



Laura M. Hicklin, Director
Joe Parisi, Dane County Executive

Administration • Land Conservation • Parks • Water Resource Engineering

January 4, 2023

Allison Graf
Ace Equestrian LLC
103 W. Madison Ave
Milton, WI 53563

SUBJECT: Approval of Manure Management Plan for Conditional Use Permit

Dear Ms. Graf;

The Dane County Land & Water Resources Department (LWRD) received a manure management plan for the Ace Equestrian LLC horse facility located at 272 Edgerton Road in the Town of Albion as part of a conditional use permit request to the Dane County Department of Planning and Development. After review of the submitted materials and staff visiting the property, the manure management plan has been approved by the LWRD.

The following conditions apply as part of this approval:

- Any changes to this plan must be approved in writing by the LWRD prior to implementation. Changes may include but are not limited to: an increase in the number of animals housed at the facility, the amount of manure produced, or how the manure is stored until it is spread on the pastures or hauled off the site.
- Manure shall be stacked in accordance with NRCS 318 Short Term Storage of Animal Waste and By-Products technical standard. (attached)
- Manure mechanically spread on pastures or cropland shall follow a nutrient management plan developed to meet NRCS 590 nutrient management technical standard. Cost-share assistance may be available to assist with the development of a nutrient management plan.
- If manure is planned to be land applied during frozen or snow covered conditions, a winter spreading permit is required prior to land application.

If you have questions regarding this approval or would like to discuss options to meet the conditions, please contact Shawn Esser at 608-228-6347 or esser.shawn@countyofdane.com.

Sincerely,

A handwritten signature in black ink, appearing to read "Amy S. Piaget".

Amy S. Piaget
County Conservationist
Land Conservation Division

*Enclosures: NRCS 318 – Short Term Storage of Animal Waste and By-products
Wisconsin's Runoff Rules*



Natural Resources Conservation Service

CONSERVATION PRACTICE STANDARD

SHORT TERM STORAGE OF ANIMAL WASTE AND BY-PRODUCTS

CODE 318

(cf)

DEFINITION

Temporary, nonstructural measures used to store solid or semisolid organic agricultural waste or manure (stackable livestock and poultry manure, bedding, litter, spilled feed, or soil mixed with manure) on a short-term basis between collection and utilization.

PURPOSE

This practice is used to accomplish the following purposes:

- Temporarily stockpile or store manure in an environmentally safe manner for improved nutrient utilization and conservation.
- Provide the agricultural operation management greater flexibility in nutrient utilization.
- Protect surface and groundwater resources.

CONDITIONS WHERE PRACTICE APPLIES

This practice applies where a comprehensive nutrient management plan (CNMP) or a nutrient management plan (NMP) has been developed and where a temporary stockpile or storage is needed because—

- Clean out of animal housing facilities or transfer of manure is required at a time when the manure cannot be readily land applied due to weather, soil conditions, or farm management requirements.
- Daily spreading operations are not possible when weather or cropping conditions are not appropriate for field spreading.
- Land area is limited and split applications of manure nutrients are required for proper nutrient management and water quality protection.
- Temporary stockpiling of solid manure is needed until it is applied to the field where it is stockpiled or transferred offsite.
- Imported organic material is temporarily stored on farm for the purpose of Wisconsin NRCS Conservation Practice Standard (WI NRCS CPS) Waste Recycling (Code 633).

This practice does not apply to the short-term management of human waste or animal mortality.

Use WI NRCS CPS Waste Storage Facility (Code 313) for long-term stockpile periods in production areas.

CRITERIA

General Criteria Applicable to All Purposes

Laws and regulations

Plan, design, and implement the practice to meet all Federal, State, and local laws and regulations.

NRCS reviews and periodically updates conservation practice standards. To obtain the current version of this standard, contact your Natural Resources Conservation Service State office or visit the Field Office Technical Guide online by going to the NRCS website at <https://www.nrcs.usda.gov/> and type FOTG in the search field.

