**Written Public Comments Submitted after Public Hearing**
Regarding renewal of General Permit DE 0051233 – noticed on July 2, 2025
LARGE, MEDIUM, & DESIGNATED POULTRY CAFOS – LAND APP FACILITIES ONLY Deadline for public comments: August 2, 2025 (Saturday)
Public Comments submitted to DNREC Surface Water Discharges Section

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The following written comments were prepared by Kathy J. Martin, environmental consultant, for SHEN and local community organizations in anticipation of submitting to Delaware Department of Natural Resources and Environmental Control (DNREC) regarding the renewal of the NPDES General Permit for Large, Medium and Designated Poultry CAFOs (with land application). SHEN is a coalition of stakeholders in Sussex County working to ensure a clean, healthy environment for current and future generations. SHEN brings attention to environmental health threats and environmental justice issues in Sussex County by partnering with local businesses, non-profit groups, community ambassadors, and residents to hold local, state, and federal government accountable. Ms. Martin has 25 years of experience reviewing CAFO permitting including waste management systems including dairy, poultry, swine, and beef in over 25 states across the country.

Documents reviewed in preparation of these comments include, but are not limited to, the current and proposed renewal permit and fact sheet, applicable state and federal regulations, reports, available public files, and regulations and standards cited in the proposed permit.

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# A. Background of Delaware Poultry Industry

**1. Delaware Broiler/Poultry Production.** According to the USDA National Agricultural Statistical Survey, Delaware broiler production was 250,500,000 birds in 2020.[1] The breakdown of poultry farms in Delaware between 2012 and 2017 indicates that the majority of Delaware poultry farms are located in Sussex County.[2]

| Poultry | State | Kent | New Castle | Sussex |
|---|---|---|---|---|
| 2017 Farms | 602 | 145 (24%) | 11 (1.8%) | 446 (74%) |
| 2012 Farms | 672 | 119 (18%) | None | 553 (82%) |
| 2017 Poultry | 262,807,807 | 68,820,439 | 1,031,700 | 192,955,668 |
| 2012 Poultry | 211,576,121 | 37,533,471 | None | 174,042,650 |

In 2019, the USDA recognized Sussex County, Delaware as the largest broiler producing county in the entire country.[3]

> "Delaware produced about 263 million broilers in 2017. Sussex County, Delaware is the largest broiler producing county in the United States and Kent County, Delaware is in the top 15 broiler producing counties."

The Cape Gazette provided a history of poultry production in Delaware that started 100 years ago with one poultry barn to today's distinction of Sussex County, Delaware being the Number 1 poultry producing county in the nation and a billion dollar industry.[4]

> "Today on Delmarva, there are 10 processing plants, 13 hatcheries and 10 feed mills. Sussex County is ranked No. 1 among all United States counties in meat chicken production at about 200 million pounds per year. In 2017, three area poultry companies were ranked among the top 20 in the country based on weekly production by weight: Perdue Farms, Salisbury, Md., ranked fourth; Mountaire Farms, Millsboro, ranked sixth; and Allen Harim Foods, Seaford (now Millsboro) ranked 20th."

The size of poultry barns has increased dramatically in the past five years and the number of barns per 'facility' as reported in 2017 by the Dover Post:[5]

> "According to the National Agriculture Statistics Service, in the 1980s chicken houses were about 16,000 square feet, or 400 feet long and 40 feet wide. Today's chicken houses are usually 36,000 square feet, or 600 feet long and 60 feet wide."

[1] See: https://www.nass.usda.gov/Quick_Stats/Ag_Overview/stateOverview.php?state=DELAWARE
[2] See: https://www.nass.usda.gov/Publications/AgCensus/2017/Full_Report/Volume_1,_Chapter_2_County_Level/Delaware/st10_2_0019_0019.pdf
[3] See: https://www.usda.gov/media/blog/2019/06/21/delaware-small-state-big-agriculture

Poultry barns that could house 20,000 broilers are being replaced with mega-sized barns that can hold 40,000 to 50,000 broilers each. Poultry production facilities proposed lately have 12 to 20 such barns per location which means each new poultry production facility would house.

> New barn style: 12 barns x 40,000 birds = 480,000 birds per facility
> Old barn style: 2 x 20,000 birds = 40,000 birds per facility

A new poultry production facility capacity is more than 10 times older style facilities. These larger production facilities are being proposed close to each other within rural agricultural communities with literally millions of broilers concentrated in a small geographical area as described in the Dover Post:[6]

> "There are eight chicken houses being built right now on a swath of land on Seashore Highway near Georgetown, across the road from Elmer's Market and Fat Daddy's BBQ. You'll find eight more off Route 16 on the western side of Ellendale, six on Rabbit Run Road in Bridgeville and six on Shortly Road near Georgetown, just to name a few. Over in Frankford, on Gum Road, you'll find over 20 chicken houses - with still more being built."

Number of birds = (8 + 8 + 6 + 20) barns x 40,000 birds/barn = 1,680,000 birds
Number of birds = (8 + 8 + 6 + 20) barns x 50,000 birds/barn = 2,100,000 birds


**Figure 1** – Mega poultry facility 800 feet from Fat Daddy's BBQ Georgetown DE.

In 2014, more than 20 chicken houses are planned for a one square mile of land in Kent County, Delaware and represent an investment of approximately $400,000 per house. The one facility recently permitted for 22 structures represents an $8 million investment.[7]

> "Delaware's Agricultural Secretary Ed Kee said two operators have received permits to build a total of 22 chicken houses: 10 at one site and 12 at another adjacent location on Woodyard Road off of Rt. 13."

Number of birds = 22 barns x 40,000 birds/farm = 880,000 birds
Number of birds = 22 barns x 50,000 birds/farm = 1,100,000 birds

[4] See: https://www.capegazette.com/article/mistake-kick-starts-billion-dollar-poultry-industry/187194
[5] See: https://www.doverpost.com/news/20170817/poultry-houses-bigger-than-ever
[6] See: https://www.doverpost.com/news/20170817/poultry-houses-bigger-than-ever

