

Name of Practice: ANIMAL WASTE CONTROL FACILITIES
DCR Specifications for No. WP-4

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation's animal waste control facilities best management practice, which are applicable to all contracts, entered into with respect to that practice.

A. Description and Purpose

A planned system designed to manage liquid and/or solid waste from areas where livestock and poultry are concentrated. This practice is designed to provide facilities for the storage and handling of livestock and poultry waste and the control of surface runoff water to permit the recycling of animal waste onto the land in a way that will abate pollution that would otherwise result from existing livestock or poultry operations.

To improve water quality by storing and spreading waste at the proper time, rate and location, and/or to control erosion and nutrient input caused by winter-feeding operations located adjacent to riparian areas.

B. Policies and Specifications

1. Eligibility: Cost-share and tax credit are limited to solving the pollution problems where the livestock or poultry operation can show they have either:
 - i. Access to land for application, and where a full farm plan approach to solving the water quality problem is being carried out.
 - ii. An approved market and a plan for manure storage, transport and sales which have been approved by the District.

2. Practice Development
 - i. Before cost-share or tax credit can be approved for construction of a winter-feeding facility with dry stacking capabilities all other means of reducing the environmental impacts of animal waste from the existing winter-feeding operation must be considered. Lack of space for relocation, economic inefficiency or other factors may be considered. All applications for animal waste control facilities, except poultry operations, must have a "Risk Assessment for Water Quality Impairment from heavy Use Areas/Animal Concentrated Areas" completed and must receive a minimum score of 120 in order to be eligible. Furthermore, all livestock must be excluded from all streams in the tract before cost share or tax credit is provided.
 - ii. Poultry Dry-Stack facilities should only be built after the completion of a Poultry Dry-Stack Needs Determination Worksheet. An analysis of the Needs Determination Worksheet must determine: That; all other means of reducing the environmental impact of the existing poultry operation have been explored and rejected due to economic inefficiency or lack of space

- for relocation.
- iii. The applicant is also required to sign a Dry Manure Storage Structure Agreement DCR-DSWC 199-86 (1/97) or similar SWCD agreement which addresses the minimum criteria prior to receiving any funds.
3. Cost-share and tax credit is authorized:
- i. For animal waste storage facilities, such as dry stacking, dry stacking storage, aerobic or anaerobic lagoons, liquid manure tanks, holding ponds, collection basins, settling basins, and similar facilities as well as diversions, channels, waterways, designed filter strips, outlet structures piping, land shaping, and similar measures needed as part of a system on the farm to manage animal wastes.
 - (a) Permanently installed equipment needed as an integral part of the system.
 - (b) Fencing and vegetative cover (including mulching needed to protect the facility). Fencing can be included for livestock or poultry exclusion from live and intermittent streams in concentrated holding and winter-feeding areas.
 - (c) Leveling and filling to permit the installation of an effective system.
 - ii. Only if the storage and diversion facilities will contribute significantly to improving the soil or water quality by providing protected storage for on site generated waste.
 - iii. For the waste storage facility as a part of the relocated livestock or poultry operation, if the original facility is contributing significantly to a water quality problem.
 - iv. Cost share can be authorized for individual components of animal waste systems, such as fencing, only if:
 - (a) NRCS determines that the component stands alone as a measure that will significantly improve water quality and
 - (b) Only where a no-discharge permit for a waste storage facility is not required. Tax credit can be authorized for individual components of animal waste systems, such as fencing, only if NRCS determines that the component stands alone as a measure that will significantly improve water quality.
 - v. For wastewater storage facilities as a stand-alone component with a minimum storage of 120 days.
 - vi. Cost-share funds only for six (6) months storage of existing need. All components of a waste storage system (regardless of funding source) must be designed to match the amount of manure storage capacity required.
 - vii. The construction of a fabricated liquid waste storage structure and associated components if it is the only acceptable alternative (based on site limitations, i.e., high water table, karst topography, etc.) for liquid waste management.