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NRCS, WI
June 2021

Nutrient utilization

Utilize nutrients in the amounts, at the location, at the identified rates, and at the specified time consistent with the requirements of WI NRCS CPS Nutrient Management (Code 590).

Consistency

Waste stockpiled will be of a consistency that permits stacking and pile formation. Total solids (manure solids plus bedding or amendments) will be greater than 25 percent. Waste having a lower percentage of solids may be acceptable with verification that suitable pile formation is achievable. *For the purpose of this standard, stackable solids are defined as the ability to maintain at least a 4 foot high stack, with a 4:1 angle of repose or steeper, in a non-frozen state.*

Criteria Applicable To Temporary Field Stockpile Areas

Locate the storage pad on a site-specific basis to minimize seepage and meet conditions and functional requirements.

Provide positive drainage away from the field stockpile area in all directions. Protect water bodies such as ponds, streams, and springs from runoff.

Maintain at least 30 feet of vegetative buffer on the downslope side of the stockpile storage area for filtering solids in the runoff. A manure stockpile may be placed in a fallow field when appropriately sited.

Provide adequate germination of newly established buffers prior to stockpile formation. Install a sediment barrier (synthetic silt fence or hay bales) around the pile if vegetation is not well established.

Maintain the stockpile so that no dust and debris transport to waters or drainageways occurs.

Seed all disturbed areas beyond the edges of the stored manure to an approved vegetative cover.

Locate stockpile—

- Above the 100-year floodplain elevation unless site restrictions require location within the floodplain. Protect the facility from inundation or damage from a 100-year flood event when in the floodplain.
- Where there is no groundwater spring, seep, or subsurface drainage tile lines that could be contaminated by the stored waste.
- On soils with a maximum saturated hydraulic conductivity class (kSAT) of moderately high (~ 2 in/hr) or on a soil pad, geomembrane lined pad, or similar lining method, and the stockpile is covered.
- Where there will be positive drainage from the stack in all directions and clean water runoff is excluded from the stockpile storage area.
- Where access is not limited by poor weather conditions such as excessive ice, snow, or muddy ground.
- *In accordance with the criteria contained in Table 1.*

Table 1 – Temporary, Unconfined Stacks of Manure and Derivatives Outside the Animal Production Area Note ¹

Waste Consistencies	≥ 25% Solids	< 25% and Stackable Solids
Size & Stacking Period		
<i>Stacking Period Maximum</i>	<i>180 Days</i>	<i>180 Days</i>
<i>Maximum Volume/Stack</i> ^{Note 2}	<i>≤ 40,000 cu feet</i>	<i>≤ 15,000 cu feet</i>
<i>Maximum Number of Stacks/40 acres</i>	<i>—</i>	<i>2</i>
<i>Maximum Stack Height</i>	<i>7 feet</i>	<i>7 feet</i>

<i>Frequency of Stacking Site Use</i> ^{Note 3}	1 year out of 2	1 year out of 3
Soil	$K_{SAT} < 2 \text{ in/hr}$	$K_{SAT} < 2 \text{ in/hr}$
Subsurface Separation Distance		
Subsurface Saturation	$\geq 3 \text{ feet}$	$\geq 3 \text{ feet}$
Bedrock	$\geq 3 \text{ feet}$	$\geq 5 \text{ feet}$
Surface Separation Distance		
Wells ^{Note 4}	$\geq 250 \text{ feet}$	$\geq 250 \text{ feet}$
Lakes	$\geq 1000 \text{ feet}$	$\geq 1000 \text{ feet}$
Sinkholes Or Other Karst Feature	$\geq 1000 \text{ feet}$	$\geq 1000 \text{ feet}$
Quarries	$\geq 1000 \text{ feet}$	$\geq 1000 \text{ feet}$
Streams	$\geq 300 \text{ feet}$	$\geq 500 \text{ feet}$
Wetlands and Surface Inlets	$\geq 300 \text{ feet}$	$\geq 500 \text{ feet}$
Areas of Concentrated Flow	$\geq 100 \text{ feet}$	$\geq 300 \text{ feet}$
Land Slope Down Gradient of Stack	$\leq 6\%$	$\leq 3\%$
Floodplain	$\geq 100 \text{ feet}$	$\geq 300 \text{ feet}$
Public Roads, or Neighboring Residences	$\geq 100 \text{ feet}$	$\geq 100 \text{ feet}$
Tile lines	$\geq 40 \text{ feet}$	$\geq 40 \text{ feet}$