[7] See: https://whyy.org/articles/delawares-growing-poultry-industry/


**Figure 2** – Poultry complexes built east of Farmington on Woodyard Rd.

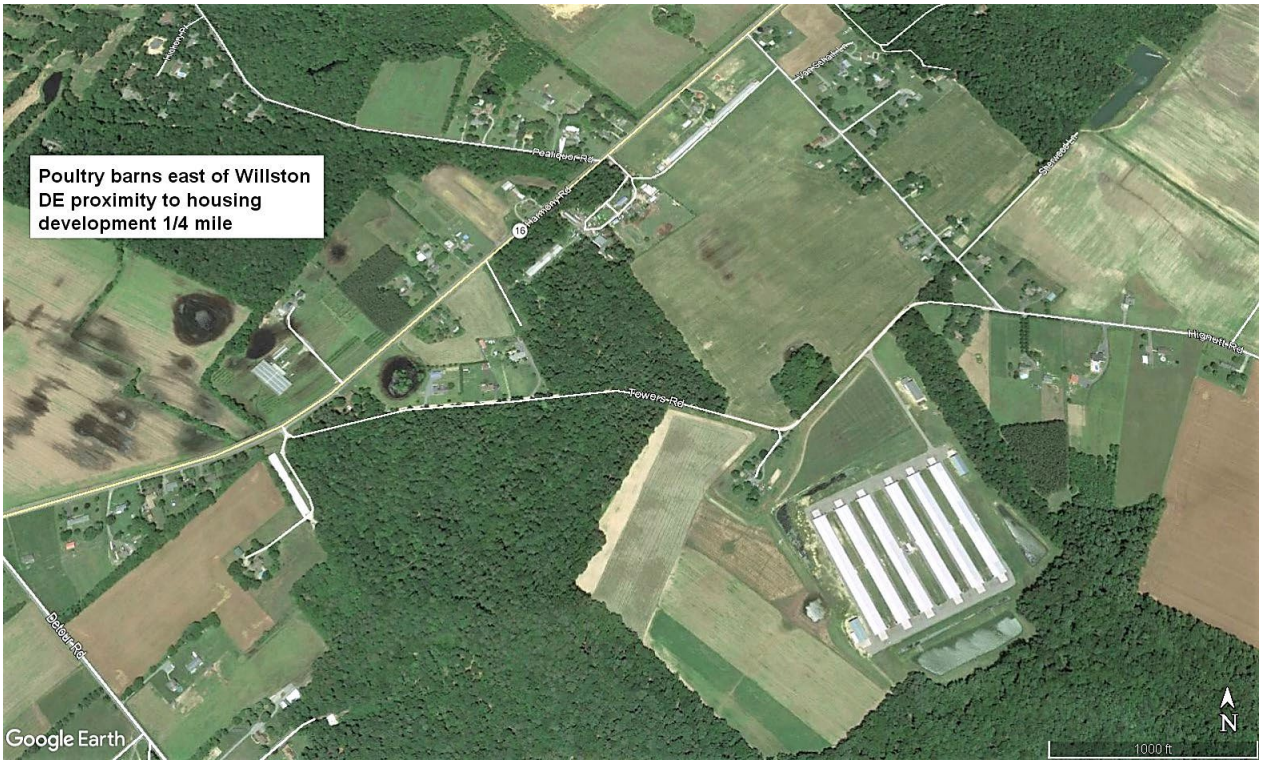


**Figure 3** – Mega poultry complex built within quarter mile of residential area Willston DE


**Figure 4** – Poultry barns between Scott's Corner and Greenwood, DE.

The trend towards larger poultry production barns and number of barns per facility is explained in this financial analysis published by WattAgNet back in 2009:[8]

> "Initial Investment. Examples of initial investments for new house construction are summarized in Table 1. Current cost for broiler houses in Georgia is around $9.00 per square foot but may be more or less depending on house type, pad costs and equipment used.
>
> Total costs for the 50-foot-wide houses for these examples exceed the costs of the 40-foot-wide houses by approximately 14 percent, but the 25 percent additional floor space provided by the wider houses results in a reduced cost of about 10 percent on a square foot basis.
>
> Four 50- by 500-foot houses would provide the equivalent floor space of five 40- by 500-foot houses but at a reduced cost. Using these numbers, four 50- by 500-foot houses would have an initial investment cost of $840,000 compared to $925,000 for the initial investment to provide the comparable floor space in five 40- by 500-foot houses (a saving of some $85,000 to the grower for the same floor space)."

[8] See: https://www.wattagnet.com/articles/28-cash-flow-checkup-for-new-construction

Setbacks to residential areas are dictated by each County in Delaware.[9]

- In New Castle and Kent Counties:
  - 100 feet from property lines
  - 300 feet from any dwelling not on the same property
  - 25 feet from wetlands
- In Sussex County:
  - 50 feet from property lines
  - 200 feet from any dwelling not on the same property
- DPI's Best Management Practices for Good Neighbor Relations:
  - 200 feet from the center of a public road
  - 100 feet from property lines
  - 400 feet from any dwelling not on the same property

**2. Delaware Phase II Watershed Implementation Plan (WIP).** The proposed renewal of the NPDES Poultry CAFO (no land application) General Permit (page 3 of 17) references the Watershed Implementation Plan as follows (emphasis added):[10]

> For Large and Medium Poultry CAFOs within the Chesapeake Bay watershed, BMPs have been identified in **Delaware's Phase II Watershed Implementation Plan (WIP)** as specific production area practices to meet Agricultural Waste Load Allocations (WLAs). Such BMPs may include but are not limited to: Nutrient Management Compliance; Soil Conservation and Water Quality Plans; Heavy Use Poultry Area Pads; Livestock Waste Structures; Manure Relocation; Poultry Waste Structures; Mortality Composters; Streamside Grass Buffers; Streamside Forest Buffers; Wetland Restoration, and; Shoreline Erosion Control."

The USEPA and Region III States are working together to develop goals and milestones related to improved water quality in the Chesapeake Bay as explained by EPA:[11]

> "There are three phases of WIPs developed by the Bay jurisdictions. Phase I and Phase II WIPs were developed and submitted to EPA in 2010 and 2012, respectively. Both Phase I and Phase II WIPs describe actions and controls to be implemented by 2017 and 2025 to achieve applicable water quality standards. The Phase II WIPs build on the initial Phase I WIPs by providing more specific local actions. Phase III WIPs will be developed by jurisdictions based on a midpoint assessment of progress and scientific analyses that is currently underway through 2017. Phase III WIPs will provide information on actions the Bay jurisdictions intend to implement between 2018 and 2025 to meet the Bay restoration goals."

[9] See: http://dechickenchecklist.com/the-building-process
[10] See: https://dnrec.alpha.delaware.gov/watershed-stewardship/nps/chesapeake/phase-ii/
[11] See: https://www.epa.gov/chesapeake-bay-tmdl/chesapeake-bay-watershed-implementation-plans-wips

The Delaware WIP Program website includes the following information about the process:[12]

> "Delaware's WIP work is being led by an interagency workgroup made up of representatives from DNREC, the Department of Agriculture, the Department of Transportation, the Office of State Planning Coordination, the County Conservation Districts, agencies of the U.S. Department of Agriculture, the U.S. Geological Survey and other stakeholders such as representatives from the farming and development communities.
> Nine subcommittees were formed to address: agriculture; stormwater; wastewater; land use and comprehensive plans; restoration; public lands; funding; information technology; and communications."

