NPDES CAFO Permit NMP Nine Minimum Practices Review Checklist

The checklist is composed of three parts which are to be completed as follows:

Part A **Summary Information**
Documents critical information concerning the operation.

Part B **Detailed Plan Review and On-Site Inspection Checklist**
To be completed when reviewing a plan or during an on-site inspection of the operation.

Note: Some of the information in this checklist may only be applicable to Large CAFOs. Please consult regulations for additional details.

Part A - Summary Information

1. Plan Preparer Certification

- Did the plan preparation involve certified technical specialists? ☐ Yes ☐ No
- Are the name and certification credentials of the plan preparer identified in the plan? ☐ Yes ☐ No

2. Type of Operation

- Is the facility operated ☐ Year Round ☐ Seasonally

Notes: _____

- Is the operation ☐ Open lot ☐ Partially enclosed ☐ Fully enclosed.

Notes: _____

- Does the description of the facility in the plan reflect the description of the facility in the application/NOI/Fact Sheet/Permit? ☐ Yes ☐ No

3. Facility Maps

- Does the plan include maps that identify topography, soil types, confinement areas, manure and wastewater storage, raw material storage, handling, and treatment facilities, and environmentally sensitive areas (sinkholes, wells, drinking water sources, field tile drain outlets) for the production area and all land application areas owned or under the ownership, rental, lease, other legal arrangement of the CAFO operator? ☐ Yes ☐ No ✘
- Does the plan identify the watershed(s) in which the operation is located including latitude and longitude to the entrance of the production area? ☐ Yes ☐ No
- Is this watershed listed on the State's list of impaired watersheds? ☐ Yes ☐ No

  If yes, what impairments are identified? _____

- Is this facility located in a state designated source water protection area? ☐ Yes ☐ No
- Are there any other water quality problems in this watershed? ☐ Yes ☐ No

  Explain: _____

✘ = Questions where a "no" answer may indicate that the NMP is deficient or that the facility may otherwise be in violation of permit requirements.

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4. Animals

- What type of animals are confined at the facility?

☐ Beef (slaughter/feeder) ☐ Chicken – Layer
☐ Dairy ☐ Chicken – Broiler
☐ Swine ☐ Sheep/lambs
☐ Turkey ☐ Horse
☐ Other _____ ☐ Duck

- What is the design capacity by animal type?

☐ Beef (slaughter/feeder) _____ ☐ Chicken – Layer _____
☐ Dairy _____ ☐ Chicken – Broiler _____
☐ Swine _____ ☐ Sheep/lambs _____
☐ Turkey _____ ☐ Horse _____
☐ Other _____ ☐ Duck _____

- Is the plan based upon the design capacity? ..... ☐ Yes ..... ☐ No

If no, what capacity is the plan based upon? _____

_____

_____

- Does the plan identify the size (acres) of the production area? ☐ Yes _____ acres ☐ No

5. Manure/Litter/Process Wastewater Generation

- What are the manure generation rates for N, P, and K identified in the plan?

Animal Type 1 ..... N_____ lbs/Year ✘ P_____ lbs/Year ✘ K_____ lbs/Year

Animal Type 2 ..... N_____ lbs/Year ✘ P_____ lbs/Year ✘ K_____ lbs/Year

Animal Type 3 ..... N_____ lbs/Year ✘ P_____ lbs/Year ✘ K_____ lbs/Year

- What are the manure generation rates for N, P, and K rates based upon?

☐ Current year manure analysis from this operation

☐ Historical manure analysis from this operation [Note Year(s): _____]

☐ Book value [Note Source: _____]

- Are the generation rates for N, P, and K generally consistent with USDA's Agricultural Waste Management Field Handbook? ..... ☐ Yes ..... ☐ No

If no, are other practices in place that account for the rates included in the plan? ..... ☐ Yes ..... ☐ No

What are the practices identified in the plan? ..... ☐ Feed Management ..... ☐ Other

Explain: _____

_____

_____

If no, are atmospheric N losses used in the plan excessive? ..... ☐ Yes ..... ☐ No

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6. Manure Utilization Options

- What manure utilization options are identified in the plan? (*Note if more than one option is identified in the plan indicate the relative amount of the manure/wastewater utilized under this option*)

Land Application ..... ☐ Yes _____% ..... ☐ No

If yes: how many acres of land owned or under the control of the applicant are available for applying manure/wastewater generated by the CAFO? _____ acres.

Do the facility maps identify the fields or conservation management units (CMU) used to develop the plan? (Field boundaries, field number, acreage) ..... ☐ Yes ..... ☐ No ✘

Composting ..... ☐ Yes _____% ..... ☐ No

Incineration ..... ☐ Yes _____% ..... ☐ No

If yes, does the plan address what is done with the remaining ash _____

_____

_____

Other ..... ☐ Yes _____% ..... ☐ No

Describe *(as needed)* _____

_____

- Is manure generated at the CAFO sold/given away for use at another location not associated with the generating CAFO? ..... ☐ Yes ..... ☐ No

If yes, what is the estimated amount transferred annually? _____ tons

7. Crop Production

- Does the plan identify what crops are produced? ..... ☐ Yes ..... ☐ No ✘

What are they? _____

- Does the plan identify the crop rotations (if any)? ..... ☐ N/A ..... ☐ Yes ..... ☐ No

What is the crop rotation? _____

_____

_____

- Does the plan identify cropping practices? ..... ☐ Yes ..... ☐ No

If yes, what are they? ☐ Ridge Till ☐ Conservation Tillage

☐ Other _____

- Does cropping system use irrigation? ..... ☐ Yes ..... ☐ No

If yes, what type. ☐ Flood ☐ Sprinkler

☐ Overland ☐ Center Pivot

☐ Ridge and furrow ☐ Traveling Gun

- Is crop/rotation information provided in the plan for each field/CMU? ..... ☐ Yes ..... ☐ No
- Are realistic crop yield goals identified in the plan? ..... ☐ Yes ..... ☐ No
- What source of information was used by to determine the realistic yield goals for this operation?