Note 1 This table may not meet the requirements of Wisconsin Administrative Code, Chapter NR 243, and additional or different criteria may apply.

Note 2 1.24 cubic feet = 1 bushel.

Note 3 New stacks shall be located outside of the footprint of the previous year's stack.

Note 4 Community water system wells may require larger separation distances (see Wisconsin Administrative Code, Chapter NR 811).

Stockpile Storage Period

Base the maximum stockpile period on the timing required for environmentally safe manure utilization considering the climate, crops, soil, equipment, and local, State, and Federal regulations, but not greater than 180 days.

Size

Design field stockpile storage areas to store the manure until it can be utilized as identified in the CNMP or NMP. Base the size on the required manure utilization schedule.

The manure stockpile area may be at one or more locations and will have sufficient area to store accumulated manure. Consider manure consistency and moisture characteristics when locating and sizing the manure stockpile area.

To reduce the potential for spontaneous combustion, the maximum height when stacking the manure will be no greater than 7 feet. Allow a minimum of 4 feet around the edges of the stack to properly anchor the covering and facilitate the removal of the manure.

Soils and Foundation

Perform the stacking operations on a firm, uniform surface. When compaction of onsite soils alone are not adequate to resist rutting from normal equipment operation, select a more suitable site or use WI NRCS CPS Waste Storage Facility (Code 313).

Covering

When specific site and local conditions or regulations require covers, cover field-stacked manure or store in geotextile bags.

Acceptable materials include geotextiles (tarps) that shed rainfall and allow transpiration, opaque plastic or polyethylene sheeting having a minimum thickness of 6 mils, or other water-resistant material.

Place the cover over the pile with care to prevent tearing. Provide a minimum of 24 inches of overlap. Use weights, anchors or other tie-down mechanisms to anchor the cover and prevent tearing during high winds. Place screw type anchors on 2-foot centers around the pad.

CONSIDERATIONS

General Considerations

Divert nonpolluted runoff around the storage facility site to the fullest extent possible.

Consider runoff from the covering in water management planning around the stockpile site.

To reduce migration of nutrients into the soil, consider spreading a bedding layer of compost, sawdust, or similar material prior to stockpile formation.

Monitor the temperature of the manure stack to ensure temperature does not reach unsafe levels.

Where material is spread on land not owned or controlled by the producer, a nutrient management plan establishing environmentally acceptable utilization of the material is recommended.

Due consideration should be given to environmental concerns, economics, the overall waste management system plan, and safety and health factors.

Considerations for site selection

Consider the following factors in selecting a site for manure stockpile areas:

- Unless there is evidence on the farm that the manure is more stackable, assume that it will not stack higher than 4 feet with a 4:1 angle of repose.
- Proximity of the manure stockpile storage facility to its source and land application area.
- Access to other facilities.
- Ease of loading and unloading manure.
- Adequate maneuvering space for operating loading and unloading equipment.
- Appropriate health regulations.
- Compatibility with respect to prevailing winds and landscape elements such as building arrangement, landforms, and vegetation, in order to minimize odors and protect aesthetic values.

Considerations for improving air quality

Maintain appropriate manure moisture content for solid manure stockpile facilities. Excessive moisture will increase the potential for air emissions of volatile organic compounds, ammonia, and nitrous oxide, and may lead to anaerobic conditions, which will increase the potential for emissions of methane and

hydrogen sulfide. Too little moisture will increase the potential for particulate matter emissions, although covering the stockpile will reduce that potential.

