

**NATURAL RESOURCES CONSERVATION SERVICE**  
**VIRGINIA ENGINEERING DESIGN NOTE #2 (DN-2)**  
**SEPARATION DISTANCES FOR ANIMAL WASTE FACILITIES**

## **INTRODUCTION**

The purpose of this Design Note is to provide guidance on separation distances for Animal Waste Facilities. This information is based upon the specific Virginia laws that must be followed. This State-specific information was not placed in the Standard because it is easier to keep the Design Note up-to-date than it is to revise the Standard each time the law changes.

This Design Note shall be used with the Standards for *Waste Storage Facility (Code 313)*, *Waste Treatment Lagoon (Code 359)*, *Anaerobic Digester (Code 366)*, and *Animal Mortality Facility (Code 316)*. This Design Note also applies to *Composting Facility (Code 317)* where animal waste is composted and to *Heavy Use Area Protection (Code 561)* where animal waste is concentrated.

## **GENERAL CRITERIA**

**100-year Floodplain.** According to state law (9 VAC 25-192-70, Part I.B.2), **waste storage facilities must be located outside of the 100-year floodplain**, except as allowed under 9 VAC 25-630-50, Part I.B.3. This exception says “unless the poultry grower has no land outside the [100-year] floodplain on which to construct the facility and the facility is constructed so that the poultry waste is stored above the 100-year flood elevation or otherwise protected from floodwaters through the construction of berms or similar best management flood control structures.” Composting and burial sites should be outside of the 100-year floodplain, if site conditions permit. The facility must be adequately protected from inundation or damage from the 25-year flood event. Burial sites **must** be outside of the 25-year floodplain. Additional site restrictions apply to burial of catastrophic mortality.

**Water Wells.** There is one additional condition that should be applied to siting animal waste facilities near a water well. The State Board of Health, Private Well Regulations, April 1992, 12 VAC 5-630-260, Point number 6, states:

“If the proposed well site is located on or at the base of sloping topography, the minimum separation distances shown on the site plan for any source of contamination within a 60 degree arc slope of the proposed well site must be increased 25 feet for every 5.0% slope.”

If there is a well downslope of the proposed animal waste facility, increase the separation distance in accordance with the guidance from the well regulations in order to provide an extra margin of safety.

## SEPARATION DISTANCES

All required separation distances are to adhere to applicable state and local laws, ordinances, and regulations. In some cases, local or specific practice requirements may be more stringent than the general requirements listed in the following tables. The most stringent requirement would then prevail. Although the separation distances listed in Table 1 were specifically established by State Law for permitted animal feeding operations, they shall be used as the minimum for **all** Standards listed above.

<b>General Information for Waste Storage Facilities</b>		
<b>Source of information</b>	<b>Feature</b>	<b>Distance, feet</b>
9 VAC 25-192-70, Part I.B.8 (Virginia Pollution Abatement Permit Regulations)	Occupied dwellings not on the owner's property (unless the occupant of the dwelling signs a waiver of the buffer zone)	200
Same	Water supply wells or springs	100
Same	Surface water courses	
	(1) Without a vegetated buffer	100
	(2) With a vegetated buffer	35
	(3) With other site-specific conservation practices approved by DEQ that will provide pollutant reductions equivalent to or better than the reductions that would be achieved by (1) or (2)	
Same	Rock outcroppings (except limestone)	25
Same	Limestone outcroppings	50
<b>Information Specific to Poultry Waste Not Stored Under Roof</b>		
9 VAC 25-630-50, Part I, B.d. Effective December 1, 2010	Any surface water, intermittent drainage, wells, sinkholes, rock outcrops, and springs	100
9 VAC 25-630-50, Part I, B.c. Effective January 1, 2006	Seasonal high ground water table	
	(1) Without impermeable liner	2
	(2) With impermeable liner	1
<b>Information Specific to On-Site Composting of Routine Animal Mortality</b>		
On-site composting of catastrophic mortality requires assistance from the State Veterinarian's Office. Composting piles or windrows <b>should</b> not be within:		
DEQ Waste Guidance Memo No. 02-2009 On-Site Composting of Routine Animal Mortality	Property boundary	50
Same	Surface water	100
Same	Any well or spring currently used as a drinking water source	200
Same	Caves and sinkholes	50
Same	25-year floodplain	Outside
Same	Seasonal high ground water table unless on an impervious surface such as concrete or asphalt	2
Same	Rock outcrops	50
Same	Intermittently flowing drainage swales	50
Same	Any off-property residence, health care facility, school, recreational park area, daycare, or similar public institution	200

**Note:** The Virginia Conservation Practice Standard Animal Mortality Facility (Code 316) does not allow burial of routine mortality but does allow for burial of non-disease catastrophic mortality. At this time, there are no specific Virginia regulations that govern the separation distances for burial of non-disease catastrophic mortality of livestock. Until such guidance is provided, the separation distances and other burial criteria for non-disease catastrophic mortality of livestock are the same as for routine mortality, per DEQ staff. The separation distances and burial requirements for non-disease catastrophic mortality of poultry are the same as for disease mortality. A permit is required for burial of disease mortality. DEQ and the State Veterinarian's Office **shall** be consulted for burial of non-disease catastrophic mortality.

<b>Information Specific to On-site Burial of Routine and Catastrophic Animal Mortality</b>		
Burial pits <b>shall NOT</b> be within:		
<b>Source of information</b>	<b>Feature</b>	<b>Distance, feet</b>
DEQ Waste Guidance Memo No. 03-2009 On-Site Burial of Routine Animal Mortality (Routine disposal of poultry is not allowed per 9 VAC 25-630-30, A.3)	Property boundary	50
Same	Surface water	100
Same	Any well or spring currently used as a drinking water source	200
Same	Caves and sinkholes	50
Same	Rock outcrops	50
Same	25-year floodplain	Outside
Same	Seasonal high ground water table, measured from bottom of pit	2
Same	Areas where bedrock occurs at a depth less than	5
Same	Any off-property residences, health care facility, school, recreational park area, daycare or similar public institution	200
Same	All other buildings and structures	25
<b>Information Specific to On-site Burial of Catastrophic Poultry Mortality</b>		
Burial pits <b>shall NOT</b> be within:		
DEQ Form AI-01, AI Disposal Pit and Emergency Permit Criteria	Property boundary	50
Same	Surface water	100
Same	Any well or spring currently used as a drinking water source	500
Same	Caves and sinkholes	50
Same	Rock outcrops	50
Same	100-year floodplain	Outside
Same	Seasonal high ground water table, measured from bottom of pit	5
Same	Areas where bedrock occurs at a depth less than	5
Same	Any off-property residences, health care facility, school, recreational park area, daycare or similar public institution	200
Same	All other buildings and structures	25
Same	Nearest edge of the right-of-way of any public road unless the sight is screened from public view	500