MARYLAND DEPARTMENT OF THE ENVIRONMENT
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MDE New Source Performance Design Criteria for CAFO Operations

Site Considerations:

A. All new sites will adhere to the Conservation Planning for Production Areas – Waste Storage and Handling section.

Conservation Planning for Production Areas – Waste Storage & Handling

BMPs for Resource Concern(s)	Technical Standard	Applicability for Production Area
Waste Storage and Handling		
1. Manure storage to prevent nutrient runoff from entering surface and groundwater.	NRCS Waste Storage Facility (Code 313)	Adequate storage is defined as at least four months but ideally six months or more. For certain operations that have hay or pasture fields during the winter months, three months may be acceptable for adequate storage.
2. Proper disposal of dead animals in a way that protects surface and ground water.	NRCS Animal Mortality Facility (Code 316)	Provide an on-farm facility with the composting or other treatment of animal carcasses resulting from normal mortality.
3. Heavy use protection for manure handling in high traffic areas. These areas are vulnerable to runoff and should be designed for low maintenance and less runoff.	NRCS Heavy Use Area Protection (Code 561)	Provide a stabilized surface of crushed stone, oyster shells, concrete, or other suitable material that will protect the soil surface from erosion. Use concrete pads in areas where litter is handled to prevent soil contamination and nutrient movement, with the provision that the pads are kept clean.
4. Heavy use pads shall be installed on all new farm sites on both the houses and manure storage sheds.		Heavy use pads prevent soil contamination and provide a means for ease of clean up.
5. Good housekeeping of the heavy use pads shall take place following each clean out in order to achieve debris free pads.		Debris free pads are imperative to prevent nutrient transport during a rain event.
6. Zero manure storage or staging shall occur in the animal production area unless under covered manure structure.		Manure storage and staging of manure for other than immediate movement to either covered storage or an area outside the animal production area is inappropriate.

B. **The site will be engineered and calculated by NRCS, the local Soil Conservation District or other site designer to address storm water containment. All of the Table B ("Conservation Planning for Production Areas – Site Runoff Management") Best Management Practices should be employed at all new sources unless the plan writer determines that they are not feasible and provides rationale to the Department for this determination.**

Conservation Planning for Production Areas – Site Runoff Management

BMPs for Resource Concern(s)	Technical Standard	Applicability for Production Area
Site Runoff Management		
1. Storm water management for controlling runoff within the production area.		Proper design provides storm flow control, nutrient sinks and erosion control. Runoff that contacts feed, bedding, manure or other production area contaminants shall be kept separate from "clean" storm water (roof or clean vegetated area runoff, etc.)
2. Vegetative buffers for non-vegetated or poorly vegetated drainage swales between confinement buildings such as chicken houses; these areas are vulnerable for sediment and nutrient runoff to surface water.	NRCS Critical Area Planting (Code 342) All drainage swales shall have vegetated buffers of at least 3 feet on all sides.	Convert small ditches to swales; Establish and maintain dense grass cover in drainage swales. This will protect the soil surface, filter sediment, and provide some nutrient uptake. Crushed stone or similar material may be needed along the drip line of structures. Provide stable outlets from the swales and at the end of pipes into receiving ditches.
3. Vegetative buffers for filtering storm runoff between waste storage structures, composters, or ends of the confinement buildings, houses, and drainage outlets.	NRCS Filter Strip (Code 393). The production area shall be fully vegetated to the edges of roads and buildings.	Establish and maintain dense grass cover between waste storage structures, composters and the ends of houses. A minimum of a 20-foot wide grass filter strip is recommended.
4. Vegetative environmental buffers to reduce particulates and ammonia from tunnel fans.	NRCS Windbreaks/ Shelterbelts (Code 380)	Windbreaks, or vegetative environmental buffers, at least as high as the fans, are planted around houses (between the fans and drainage swales, but not closer than 5 feet from swales to allow buffer cited in #2 above) to reduce particulates and ammonia from tunnel fans.

BMPs for Resource Concern(s)	Technical Standard	Applicability for Production Area
Site Runoff Management		
5. Water control structure to reduce nutrients and sediments in water courses.	NRCS Structure for Water Control (Code 587)	A Water Control Structure is placed in a drainage ditch receiving run-off from the production area to regulate and manage drainage water and to improve water quality by trapping sediment and managing dissolved or suspended nutrients. If the ditch receiving the water has a vigorous stand of vegetation on the bottom of the ditch, this practice should not be utilized because of the filtering and uptake already provided by the plants.
6. Access road to reduce erosion and sedimentation and improve water management.	NRCS Access Road (Code 560)	Construct a road to better manage the movement of vehicles to control erosion and sedimentation and improve water management.
7. Wetlands for treating runoff within the production area.		Natural or constructed wetlands provide a nutrient sink and reduce sediment erosion.
8. "Clean" storm water controls		All "clean" storm water (that which falls on the chicken house roofs, vegetated areas free of production area contamination, etc.) must be diverted from the production area before it contacts any contaminated production area surface.
9. "Clean" storm water containment		Containment of "clean" storm water shall be designed to the 2-year, 24-hour storm, controlling the release of the storm water shall be designed to be at the pre-developed flow rate to reduce erosion and provide water quality treatment for any incidental contaminants.
10. Contaminated storm water containment		Storm water structures shall be designed to contain the production area runoff up to the 2-year, 24 hour storm and employ BMPs, such as vegetated, dry open swales for infiltration, excavated ponds or other best management practices strategically placed to hold the proper amount of storm water to provide water quality treatment for runoff generated from within the production area and prevent contaminated water from reaching surface waters. The release of the storm water shall be designed to be at the pre-developed flow rate to reduce erosion.

C. The following setbacks will be implemented during construction of new CAFOs.

Conservation Planning for Production Areas – Setbacks

BMPs for Resource Concern(s)	Technical Standard	Applicability for Production Area
Setbacks		
1. All houses, storage sheds and composters shall be situated a minimum of 100 feet from Waters of the State.		The minimum 100-foot setback will allow an adequate work area and buffer zone to be combined with the Waste Storage & Handling BMPs listed above.
2. All houses, storage sheds and composters shall be situated a minimum of 100 feet from domestic wells.		
3. All entry drives will be a minimum of 50 feet wide at the roadway narrowing to a 12 feet minimum lane width unless restricted by a local or state governing jurisdiction. Aggregate will be used to stabilize the entrance for a minimum length of 50 feet.		A stabilized entry drive will prevent soil erosion.

D. The University of Maryland is developing a "Poultry Farm Management" training class and certification for new poultry farmers. This class will cover good farm management and stewardship and should be viewed as a compliment to the education, outreach and training programs that the poultry industry may already be implementing. Topics to be covered in the training are listed, but not limited to those below:

1. Proper site management and maintenance of driveways, swales, pipes, storm water management ponds, houses etc,.

2. Required documentation and maintenance of BMPs with regard to nutrient & manure management, mortality management systems, heavy use area protection, shelterbelts, poultry litter treatments and any other BMP required on their farm.

3. Discuss the regulatory inspection process, including a presentation to explain what EPA and other agencies are expecting from a well managed operation to demonstrate compliance with applicable laws, regulations and codes.