**Phase I** of the Delaware WIP involved identifying known AFOs as follows:

> In the late 1990s and early 2000, staff from the Kent and Sussex Conservation Districts did a GIS assessment to identify animal operations across much of the State of Delaware. Delaware's 1997 digital orthophotography was first used as a preliminary visual census to create a shapefile of AFOs and BMPs at a sub-watershed scale. Then, the information was field verified through a road survey; the operations and BMPs visible from the road were noted and the shapefile was updated accordingly. Capacity information, for poultry especially, was estimated based on the size of the poultry house.
>
> [As of 2010] This is currently the only known state-maintained government dataset of animal operations within the First State. There is some concern that the dataset is outdated and incomplete. The number of animal operations falling within the medium and large CAFO designation was determined where data was available, and a summary is displayed in Table 34 below.

Table 34: Chesapeake Bay Animal Operation Summary (*Assume Small AFO)

| Animal | Number of Operations | % With Capacity Information | % Without Capacity Information* | Number of Small AFO | Number of Medium CAFO | Number of Large CAFO |
|---|---|---|---|---|---|---|
| Hog | 24 | 13% | 88% | 23 | 1 | 0 |
| Dairy | 31 | 45% | 55% | 28 | 2 | 0 |
| Bovine | 48 | 35% | 65% | 48 | 0 | 0 |
| Equine | 76 | 34% | 66% | 76 | 0 | 0 |
| Poultry | 725 | 96% | 4% | 188 | 480 | 57 |

> "In February 2010, Delaware had only twenty-four (24) NPDES CAFO permitted operations. As a result of an extensive educational push by DDA, DNMC, and

[12] See: https://dnrec.alpha.delaware.gov/watershed-stewardship/nps/chesapeake/

EPA in the winter/spring of this year, Delaware now has approximately 372 permitted CAFOs, with 240 located in the Chesapeake Bay Watershed. Table 35 provides a breakdown of the types of CAFOs in Delaware. We believe that almost 100% of operations or sources subject to NPDES regulations have permits."

Table 35: Number of Delaware CAFO Permits, 2010

| | | | |
|---|---|---|---|
| Total active CAFO permits | | 372 | |
| Poultry-broiler farms | | | **356** |
| Dairy farms | 9 | | |
| Horse farms | 4 | | |
| Beef farm | 1 | | |
| Swine farm | 1 | | |
| Poultry-layer farm | 1 | | |
| Total inactive CAFO permits | | 5 | |
| Number of poultry farms over 125k capacity | | | **51** |
| | | | |
| Permit coverage within the Chesapeake Bay | | | |
| Poultry farm | | | **240** |
| Beef farm | 1 | | |
| Dairy farm | 2 | | |
| Complete CAFO files | | 245 | |
| Incomplete CAFO files | | **127** | |
| Manure generation and exported | | **94** | |
| Manure generation and land applied | | 151 | |

On page 126 of 440 of the Delaware **Phase I** WIP, there was this statement:

The Delaware Department of Agriculture (DDA) does not expect the number of poultry operations in the Chesapeake to increase between now and 2025 and they may actually decrease.

On page 15 of 313 of the Delaware **Phase II** WIP, a comment was added:

"A section was added to highlight the concerning difference between the Chesapeake Bay Programs estimates of poultry manure volume and nutrient content and the much lower amounts calculated by the University of Delaware, University of Maryland, and Delaware Department of Agriculture."

On page 154 of 313 of the Plan, there is a list of accomplishments in Table 36, including the topic of Waste Management Systems as follows:

"This section documents the accomplishments and highlights of the State of Delaware during the 2010 calendar year within the Chesapeake Bay Watershed. As noted below, Delaware's agriculture community is committed to reducing

nutrient and sediment loads through priority practices and other best management practices."

Table 36 - Accomplishments and highlights of the State of Delaware during the 2010 calendar year within the Chesapeake Bay Watershed ***Agriculture Practices.***

| Topic | Unit | 2009 | 2010 | Change |
|---|---|---|---|---|
| Nutrient Management on Crops | Acres | 198,625 | 197,348 | -1,277 |
| Enhanced Nutrient Management | Acres | 0 | 0 | 0 |
| Poultry Waste Management Systems | AU | 10,640 | 13,678 | +3,038 |
| Poultry Mortality Composting | AU | 4,304,336 | 3,084 | * |
| Manure Transport outside CBWS | Tons | 14,747 | 31,569 | +16,822 |
| Manure Transport within CBWS | Tons | 43,122 | 11,526 | -31,596 |
| Manure Transport | Tons | 57,869 | 43,095 | -14,774 |

*Jurisdictions transitioned to reporting progress through the National Environmental Information Exchange Network (NEIEN) in 2010 and some practices require additional attention to ensure that data is appropriately submitted and credited.

On page 159 of the Plan, there is a description of the Delaware Nutrient Management Commission as follows:

> "The Delaware Nutrient Management Commission (DNMC) was formed to direct the Program and develop regulations pertaining to nutrient management, waste management for Animal Feeding Operations (AFOs), and National Pollutant Discharge Elimination System (NPDES) permits for concentrated animal feeding operations (CAFOs). The Commission is composed of fifteen voting members and four ex-officio members. The voting members include seven full-time farmers, one commercial/agricultural nutrient applicator, one member of the commercial nursery industry, one golf course/lawn care industry representative, two members from one or more environmental advocacy groups, one nutrient consultant, one public citizen, and a representative of DNREC. To clarify, the NPDES CAFO program is administered by DNREC and managed by DDA. The DNMC serves an advisory role."

From pdf page 204 of 313 of the Plan:

**9.6.1.15 Poultry Waste Structures:** These structures protect poultry waste from rain so that it can be used as a crop fertilizer when conditions are appropriate for transport to another location.

**There are currently 444 structures of Poultry Waste Structures**. Delaware's goal is to increase this by 20% annually. Delaware intends to achieve full implementation of 723 structures by 2025. The cost to fully implement this practice is $7,534,395 using a rate of $27,005/each.

- **2011 Goal:** 532 structures.
- **2013 Goal:** 708 structures.
- **2017 Goal:** 712 structures.
- **2025 Goal:** 723 structures.

**FUNDING MECHANISM:** Cost share funding to offset the costs if implementation to the landowners is available from the State of Delaware Conservation Cost Share Program and the various Farm Bill programs. Additional funding is provided through the Chesapeake Bay Grant and the CWA Section 319 Program. Additional sources will be pursued to allow for the increased BMP implementation schedule. For example, additional funding requests will be made through the State of Delaware Legislative Budget development process to increase contributions to the State of Delaware Conservation Cost Share Program.

From pdf page 205 of the Plan:

**9.6.1.18 Mortality Composters:** Recommend dead bird composters/incinerators on all poultry operations for bird mortality. Dead bird composters have been cost shared and promoted in Delaware, however, there is likely room to increase this implementation rate. Increase implementation of Mortality Composters: for small operations (AFOs), at least 50% of operations in each sub-watershed should have these practices; for medium and large operations (CAFOs), 100% of operations should have these practices.

There are currently **449 Mortality Composters**; Delaware's goal is to increase this to 539 composters for 2011. Approximately $595,620 is needed to meet the 2011 goal. Delaware intends to achieve full implementation (723 structures) by 2017. Currently, adequate funds exist to meet this goal.