Some fabric covers are effective in reducing odors.

PLANS AND SPECIFICATIONS

Plans and specifications will describe the requirements for applying this practice. As a minimum, include in the engineering plans, specification, and reports of the following:

- Plan view of stockpile locations and layout. A plan map showing the location of all stockpile areas, access roads to these areas, slopes, surfaces to be graded, necessary cuts and fills, and location of sensitive areas such as wells, springs, streams, and floodplains, with setback distances from water bodies, streams, sinkholes, etc.
- Stockpile period. Link the stockpile to the nutrient management plan, and crop rotation, or both for the field in which the manure is stockpiled.
- Dimensions of field stockpile storage areas including length, width, and additional width for edge area for working and cover anchor, as appropriate.
- Maximum design height for stacking manure.
- Type of covering and details for anchoring the cover, as needed.
- Specifications for cover or bagging material, as needed.
- Vegetative, or other, buffer requirements.
- Quantities of stockpiled material to be managed.
- Soil and foundation findings, interpretations, and reports, as required for site suitability.
- Pad and liner specifications, as required.
- Temporary erosion control measures during construction, as required.
- Odor management or minimization requirement and pest management (fly control).
- Location of utilities and notification requirements.

OPERATION AND MAINTENANCE

Develop an operation and maintenance plan that is consistent with the purposes of the practice and safety requirements.

Provide for the proper utilization of the stockpiled material in the plan. Include the requirement that manure will be removed from the stockpile and utilized at locations, times, rates, and quantities in accordance with the overall waste management system plan.

Include a strategy for removal and disposition of manure with the least environmental damage during the normal stockpile period. Provide for establishment of vegetation on areas disturbed by removal of the stockpiled material.

Develop an emergency action plan where there is a potential for an accidental manure spill event. Include site-specific provisions for emergency actions that will minimize these impacts.

Include instruction for replacement of plastic or polyethylene covering that will deteriorate over time. Provide for disposal of damaged liners and covers in conformance with local laws and regulations.

When soil material is inadvertently removed during the manure removal process, provide maintenance and reconstruction of the soil pads.

Take care during removal of the stored material not to damage the geomembrane, when geomembranes are used to line the pad. Promptly complete any needed repairs of the geomembrane.

Inspect and repair as needed, the pad, cover, and adjacent area after each major storm event.

Prevent ponding of water in the area surrounding the field stockpile and divert runoff from the stockpile area.

Provide instructions for record keeping for the hauling of stockpiled material from one geographical area to another including—

- Type and amount of material transferred.
- Solids percentage of the material.
- Date of the transfer.
- Name and address of the source and destination of the material.
- Condition of the material as left at the destination (spread, stockpiled, and covered, etc.).

REFERENCES

USDA NRCS. National Engineering Handbook, Part 651, Agricultural Waste Management Field Handbook. Washington, DC.

USDA NRCS. Soil Survey Technical Note 6, Saturated Hydraulic Conductivity: Water Movement Concepts and Class History. Washington, DC.

Wisconsin's **Runoff** Rules

what farmers need to know

January 2013 DNR Pub. No. WT 756 REV 1/13



Farms, like all major industries, must follow environmental requirements to control runoff from fields, pastures and livestock facilities. Otherwise this pollution can harm our lakes, streams, wetlands and groundwater.

Wisconsin adopted administrative rules in 2002 (NR 151), with revisions effective in 2011 that set statewide performance standards and prohibitions for all Wisconsin farms. All farmers must comply with these standards and prohibitions. Cost-share funding may be available to assist with compliance. Some state and local programs may require compliance whether or not cost-share funds are available.

This fact sheet explains the basic information that farmers need to know about these rules and how to comply with them. It is recommended that farmers contact their county land conservation staff for further details on these rules and their impact on farm operations.