4. Cost share and tax credit are not authorized:
 - i. For measures primarily for the prevention or abatement of air pollution unless the measures also have soil and water conserving benefits.
 - ii. For:
 - (a) Portable pumps.
 - (b) Pumping equipment or other portable equipment for unloading facilities.
 - (c) Buildings or modifications of buildings.
 - (d) Spreading animal wastes on the land, including distribution system using irrigation pipelines.
 - iii. For the portion of the cost of animal waste structures installed under or attached to buildings that serve as part of the building or its foundation.
 - iv. For animal waste facilities that do not meet local or State regulations.
 - v. For installation primarily for the operator's convenience.
 - vi. Dairy, beef, poultry and swine confined feeding operations that are planned or under construction do not qualify for cost-share assistance for an Animal Waste Control Structure (WP-4) under the Virginia Agricultural BMP Cost-Share Program. A water quality problem must already exist for cost-share to be approved for a BMP. The number of livestock that would be used to design the animal waste control facility must be present before consideration for cost-share can be given.
 - vii. Enlargements cannot receive additional cost-share for WP-4 unless the original cost-shared WP-4 practice has been in place for 10 years per location.
5. All applicants must have:
 - i. A nutrient management plan developed in accordance with requirements for nutrient management plan content and procedures as stipulated in the Nutrient Management Training and Certification Regulations for land application or a planned waste management system for any other uses of manure produced. The nutrient management plan should address all the acreage, which the participant farms where manure will be applied. The nutrient management plan should be implemented and maintained for the life of the practice. Design storage capacity of animal waste facilities should be coordinated with the nutrient management plan so that adequate storage capacity is installed for the specific cropping system.
 - ii. A manure test for nutrient analysis (once during the first twelve months of operation of the facility).
6. All appropriate local and state permits must be obtained before cost-share payments are authorized.
7. This practice is subject to NRCS standards Comprehensive Nutrient Management Plan (CNMP), which include NRCS Standards 313 Waste Storage Structure, 342 Critical Area Planting, 359 Waste Treatment Lagoon, 362 Diversion, 367 Roofs

and Covers, 382 Fence, 412 Grassed Waterway, 558 Roof Run Off Management, 561 Heavy Use Protection, 575 Trails and Walkways, 590 Nutrient Management, 620 Underground Outlet, 633 Waste Recycling and 634 Waste Transfer.

8. All practice components implemented must be maintained for a minimum of 10 years following the calendar year of installation. The lifespan begins on Jan. 1 of the calendar year following the year of certification of completion. By accepting either a cost-share payment or a state tax credit for this practice the participant agrees to maintain all practice components for the specified lifespan. This practice is subject to spot check by the SWCD throughout the lifespan of the practice and failure to maintain the practice may result in reimbursement of cost share and/or tax credits.

C. Rate(s)

1. The state cost-share payment, alone or if combined with any other cost-share payment, will not exceed 75% of the total eligible cost. The maximum state payment for this practice is not to exceed \$70,000 per landowner per year.
2. As set forth by Virginia Code § 58.1-339.3 and §58.1-439.5, Virginia law currently provides a tax credit for implementation of certain BMP practices. The current tax credit rate, which is subject to change in accordance with the Code of Virginia, is 25% of the total eligible cost not to exceed \$17,500.00.
3. If a cooperator receives cost-share, only the cooperator's eligible out-of-pocket share of the project cost is used to determine the tax credit.

D. Technical Responsibility

Technical and administrative responsibility is assigned to qualified technical DCR and SWCD staff in consultation, where appropriate and based on the controlling standard, with DCR, Virginia Certified Nutrient Management Planner(s), NRCS, DOF, and VCE. Individuals certifying technical need and technical practice installation shall have appropriate certifications as identified above, and/or Engineering Job Approval Authority (EJAA), for the designed and installed component(s). All practices are subject to spot check procedures and any other quality control measures.

Revised March, 2016

**Animal Waste Control Facility Needs Determination Worksheet
for Poultry Dry-Stack Facilities**

1. What type of poultry operation do you have?

2. How long have you been in operation?

3. Have you expanded or enlarged your poultry operation? If so, when?

4. How often in the past 5 years have you been forced to store waste out-of-doors? How long was the litter stored outside? Was this due to unfavorable conditions beyond your control? Explain. Also locate the storage sites utilized.
 - a.

 - b.

 - c.

Explanation:

5. How many birds per flock do you normally produce? Their size, type, etc.

6. How many flocks per year do you normally produce?

7. How often do you clean out in a year's period? When and how is the litter used and/or stored? Also give the number of partial and total clean outs.