- **2011 Goal:** 539 composters.
- **2013 Goal:** 600 structures.
- **2017 Goal:** Achieve full implementation of 723 structures.
- **2025 Goal:** Maintain full implementation

From page 213 of 313 of the Plan:

> **9.6.3.3 Vegetative Environmental Buffers**: A vegetative environmental buffer is the strategic planting of combinations or trees and shrubs around poultry houses to address environmental, production, and public relations issues by providing a vegetative filter to lower emissions of ammonia, dust, odor, feathers, and noise on a potential of 82 operations. In addition to offering a practical, efficient, and cost effective means of capturing emissions, a properly designed vegetative environmental buffer program can help to conserve energy and reduce air borne pathogens by offering shade and slowing wind speeds, as well as create a more attractive landscape and screen routine operations from view.
>
> There are currently 72 Vegetative Environmental Buffers. Delaware's goal is to expand this to 82 additional Operations for 2011. Additional funding of $4,000 per system is needed. By 2025, Delaware's goal is to Vegetative Environmental Buffers to 222 Operations.
>
> **2011 Goal:** 82 Operations.
> **2013 Goal:** 102 Operations.
> **2017 Goal:** 162 Operations.
> **2025 Goal:** 222 Operations

3. Delaware Phase III Watershed Implementation Plan.

> "On April 12, 2019, Delaware submitted a draft version of the Phase III WIP to EPA and posted it on DNREC's website. Delaware solicited public comments from April 12 through June 7, with comments submitted via electronic form, email, and the United States Postal Service. Delaware has consolidated every comment received in Appendix J, along with a response.
> The updated version of the Phase III Watershed Implementation Plan was submitted to the EPA and posted onto DNREC's website for final review on Aug. 23, 2019.

On page 11 of the 2004 USEPA Evaluation of the Delaware NPDES program included the following comments about which state agency would pursue NPDES delegation:[13]

> "DNREC has delegated responsibility for the CAFO program to DDA but will still be involved with the program to some extent. Although DDA will be the primary administrator of the program, DNREC is still technically and legally responsible for the CAFO NPDES program as a whole. It is expected that once the final regulations and strategy are approved and the program has been functioning for a while, either DDA or the Nutrient Management Commission will pursue full and complete delegation of the program."

[13] See: https://www3.epa.gov/npdes/pubs/delaware_final_profile.pdf

In the 2018-2021 EPA evaluation of Delaware's progress in achieving the State's WIP milestones, the EPA stated the following strengths and weaknesses of the program:[14]

> "Some notable strengths identified in this evaluation of the Delaware 2018-2019 milestones and the 2020-2021 milestones include **(emphasis added)**:
>
> - Developing Standard Operating Procedures for Delaware Nutrient Management Plan Verification for Land and/or Animal Operations that were approved by the Delaware Nutrient Management Commission and supported by EPA.
> - Quantifying numeric milestones for the priority BMPs listed in the table below.
> - **Issuing coverage for 197** Concentrated Animal Feeding Operations (CAFOs) under the National Pollutant Discharge Elimination System (NPDES) CAFO General Permit for Large, Medium, & Designated Poultry Operations with No-Land Application of Manure **(GP1).**
> - Issuing the NPDES CAFO General Permit for Large, Medium & Designated Poultry Operations with the Land Application of Manure **(GP2)** and committing to issue the NPDES CAFO General Permit for Large, Medium, & Designated Non-Poultry Operations **(GP3).**
> - Revising the Sediment and Stormwater Regulations to include an added section for stormwater management offset provisions, fees-in-lieu, trading, banking, and stormwater management offset districts.
>
> Some key areas that EPA recommends addressing during the 2020-2021 milestone period and beyond include **(emphasis added)**:
>
> - Report information for CAFO GP1, GP2, and GP3 to document and track the number of CAFOs per permit, permit coverage per permit, and schedules for providing coverage/reissuance.

**Note:** According to the USEPA report, Delaware has permitted 197 CAFOs under the Poultry CAFO General Permit that was renewed in 2021. No numbers were provided with the fact sheet on registrations under GP2

**Question:** How many CAFOs were registered under GP2 Poultry with Land Application?

[14] See: https://www.epa.gov/sites/production/files/2020-07/documents/de_2018_2019_2020_2021_final_milestone_evaluation.pdf

# Requirement for Individual Permit – Mega large poultry CAFOs

It is inappropriate to allow extremely large poultry CAFOs to be permitted under a General Permit when the amount of manure and mortality is exponentially larger than a typical 1000 animal unit facility (definition of a Large CAFO).

According to the Clean Water Act a large poultry CAFO of 1000 animal units is equivalent to

| Animal Sector | Size Thresholds (number of animals) | | |
|---|---|---|---|
| | Large CAFOs | Medium CAFOs[1] | Small CAFOs[2] |
| turkeys | 55,000 or more | 16,500 - 54,999 | less than 16,500 |
| laying hens or broilers (liquid manure handling systems) | 30,000 or more | 9,000 - 29,999 | less than 9,000 |
| chickens other than laying hens (other than a liquid manure handling systems) | 125,000 or more | 37,500 - 124,999 | less than 37,500 |
| laying hens (other than a liquid manure handling systems) | 82,000 or more | 25,000 - 81,999 | less than 25,000 |
| ducks (other than a liquid manure handling systems) | 30,000 or more | 10,000 - 29,999 | less than 10,000 |
| ducks (liquid manure handling systems) | 5,000 or more | 1,500 - 4,999 | less than 1,500 |

[1]Must also meet one of two "method of discharge" criteria to be defined as a CAFO or may be designated.
[2] Never a CAFO by regulatory definition, but may be designated as a CAFO on a case-by-case basis.

As mentioned earlier in these comments, poultry barns that could house 20,000 broilers are being replaced with mega-sized barns that can hold 40,000 to 50,000 broilers each. Poultry production facilities proposed lately have 12 to 20 such barns per location which means each new poultry production facility would house.

New barn style: 12 barns x 40,000 birds = 480,000 birds per facility
Old barn style: 2 x 20,000 birds = 40,000 birds per facility

**Proposal:** The new barn style poultry CAFO would **house nearly 4 times** the amount considered to be a large CAFO. Therefore, there needs to be an upper limit whereby a mega-large poultry CAFO would need to seek an Individual Permit.

Large poultry CAFOs 1000 to 2000 animal units – registration under GP2
Mega-large poultry CAFOs greater than 2000 animal units --- individual permit

# Requirement for Individual Permit – Manure Handling

This general permit does not include the BMP for manure incorporation and/or injection and thus would allow large and mega-large poultry CAFOs to merely spread their manure on the top of the soil allowing for volatile loss of nutrients, potential for contaminated stormwater runoff, malodors, and flies.