► Agricultural Standards and Prohibitions:

ALL FARMERS MUST:

- *Meet tolerable soil loss ("T") on cropped fields and pastures.*
- *Annually develop and follow a Nutrient Management Plan (NMP) designed to keep nutrients and sediment from entering lakes, streams, wetlands and groundwater. Farmers may hire a certified crop advisor or prepare their own NMP if they have received proper training.*
- *Use the phosphorous index (PI) standard to ensure that their NMP adequately controls phosphorous runoff over the accounting period.*
- *Avoid tilling within 5 feet of the edge of the bank of surface waters. This setback may be extended up to 20 feet to ensure bank integrity and prevent soil deposition.*

► Additional Standards:

FARMERS WITH LIVESTOCK MUST:

- *Prevent direct runoff from feedlots or stored manure from entering lakes, streams, wetlands and groundwater.*
- *Limit access or otherwise manage livestock along lakes, streams and wetlands to maintain vegetative cover and prevent erosion.*
- *Prevent significant discharges of process wastewater (milkhouse waste, feed leachate, etc.) into lakes, streams, wetlands, or groundwater.*

FARMERS WHO HAVE, OR PLAN TO BUILD, MANURE STORAGE STRUCTURES MUST:

- *Maintain structures to prevent overflow and maintain contents at or below the specified margin of safety.*
- *Repair or upgrade any failing or leaking structures to prevent negative impacts to public health, aquatic life and groundwater.*
- *Close idle structures according to accepted standards.*
- *Meet technical standards for newly constructed or significantly altered structures.*

FARMERS WITH LAND IN A WATER QUALITY MANAGEMENT AREA (300 feet from streams, 1,000 feet from a lake, or in areas susceptible to groundwater contamination) MUST:

- *Avoid stacking manure in unconfined piles.*
- *Divert clean water away from feedlots, manure storage areas, and barnyards located within this area.*

► Farmland Preservation Tax Credit:

A farmer must comply with applicable state standards to receive the Farmland Preservation Tax Credit, even if cost sharing is not available. Farmers may be considered in compliance by entering into a schedule of compliance.

This requirement applies to farmers whose land is located in a certified farmland preservation zoning district (i.e. exclusive agriculture), or for farmers who signed a farmland preservation agreement after standards were in effect for that county. Farmers should contact their county land conservation staff for more information regarding applicable standards and compliance documentation.

► Implementation and Financial Assistance:

Under DNR rules, a landowner is normally entitled to cost sharing if the landowner is required to implement best management practices on "existing cropland" or an "existing" livestock facility or operation in order to comply with a DNR performance standard. Cropland or livestock facilities brought into service after the effective date of the standard are considered "new" and must meet standards and prohibitions without cost-share funding. Farmers with existing cropland or livestock facilities may be eligible for state or federal cost sharing and are encouraged to contact their county land conservation staff or USDA Natural Resources Conservation Service (NRCS) office for information about current funding sources, rates and practices eligible for cost sharing.

Farmers also should work with their land conservation staff to determine how these performance standards and prohibitions may affect their participation in various federal, state and local programs, such as Farmland Preservation. You can find a directory of land conservation offices and related agencies at <http://datcp.wi.gov/Environment> under "Land and Water Conservation."

► Permits and Licensing:

Farmers may be required to meet NR 151 Standards in order to obtain local and state permits. For livestock siting and manure storage ordinance permits, for example, nutrient management plans and other requirements may be imposed on livestock operations without providing cost sharing. Contact your local officials for additional information.

Farmers with 1,000 or more animal units must operate under a Wisconsin Pollutant Discharge Elimination System (WPDES) permit and do not qualify for state cost sharing to meet permit requirements. Contact your DNR Service Center for more information about WPDES permits.

For more information about runoff management in Wisconsin and topics found in this brochure please visit:

runoffinfo.uwex.edu



Wisconsin Department of Natural Resources (WDNR), Wisconsin Department of Agriculture, Trade, and Consumer Protection (DATCP), in cooperation with: USDA Natural Resources Conservation Service (NRCS), University of Wisconsin-Extension (UWEX), County Land Conservation Departments (LCD).

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