8. What use do you make of the litter produced?

9. Is any waste disposed of off your farm? If so, is it sold or bartered for commercial gain? Explain.

10. How much pasture, hayland and cropland are available to spread litter on in your operation?

Pasture acres _____ Hay acres _____ Cropland _____

Completed by: _____
Signature Date Title

Dry Manure Storage Structure Agreement

1. The Waste Storage Structure or winter-feeding facility must be utilized in accordance with a Nutrient Management or Market plan approved by the District. The Plan identifies specific requirements related to waste storage, utilization and disposal. These requirements must be met in order to remain in program compliance.
2. A Nutrient Management or Market plan must be developed and approved prior to the approval of the cost-share payment.
3. Any changes in the farming operation that affect the ability to comply with the Nutrient Management or Market Plan will be reported to the District so that a new Plan may be developed or other actions taken to retain compliance with program guidelines.
4. No alterations to the structure are allowed without prior approval by the District. The structure must be built according to the approved final design and no change may be made to it.
5. The structure must be maintained in strict accordance with the NRCS maintenance guidelines.
6. The District imposes that (District check one of the following):
 - i. The structure is to be used for storage of manure only.
 - ii. The applicant must request prior district approval for storage of non-manure items.
 - iii. During times when the structure is not filled with manure, shavings or temporary housing of mobile farm equipment or composted poultry carcasses resulting from normal mortality is permitted. This is only if it does not affect compliance with the Nutrient Management or Market Plan.

At NO TIME will manure be stored outside the facility when storage space is available in the structure. Waste stored out-of-doors will be grounds for the refund of all cost-share funds.

7. Employees or agents of Federal, State and local conservation agencies will be allowed to spot-check the facility at any time during the minimum 10-year life span of the practice.

I _____ certify that I have read and understand the guidelines contained herein. I further understand that if I fail to comply with these guidelines, I will pay back all cost-share funds received by me for the waste storage structure.

Producer Signature

Date

District Director

Date

Risk Assessment for Water Quality Impairment from Heavy Use Areas/Animal Concentrated Areas

Client's Name: _____ Farm #: _____ Tract #: _____

Livestock Type: _____ No: _____ Avg. Wt.: _____

Is the cooperater currently feeding hay or other feedstuffs from a fixed location? Yes No

If yes, then describe where and how they are feeding:

If the cooperater is not feeding hay or other supplements, then do not complete this form.

For those who are feeding, are alternative concentrated feeding locations available? Yes No

Could relocation of the concentrated feeding area reduce the risk to the water resources? Yes No

Describe the alternatives discussed with the landowner:

Describe the selected alternative:

Note: The Landowner should be informed that if the selected alternative includes manure or wastewater handling, storage, or treatment practices, a Comprehensive Nutrient Management Plan (CNMP) must be developed and implemented for the farm prior to construction of the storage facility.

VA NRCS Concentrated/Feeding Livestock Area Manure and Nutrient Loading Estimator

1. **Manure Estimator** - Input site specific data into the table below:

Select Livestock Type from the list below in Table 1:	INPUTS								OUTPUT - Waste deposited annually in concentrated area		
	A	B	C	D	E	F	G	H	Manure (tons/ac/yr)	Total N (lbs/ac/yr)	Total P ₂ O ₅ (lbs/ac/yr)
Number of animals fed	Average animal weight (lbs)	Days in concentrated area (per year)	Portion of manure dropped in concentrated area (%)	Size of concentrated area (ac)	Manure production rate (lbs/day per 1,000 lbs of live weight)	Total N per ton of manure	Total P ₂ O ₅ per ton of manure				
6	100	75	250	90%	0.25	40	22.5	8	135	3,038	1,080

2. Guidance on inputs:

Column A, B, C, D, E, are site specific and may be adjusted according to site conditions and professional judgement.

Column D: If water is available in concentrated/feeding area, assume 60-70% drops in the area (adjust to site conditions).
If water is only available in pasture outside concentrated/feeding area, assume 40-50% drops in the area (adjust to site conditions).

Column E: The concentrated feeding area includes the feeding pad plus the total surrounding area with < 60% cover.

Columns F through H (see Table 1 below) are auto-filled with appropriate values when livestock type is selected.