**Proposal:** If DNREC will not include the BMP for manure incorporation/injection into this GP2 and restrict the size of the poultry CAFO that can merely register for permit coverage, then it is proposed that all large poultry CAFOs that do not practice manure incorporation/injection shall be required to apply for an individual permit, especially mega-large poultry CAFOs.

# Comments on Special Condition BMPs – Manure Handling

**From page 4 of 20** - Special Conditions between no land app versus land app GPs

TMDL paragraph - No land app:

> Permit requirements are consistent with existing and applicable Total Maximum Daily Loads (TMDLs) for impaired water bodies. The permittee shall continue to implement all BMPs currently in place and shall implement any additional BMPs required by the permittee's AWMP/NMP and this permit. The Department may require additional BMP's to minimize phosphorus and nitrogen transport to waters of the state as a requirement of this permit. For Large and Medium Poultry CAFOs within the Chesapeake Bay watershed, BMPs have been identified in Delaware's Phase II Watershed Implementation Plan (WIP) as specific production area practices to meet Agricultural Waste Load Allocations (WLAs). Such BMPs may include, but are not limited to: Nutrient Management Compliance; Soil Conservation and Water Quality Plans; Heavy Use Poultry Area Pads; Livestock Waste Structures; Manure Relocation; Poultry Waste Structures; Mortality Composters; Streamside Grass Buffers; Streamside Forest Buffers; Wetland Restoration, and; Shoreline Erosion Control.

TMDL paragraph - With land app:

> Permit requirements are consistent with existing and applicable Total Maximum Daily Loads (TMDLs) for impaired water bodies. The permittee shall continue to implement all BMPs currently in place and shall implement any additional BMPs required by the permittee's AWMP/NMP and this permit. For Large and Medium Poultry CAFOs within the Chesapeake Bay watershed, BMPs have been identified in Delaware's Phase III Watershed Implementation Plan (WIP) as specific production area practices to meet Agricultural Waste Load Allocations (WLAs). Additional BMPs may be required if field conditions change, or to meet the pollution reduction goals of the Chesapeake Bay TMDL. These BMPs have been identified in Delaware's Phase III Watershed Implementation Plan, which includes steps that each of the seven Bay jurisdictions intend to implement to meet the Bay restoration goals. Such BMPs may include, but are not limited to: Nutrient Management Compliance; Cover Crops Traditional; Cover Crops Commodity; Soil Conservation and Water Quality Plans; Conservation Tillage; Continuous No-Tillage Conservation, Decision Agriculture Soil Conservation and Water Quality Plans; Heavy Use Poultry Area Pads; Livestock Waste Structures; Manure Relocation; Poultry Waste Structures; Mortality Composters; Streamside Grass Buffers; Streamside Forest Buffers; Wetland Restoration; Shoreline Erosion Control; Land Retirement; and Forest Harvesting Practices.

**Comment:** The yellow highlighted BMPs are common to both the 2021 and 2025 poultry CAFO General Permits with the aqua highlights identifying the additional BMPs for 2025 due to land application.

**Question:** How do these additional BMPs protect surface water from land application of poultry manure during storm events?

**Question:** Why not include the BMP for manure incorporation or injection that is found on page 78 of Delaware's Phase III Watershed Implementation Plan?[1]

> Applying manure to the soil surface is a common method for distributing manure and its nutrients on crop fields. However, this results in the loss of ammonia nitrogen, can cause odor issues and increases the risk of phosphorus runoff. When manure is incorporated or injected into the soil the potential odors or loss of nutrients are reduced. There are many different specialized pieces of equipment that enable farmers to incorporate or inject manure into the soil based on their needs or manure used.
>
> Manure Incorporation is defined as the mixing of dry, semi-dry, or liquid organic nutrient sources (including manures, biosolids, and compost) into the soil profile within a specified time period from application by a range of field operations (≤24hr for full ammonia loss reduction credit and 3 days for P reduction credit(s)).
>
> These methods can provide nutrient loss reductions that may differ for P and N by method used. Nutrient loss reductions are primarily due to lower ammonia-N volatilization and in many cases lower dissolved P and N losses in surface runoff. Nutrient loss reductions may vary with timing between application and soil mixing, degree of soil mixing, and percent soil surface disturbance. The CBP has established two categories of incorporation:
>
> *High disturbance incorporation* provides the highest degree of mixing of organic nutrient sources into the root zone, but effectively eliminates the erosion control benefits of conservation tillage. Incorporation plus additional field operations retain <30% of residue cover at planting.
>
> *Low disturbance incorporation*: leaves greater quantities of organic nutrient sources on the soil surface, but maintains most of the benefits of conservation tillage. Incorporation plus additional field operations retains at least 30 % of residue cover at planting to meet criteria for the Phase 6 Conservation Tillage practice.

[1] *See*: https://dnrec.delaware.gov/watershed-stewardship/nps/chesapeake/phase-iii/

*Manure Injection* is a specialized category of placement in which organic nutrient sources (including manures, biosolids, and composted materials) are mechanically applied into the root zone with surface soil closure at the time of application. Injection is expected to provide the greatest level of nutrient loss reduction to both atmospheric and surface runoff pathways (including both dissolved and sediment bound nutrients), as well as odor reduction, due to limited quantities of material left on the soil surface, limited soil disruption, and immediate soil closure. Total soil surface disturbance for injection plus planting and any other field operations should be less than 40% so that the practice is compatible with the Low Residue, Strip Till/No-Till practice.

**Specifications or Key Qualifying Conditions**

Manure must be incorporated into the soil within 1-3 days to be eligible for the manure incorporation (late) BMPs and must be incorporated within 24 hours to be eligible for the incorporation (early) BMPs. The expert panel report (see Additional Information below) provides other qualifying conditions, such as appropriate application technologies for injection and incorporation (low-disturbance). Any tillage system is appropriate for high-disturbance incorporation, but not all tillage systems may be consistent with disturbance or crop residue requirements for separate BMPs such as conservation tillage.

**Nitrogen, Phosphorus and Sediment Reductions**

Only nitrogen and phosphorus efficiencies have been established for these practices. Any sediment loss reductions associated with injection or low disturbance incorporation are addressed through corresponding conservation tillage BMPs (see A-3: Conservation Tillage). Phosphorus efficiency values differ based on whether the practice is implemented in an area of the Coastal Plain or in any other hydrogeomorphic region (HGMR), as shown in Table A-17-1.

