation.
- Added clarification describing subgrade conditions that require a cushion or padding under the liner.
- Added regarding what should be considered for safety features to include in the design.
- Added requirement that venting shall be investigated as part of the design.
- Considerations clarified to identify soil conditions that may allow dissipation of gas accumulating beneath the liner.
- Added EPA reference.
- O&M Plan revisions to include:
 - Additional items to included in O&M inspections;
 1. Check visible portions of liner for tears, punctures or other damage;

2. Check visible portions of liner interface with inlets, outlets, ramps, and other appurtenances for damage;
 3. Check for bulging or ballooning (“whales”) of the liner indicating the presence of gas or water accumulation beneath the liner;
 4. Check venting system ensuring there is no blockage of vent outlets or damage to venting system that would allow water or waste to get behind the liner.
 - Repairing damage as soon as possible.
- No changes to Statement of Work.

Vegetated Treatment Area (635)

- Formerly titled Wastewater Treatment Strip (635).
- National standard changed criteria eliminating option for “other technically acceptable method”.
- Received variance from Director, Conservation Engineering Division, to continue to use the current NRCS-Michigan Wastewater Treatment Strip criteria while research on the criteria is being conducted at Michigan State University.
- Only changes are to Title, Definition, and Purpose to be consistent with national standard.
- O&M Plan revised as follows:
 - Practice title change
 - Added “In the first three years mow frequently to achieve the desired stem density.”
- Statement of Work revision only for practice title change.

Waste Transfer (634)

- Formerly titled Manure Transfer (634).
- Updated national standard changed focus from manure to all agricultural byproducts (waste).
- Substantive changes to previous NRCS-Michigan standard include the following (mostly to be consistent with new national standard):
 - New criteria - Fluid velocity in pipe shall not exceed 5 feet per second if the pipe is not buried or securely tied down.
 - Clarification – For gravity pipes outletting into a waste storage facility, head is measured from the inlet invert of the pipe to the maximum operating level elevation in the storage facility.
 - Added reference to Solid/Liquid Waste Separation (632) practice standard.
 - Added some considerations.
- No changes to Statement of Work.
- O&M Plan revisions to include:
 - maintaining any required records.
 - performing planned management actions intended to minimize odors, flies, and risk of gas build up.
 - flushing pipes for solids removal, if necessary.

- routine removal of solids from conveyance conduits such as concrete lined ditches.

Water and Sediment Control Basin [WASCOB] (638)

- Updated national standard led to some reordering and word changes to NRCS-Michigan standard and some changes in Considerations.
- Only substantive Criteria change is to require 0.5 foot freeboard above the design flow depth through any auxiliary spillway.
- No change to O&M Plan or Statement of Work.

Well Decommissioning (351)

- Inserted standardized Michigan text for Operation and Maintenance section. No other changes to standard.
- No change to O&M Plan or Statement of Work.

Technical questions should be addressed to Steve Davis, State Conservation Engineer, at (517) 324-5232.

Questions regarding FOTG content management should be directed to Ruth Shaffer, Water Quality Specialist, at (517) 324-5239.

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