TABLE 1

Livestock Type	Weight	Manure lbs./day/1,000lbs.	N/ton of manure	P ₂ O ₅ /ton of manure
1: Beef Finishing	400 - 1,000	65	11	3.1
2: Beef Cow/calf	900 - 1,400	104	7	3.5
3: Non Lact. Dairy	150 - 1,500	56	10	4
4: Lactating Dairy	1100 -1,500	119	13	5.4
5: Horse	1000-1,500	52	9.6	4.2
6: Goats/Sheep	30-200	40	22.5	8

Note: Calculation of manure weight, N, and P are associated with livestock concentrated/feeding locations. Dairy, beef, horse and sheep values are based on NRCS Agricultural Waste Management Field Handbook (AWMFH).

3. Guidance on interpreting output:

TABLE 2

Loading Rate (lbs/ac/yr) from Estimator above		Level of Concern	Water resources at risk	Loading Points
N	P2O5			
Less than 200	Less than 80	Minor	No	0
201 to 300	81-120	Moderate	Possibly	15
301 to 800	121-310	Major	Possibly	40
801 to 1000	311-390	Excessive	Possibly	75
1,001 +	390 +	Extreme	Possibly	80

Comments **Loading Points**

Loading Points: From Table 2

Site Information - Receiving water feature and buffer considerations: (see exhibit 1 to determine if points are to be given in Section A below for overland flow to a vulnerable water feature or Section B below for a concentrated flow to a vulnerable water feature)

(A1) Overland Flow - Proximity to Vulnerable Water Feature:		<u>Comments</u>	
< 100 Feet: 40 points 100- 199 Feet: 25 points 200-300 Feet: 15 points >300 Feet: 0 points	<i>Distance from edge of concentrated/ feeding area to edge of a water feature which includes open sinkholes, springs, streams (perennial or intermittent), wetlands and ponds.</i>		<div style="border: 1px solid black; height: 40px; width: 100%;"></div>
(A2) Buffer width adjacent to the selected water feature:			
< 35 Feet: 20 points 35 -100 Feet: 10 points >100 Feet: 0 points	<i>A buffer is a vegetative area which effectively filters overland flow to the adjoining water feature (0-34' is not an effective buffer). Source: P Index and FOTG.</i>		<div style="border: 1px solid black; height: 40px; width: 100%;"></div>
Sum of A1 and A2:			0

or

(B) Concentrated Flow - Does the runoff from the ACA enter a transport feature within 300 feet of the edge of the ACA?		
Yes 60 points No 0 points	<i>Transport Feature - A swale, grassed waterway, gully, or similar feature where concentrated water flow occurs. (This transport feature must flow into the vulnerable water feature in the above question)</i>	<div style="border: 1px solid black; height: 40px; width: 100%;"></div>
The greater of A or B (maximum 60 points can be earned here):		0

Is the Vulnerable Water feature or Receiving Water Feature above classified as high value water?

High Value Water - A stream, lake, or estuary designated within a TMDL watershed based on the 303d Impaired Waters List, endangered species, and/or designated trout waters.

Yes = 20 points

No = 0 points



Site Information:

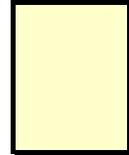
Scoring Boxes

Comments

Environmental Sensitivity Index:

- High 15 points
- Medium 10 points
- Low 0 points

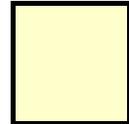
From DCRs Virginia Nutrient Management Standards and Criteria, Revised 10/2005, Table 1-4. Includes soils with leaching potential, shallow soils and poor drainage. (Use soil series at the existing HUA/ACA.)



Slope:

- 0-2 % 0 points
- 2-6% 5 points
- 6-15% 15 points
- 15-25% 25 points

General slope of the HUA/ACA from the edge of feeding area to the vulnerable water feature.



Total Score:

0

Note: If total is 120 or greater, there is a significant risk of water resource impairment. Follow the planning process to address this concern. Consider both structural and non-structural alternatives.

Definitions:

Buffer - A permanently vegetated area with a minimum width of 35 feet.

High Value Water - A stream, lake, or estuary designated within a TMDL watershed based on the 303d Impaired Waters List, endangered species, and/or designated trout waters.

Karst features - Includes sinkholes, limestone rock outcrops, and fractured limestone that are direct conduits to ground water.

Vulnerable Water Feature - An open sinkhole, stream (perennial or intermittent), spring, wetland, or pond that is receiving overland flow.

Transport Feature - A swale, grassed waterway, gully, or similar feature where concentrated water flow occurs.

HUA/ACA - Areas which have a high concentration of livestock, large amounts of waste and the inability to sustain vegetation.

Exhibit 1