*Table A-17-1. Nitrogen and Phosphorus Efficiency Values for Manure Incorporation and Injection BMPs*

| BMP | Nitrogen *All HGMRs* (%) | Phosphorus *Coastal Plain HGMRs* (%) | Phosphorus *All other HGMRs* (%) |
|---|---|---|---|
| **Incorporation Low Disturbance Early*** | 8 | 14 | 24 |
| **Incorporation Low Disturbance Late**** | 8 | 14 | 24 |
| **Incorporation High Disturbance Early*** | 8 | 14 | 12 |
| **Incorporation High Disturbance Late**** | 8 | 14 | 12 |
| **Injection** | 12 | 22 | 36 |

*Early = manure is incorporated into soil within 24 hours of application
**Late = manure is incorporated into soil between 1 and 3 days of application

Figure – Snapshot of the N and P efficiency values for the BMPs

**From page 5 of 20** – discharge authorization Effluent Limitations

> Each permittee is authorized to discharge from the facility in accordance with the conditions set forth in this permit, including Part I.C.1 and Part I.C.2 of this permit, from the date noticed of permit coverage, lasting through the expiration date of this General Permit. Violations of any of the following Effluent Limitations may result in enforcement action in accordance with Part II.A.21. of this permit.
>
> 1. Large Poultry Effluent Limitation Guidelines (ELG's) for Production Areas:
>
> a. In accordance with 7 Del. Admin. C. §7201-9.5.6.4.1.1.1 of the CAFO Regulations, there shall be no discharge of manure, litter or process wastewater pollutants to Waters of the State from the production area.
>
> b. In accordance with 7 Del. Admin. C. §7201-9.5.6.4.1.1.1.2 of the CAFO Regulations, whenever precipitation causes an overflow of manure, litter or process wastewater, the overflow may be discharged into Waters of the State if:
>
> i. The production area is designed, constructed, operated, and maintained to contain all manure, litter, and process wastewaters plus the runoff and direct precipitation from a 25-year, 24 hour rainfall event; and
> ii The production area is operated in accordance with the measures and records required in 7 Del. Admin. C. §7201-9.5.5.0 of the CAFO Regulations.
>
> c. If the Secretary determines that a discharge from the production area is an "Upset" in accordance with Part II.A.23, the discharge shall not be a violation of the Effluent Limitations in this permit.

**Question:** How does DNREC determine that the production area is able to contain all process wastewaters plus runoff from the 25 year 24 hour storm event? Does DNREC require the construction of a waste storage facility capable of holding contaminated liquids?

The only mention of manure storage is under the record-keeping requirements as follows:

> b. Records of manure storage activities, length of storage, amount stored, and maintenance of manure storage facilities.

**Question:** Why doesn't this general permit include the design, construction, maintenance, and operation requirements of poultry manure and poultry manure wastewater storage facilities?

# Comment about Public Access to Recordkeeping

**Records Need to be in the Public File and Accessible to the Public**
Large poultry CAFOs generate significant amounts of manure and mortality, and those amounts should be reported to the public file so that the public that lives next to these facilities has a clear understanding of how much is generated and how the facility operator handled and disposes of those poultry wastes and wastewaters.

**Proposal:** All large Poultry CAFOs registered under the GP2 must submit their required recordkeeping to the permitting agency (DNREC) on an annual basis in an annual report that can be kept in the public file and made available to the public upon request.

**From pdf pages 5 to 7** of the proposed GP2 renewal:

> D. MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS
>
> 1. The permittee shall maintain records of implementation that of its site specific AWMP/NMP for six (6) years in accordance with the State Technical Standards. All AWMP/NMP's shall also contain content requirements in §7201-9.5.1 of the CAFO Regulations. The permittee shall maintain a copy of the "Notice of Intent & Application for Coverage" and a copy of the most current AWMP/NMP at the CAFO with this issued NPDES CAFO Permit.
>
> 2. The permittee shall operate and comply with all applicable requirements in 7 Del. Admin. C. §7201-9.5.6.4.3.1.1, §9.5.6.4.3.1.2 and §9.5.6.4.3.1.3 of the CAFO Regulations for Large CAFOs or 7 Del. Admin. C. §7201-9.5.6.6.2.1.1, §9.5.6.6.2.1.2 and §9.5.6.6.2.1.3 of the CAFO Regulations for Medium CAFOs. The permittee shall maintain records of implementation for six (6) years at the CAFO in accordance with State Technical Standards. Applicable records of implementation include:
>
> a. Records indicating mortality management to include number disposed and method of disposal. The total number of mortality disposed may be documented with integrator developed mortality sheets, integrator settlement sheets, or any other recording of the information.
>
> b. Records of manure storage activities, length of storage, amount stored, and maintenance of manure storage facilities.
>
> c. If manure, litter or process wastewater is sold or given to other persons for disposal or utilization, the following information shall be maintained at the CAFO generating the manure, litter or process wastewater:
> i. The date of manure, litter or process wastewater removal.

ii. Name of receiver and contact information.
iii. Quantity (tons/gallons) of manure, litter or process wastewater removed.
iv. A copy of the most recent manure, litter and process wastewater nutrient analysis shall be given to the receiver on or before the date of transfer.
d. Manure, litter, process wastewater and soil test results, methods for testing and analyzing, and recommended nitrogen and phosphorus application rates with an explanation of the basis for determining manure application rates, as provided in the protocols established in the State Technical Standards or the nutrient management plan.

e. Quantities, analyses and sources of all nitrogen and phosphorus applied to fields.

f. Dates, weather conditions at the time of manure, litter or process wastewater land application and 24 hours before and after application, and methods of application(s).

g. Crops planted, yields, and plant matter (grain, silage, etc.) removed from the land.

h. Records indicating periodic inspections and maintenance of land application equipment for leaks.

i. The large CAFO owner or operator shall document any deficiencies found within the land application area and/or necessary corrective actions resulting from any inspections conducted and the date deficiencies were corrected. Deficiencies shall be corrected in 30 days. Deficiencies not corrected in 30 days shall be accompanied by an explanation of the factors preventing immediate correction.

**Question:** What legal procedure is available for the public at large and the adversely impacted communities to obtain access to these records to evaluate the efficacy of the operator's implementation of BMPs and determination whether the State Technical Standards are being followed correctly?

From page 17 of the GP2:

16. Public Access to Information

All information pertaining to this NPDES CAFO permit issuance, reissuance, modification, revocation or termination, including NOIs, attachments including the AWMP/NMP, comments received by the public, and draft NPDES CAFO permits shall be available for review by the public. Annual reports, including without limitation a statement by the owner or operator stating whether or not the owner or operator met or exceeded the projected crop yields provided in the CAFO's NMP, shall be available for

review by the public, provided that the actual crop yields provided and contained in annual reports shall be confidential and non-public to the maximum extent permitted under Delaware law. The crop yields provided and contained in annual reports may be used for data compilation in an aggregated form, and such data compilation in an aggregated form may be made public. Information transmitted by the Secretary to EPA shall be subject to appropriate Federal regulations. Knowingly making any false statement in any such report may result in the imposition of criminal penalties as provided for under 7 Del.C. §6013.

The section above *appears to allow the operator to hide the actual crop yields* from the public. Crop yields are the very foundation for how much manure (and the nutrients it contains) can be land applied to the cropland. If the crop yield used as a predictor overestimates the actual crop yield, then the more nutrients were applied to the soil than could be utilized by the crop plants. This overapplication of nutrients can lead to contaminated stormwater runoff and degradation of surface water.

**Proposal:** Do not allow crop yields to be determined 'confidential' as the yield is foundational to proper manure management and without that information no one knows what is really happening in the soils. Without real crop yields, the AWMP is a fantastical document.

# Comment Regarding Substantial Change

On pdf page 14 of the proposed renewal, the example of substantial change is given in the context of a Site Specific Animal Waste Management Plan as follows:

> Part II.
> A. MANAGEMENT REQUIREMENTS AND RESPONSIBILITIES
> 2. Requirement to Implement a Site Specific Animal Waste Management Plan or Nutrient Management Plan
> A CAFO owner or operator under this permit shall implement and fully comply with the AWMP/NMP as described in 7 Del. Admin. C. §7201-9.5.5.0 of the CAFO Regulations developed by a Delaware certified nutrient consultant that contains site specific Best Management Practices necessary to meet the requirements of this permit and applicable Effluent Limitations and standards as specified in the CAFO Regulations. The AWMP/NMP submitted by the applicant for coverage is incorporated into this NPDES CAFO Permit and any violation of its terms shall constitute a violation of the NPDES CAFO permit.
>
> a. Anytime changes to an AWMP/NMP occur, the new updated plan and/or addendum to the plan must be submitted to DDA. The permittee shall provide the DDA with the revised/updated CAFO's AWMP/NMP within 90 days of any update, and shall identify changes from the previous version. The DDA will review the revised AWMP/NMP to ensure it meets the requirements of the regulations and the standards as described in the State Technical Standards, and will determine whether the changes to the AWMP/NMP require revision to the terms of the NPDES CAFO Permit issued to the CAFO. If revision to the terms of the AWMP/NMP is not necessary, the DDA will notify the CAFO owner or operator and upon such notification the CAFO may implement the revised AWMP/NMP. If the DDA determines that the changes to the terms of the AWMP/NMP are substantial, the Secretary will make the revised AWMP/NMP publicly available and include it in the permit record, revise the terms of the AWMP/NMP incorporated into the permit, and notify the owner or operator of any changes to the terms of the AWMP/NMP that are incorporated into the permit.
>
> b. A substantial change to the NPDES CAFO Permit will be determined by the Secretary. Changes determined to be substantial are subject to public review and comment. The Secretary may include the changes to the incorporated Animal Waste Management Plan in the NPDES CAFO Permit, and will notify the owner or operator and the public of the final decision concerning revisions to the terms and conditions of the NPDES CAFO Permit.

If the permitting authority decides that the changes that have been implemented do not ensure compliance with state and federal regulations, the permittee would be subject to enforcement under 7 Del. Admin. C. §9.5.9.1 of the CAFO Regulations

In the General Permit for Poultry with Manure Generation Only (GP1), the example of what would be a substantial change to the AWMP as 'increase of 25%" of the animal feeding capacity. We provided comment on that GP1 about the vagaries of picking 25% as follows:

> Original permitted capacity: 8 barns with 40,000 birds/barn = 320,000 birds
> 25% of 320,000 = 80,000 birds
> Expanded capacity = 320,000 + 79,999 = 399,999 birds (10 barns)
> 25% of 399,999 birds = 99,999 birds
> Expanded capacity = 399,999 + 99,998 = 499,997 birds (12.4 barns)
>
> **Questions:** Could the operator increase the animal feeding capacity every year and never trigger public notice? Isn't it true that under that scenario – every time the operator increased the animal feeding capacity the next time there is an expansion, the number of animals that would be considered less than or greater than 25% would be a larger number? When would the Secretary address the cumulative impacts of these allowed expansions and finally say – that amount of expansion warrants public notice?
>
> **Questions:** How many facilities permitted under this General Permit have expanded? How many times did the Secretary determine that the amount of expansion warranted new 'public review and notice'? How many facilities have expanded their animal feeding capacity without triggering new public notice?

Now it appears this GP2 *does not include* the 25% increase provision but still does not provide the public with an idea of what the Department would consider to be a substantial increase or change to the AWMP.

It also appears that the public would not be aware of the discussion of whether the proposed changes to the AWMP (increase in animal units, change in land application methods, change in mortality disposal, etc.) are substantial unless the General Permit itself were changed – ostensibly changed only for a particular facility.

**Proposal:** The proposed changes to the AWMP should be made available to the public during the agency's deliberations on whether the changes are substantial enough to 'change the permit' (meaning the attached AWMP described in paragraph Part II A 2). The agency should consider the public's concerns when determining what is 'substantial'.

# Comment Regarding Temporary Field Staging of Manure

On pdf page 15 of the GP2, there is a paragraph describing temporary field staging as follows:

> 6. Temporary Field Staging Requirements
> The permittee may temporarily stage manure and litter if there is no remaining undercover more storage capacity at the CAFO. All temporarily field staged manure and litter shall be applied within that field in 90 days or less of the pile construction, unless an extension is grated by DDA. The permittee shall comply with the State Technical Standard for Temporary Field Staging of manure and litter.

if the CAFO is *properly designed, constructed, maintained and operated* --- why would it ever be in a position not to have adequate storage capacity? This provision seems like a 'get out of jail free card' for a improperly designed manure storage facility.

**Proposal:** If there truly is a problem with manure storage capacity at the poultry CAFO --- then the permit should require the operator to *submit a formal request for a variance* that describes in detail the reason why there is not enough storage and how the operator will remedy the situation. This variance request should be publicly noticed so the community is aware there is something very wrong with the AWMP and predicted capacity needs for manure storage. *There must be a formal agreement between the operator and the agency to remedy the manure storage capacity problem as quickly as possible*.

Allowing piles of poultry litter to be staged across the state because of capacity errors and other operator oopsies *does little to prevent contaminated stormwater runoff* that will further degrade surface water quality that the Delaware claims it wants to and has a duty to protect.

# Comment Regarding State Technical Standards

On pdf page 12, the definition is provided as follows:

> "State Technical Standards" means those technical standards established by the Secretary and in consultation with a collaborative group of technical experts representing technical resources and endorsed by the Delaware Nutrient Management Commission. State Technical Standards are available at the DDA.

DDA webpage: https://agriculture.delaware.gov/nutrient-management/cafo/

On DDA webpage on CAFOs, there is an expansion link to State Technical Standards that includes this definition at the top:

> "State Technical Standards" are the practices and conduct required of individuals or entities overseen by the Nutrient Management Commission that were developed by a group of environmental scientists, agronomists, engineers, planners, agricultural operators, and policy makers from the Nutrient Management Commission, Department of Agriculture, the Department of Natural Resources and Environmental Control, the University of Delaware, USDA-NRCS and the private sector. The Commission hereby adopts the State Technical Standards in their entirety by reference."

*There are 47 different* State Technical Standards related to livestock facilities as follows:

- Amendments: Treatment of Agricultural Waste (591)
- Animal Mortality Facility (316)
- Calibrating Fertilizer Applicators
- Calibrating Poultry Litter and Other Solid Manure Spreaders
- Composting Facility (317)
- Conservation Cover (327)
- Corn Stalk Nitrate Test
- Cover Crop (340)
- Critical Area Planting (342)
- Deep Tillage (324)
- Feed Related
- Fence (382)
- Fertilizer Storage
- Field Application Setbacks
- Filter Strip (393)
- Grassed Waterway (412)
- Heavy Use Area Protection (561)
- Hedgerow Planting (422)
- Irrigation Water Management

- Manure Incorporation
- Manure Testing
- Nutrient Management (590)
- Nutrient Management Record Keeping
- Nutrient Management Record Keeping Pages
- Nutrient Management Relocation
- NMP & AWMP
- Phosphorus Saturation Ratio
- Precision Agriculture
- Pre Side – Dress Soil Nitrate Test (PSNT)
- Processed Waste Water Testing for Land Application
- Production Area Risk Assessment
- Residue and Tillage Management Mulch Till (345)
- Residue and Tillage Management; No-Till/Strip Till/Direct Seed (329)
- Riparian Forest Buffer (391)
- Roof Runoff Structure (558)
- Sediment Basin (350)
- Soil Sampling and Analysis
- Stormwater Management for Existing Source Large CAFO's
- Stormwater Management for New Source Large CAFO's
- Structure for Water Control (387)
- Temporary Field Staging
- Tissue Sampling and Analysis
- Trees and Shrubs – Fact Sheet
- Warm Season Grasses – Fact Sheet
- Waste Facility Closure (360)
- Waste Storage Facility (313)
- Windbreak/Shelterbelt Establishment

**Question:** Is it the intention of the agency to include by reference *all of these* State Technical Standards? Once the standards are part of the permit, will the agency enforce all of the provisions and specifications in the standard? Why are some of the Standards outdated? Why not utilize the NRCS-DE Conservation Practice Standards or are these the same?

For example, for Temporary Field Staging, the following restrictive language is in the Standard:

> The temporary staging of manure/litter must be performed in the following manner:
> 1. The manure must be at least 6 feet high and in a conical cross section shape; and
> 2. The selection of the staging site must consider the highest, most practical site possible and shall not use the same site more than once every two years; and
> 3. The staging site must be located at least 100 feet from a public road, 100 feet from any surface water and 200 feet from any residence not located on the property; and
> 4. The staging site must be at least 200 feet from a domestic well and 300 feet from a public water supply well; and

5. Post litter removal treatment must include the removal of all litter and the top 1-2 inches of topsoil if the topsoil is co-mingled with the litter to prevent nutrient loads; and
6. A production crop or vegetative cover crop must be established and maintained at the staging site as soon as practical following post removal treatment.

**Question:** Will the agency inspect temporary field staging areas to make sure there is compliance with the setbacks in provisions 3 and 4? Will the agency keep track of the temporary field staging areas to ensure compliance with the restrictions of provision 2 regarding the relative height above mean sea level and the frequency of use of that location?

**Question:** Does the operator understand that the inclusion of these Standards by reference only hides the fact that there are potentially dozens of restrictions that must be complied with that are not plainly presented in the GP2 permit itself (which is only 20 pages long).

**Note:** Some of the State Technical Standards *are grossly outdated*, such as the Waste Storage Facility which is dated 2001 – or nearly 25 years old. Yet there are NRCS Conservation Practice Standards that are more current and updated to include modern information and regulatory changes.

Link to NRCS-DE Conservation Practice Standard for Waste Storage Facility:
https://efotg.sc.egov.usda.gov/api/CPSFile/2238/___

**Note:** This NRCS standard was last updated in August 2018

Link to NRCS Delaware Conservation Practice Standards (via the NRCS fotg)
https://efotg.sc.egov.usda.gov/#/state/DE/documents/section=4&folder=-3

**Note:** The NRCS-DE does not contain a conservation practice standard for Temporary Field Staging.

**Question:** Why would it be appropriate to include highly outdated Technical Standards?

# Comment Regarding Timely Inclusion of AWMP in the NOI

From pdf page 14 of the GP2:

> 2. Requirement to Implement a Site Specific Animal Waste Management Plan or Nutrient Management Plan
>
> A CAFO owner or operator under this permit shall implement and fully comply with the AWMP/NMP as described in 7 Del. Admin. C. §7201-9.5.5.0 of the CAFO Regulations developed by a Delaware certified nutrient consultant that contains site specific Best Management Practices necessary to meet the requirements of this permit and applicable Effluent Limitations and standards as specified in the CAFO Regulations. The AWMP/NMP submitted by the applicant for coverage is incorporated into this NPDES CAFO Permit and any violation of its terms shall constitute a violation of the NPDES CAFO permit.

**Note:** Since 2014, the DDA has appeared to make it a policy to accept Notice of Intents that did not include nutrient management plans and thus the permit applications are not complete. Since 2019, the DDA has been stalling when the public has requested access to the public records for numerous poultry facilities.

**Questions:** How many poultry CAFOs have submitted an incomplete NOI and are operating a large poultry CAFO without being fully permitted under this General Permit or an individual permit? Does the state convey that information to the USEPA during the milestone evaluations? What is the state's policy on responding to public requests for information (FOIAs) and requests to access the public files for Large Poultry CAFOs? If the AWMP/NMP is incorporated into the NPDES CAFO permit (a federal permit issued by the State of Delaware), then what legal authority does the state have to deny public access to the files of a federally permitted facility?

Part II A (2)(a):

> If the DDA determines that the changes to the terms of the AWMP/NMP are substantial, the Secretary will make the revised AWMP/NMP publicly available and include it in the permit record, revise the terms of the AWMP/NMP incorporated into the permit, and notify the owner or operator of any changes to the terms of the AWMP/NMP that are incorporated into the permit.

**Questions:** In Part II A (2)(a) above, the General Permit states that the AWMP/NMP will be publicly available – so why does the DDA deny public access to these plans? How many of the currently permitted facilities have changed their AWMP/NMP in the past five years? How many times were those changes considered to be 'not substantial' and did the DDA post public notice of those changes?

# Comment Regarding Protection of Groundwater

In Part II (A)(7) of the proposed renewed General Permit there is a brief mention of groundwater as follows:

> "7. Discharge Minimization. The permittee must take immediate steps to stop, contain, and adequately clean up any discharge resulting from manure, litter, and/or process wastewater that materially adversely affect surface water. Additionally, the permittee shall take all reasonable and necessary steps to minimize any adverse impacts to groundwater."

**Questions:** What do DDA and DNREC consider to be 'all reasonable and necessary steps to minimize adverse impacts to groundwater' for poultry facilities operating under this General Permit? Does the permittee even have to identify the depth to groundwater at the production area? Has the DDA and/or DNREC ever investigated the possibility of groundwater contamination from poultry CAFOs operating under this General Permit? If so, what measures were taken to determine that groundwater quality standards have not been violated during the operation of poultry CAFOs under this permit?