☐ Farm Records (***Circle One:*** last year's crop and production, 3-year average, 5-year average)

☐ USDA ☐ State Databases (VALUES, MASCAP)

☐ County Averages ☐ Previous crop insurance records

- Is adequate justification provided to support the yield goal ..... ☐ Yes ..... ☐ No

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8. Nutrient Application

- Does the plan identify the basis/rationale for determining an N-based or P-based application rate? ☐ Yes ☐ No ✘

  What is the basis? ☐ State Regulations/Nutrient Management Technical Standard ☐ NRCS Code 590

  ☐ Other _____

- Does the plan identify the application method? ☐ Yes ☐ No ✘

  If yes, what method is used: ☐ Surface applied ☐ Injected ☐ Incorporated

- Does the NMP reference the correct State Nutrient Management Technical Standard identified in the permit? ☐ Yes ☐ No ✘
- Does the plan include land application areas that are N-based and others that are P-based? ☐ Yes ☐ No

9. 25-Year, 24-Hour Storm Information*

- Does the plan utilize the correct 25-Year, 24-Hour rainfall amount for the location of this operation to determine storage requirements?* ☐ Yes ☐ No ✘

  Note source of information _____

Additional Comments: _____

* Some facilities are required to design storage impoundments based on a 100-year, 24-hour storm.

Part B - Detailed Plan Review and On-Site Inspection Checklist.

Minimum Practice **Ensure Adequate Storage Capacity**

Plan Review

- Does the plan identify the volume and duration of storage required for the facility? ☐ Yes ☐ No ✘
- Does the storage volume in the plan account for manure and process wastewater in addition to the collection of runoff and the 25-year/24-hour storm event for the CAFO location? (Note: New source swine, poultry, and veal operations use a 100-year/24-hour storm) ☐ Yes ☐ No ✘
- Are storage structures constructed and operated in accordance with the ELG? ☐ Yes ☐ No ✘
- Does the plan include a schedule for cleaning out the storage structures or solids removal for liquid storage structures? ☐ Yes ☐ No ✘
- Does the plan require maintenance for all storage structures? ☐ Yes ☐ No ✘

On-Site Inspection

- Is a depth marker in place in all lagoons and other appropriate storage structures? ☐ Yes ☐ No ✘
- Is adequate lagoon storage volume being maintained? ☐ Yes ☐ No ✘
- Is the length of storage documented in on-site records consistent with storage practices identified in the plan? ☐ Yes ☐ No

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Minimum Practice **Ensure Proper Management of Mortalities**

Plan Review

- Is animal mortality addressed in the plan ☐ Yes ☐ No ✘

  If yes, what methods are identified in the plan to address animal mortality?
  ☐ Rendering ☐ Incineration ☐ Composting ☐ Disposal pits
  ☐ Landfill ☐ Other _____

- Does the plan address mortality storage prior to final disposition? ☐ Yes ☐ No
- Is the mortality rate used in the plan consistent with USDA expected values for the animals confined at the operation? ☐ Yes ☐ No
- Does the animal mortality plan meet State requirements? ☐ N/A ☐ Yes ☐ No ✘

On-Site Inspection

- Are the animal mortality disposal methods and equipment identified in the plan in place and being properly implemented? ☐ Yes ☐ No ✘

Minimum Practice **Divert Clean Water From Production Area**

Plan Review

- Does the plan include provisions that address the diversion of clean water from the production areas? ☐ Yes ☐ No

  If no why? _____

  If no, is the runoff being collected and is storage of runoff adequate? (See Minimum Standard No. 8) ☐ Yes ☐ No

- Does the plan require periodic visual inspection to verify proper and functional diversion? ☐ Yes ☐ No
- Does the plan address the maintenance of diversion structures? ☐ Yes ☐ No

On-Site Inspection

- Are the diversion provisions identified in the plan being properly implemented? ☐ Yes ☐ No
- Is the storage capacity sufficient for all non-diverted runoff? ☐ Yes ☐ No
- Are records of periodic inspections being maintained? ☐ Yes ☐ No
- How often are operator inspections being conducted? (*Circle one:* Daily Weekly Monthly)

Minimum Practice **Prevent Direct Contact**

Plan Review

- Does the facility or topo map identify any surface water in the production area? ☐ Yes ☐ No

  If yes, are measures in the plan to prevent direct contact? ☐ Yes ☐ No ✘

  What are the measures identified in the plan? ☐ Fences ☐ Other

On-Site Inspection

- Is there surface water in the production area? ☐ Yes ☐ No
- Are the measures identified in the plan being implemented and maintained to prevent direct contact? ☐ Yes ☐ No ✘
- Are there any animals in contact with surface water in the production area? ☐ Yes ☐ No

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Minimum Practice **Chemical Handling**

Plan Review

- Has the facility incorporated measures (in accordance with applicable laws and regulations) to prevent the mishandling of pesticides, hazardous and toxic chemicals, and petroleum products/by-products from contaminating manure and wastewater? ☐ Yes ☐ No

  If no, explain: _____

On-Site Inspection

- Are the measures identified being implemented? ☐ Yes ☐ No
- Is there any evidence of mishandling of pesticides, hazardous and toxic chemicals, and petroleum products/by-products contaminating manure and wastewater storage. ☐ Yes ☐ No

Notes: _____

_____

Minimum Practice **Conservation Practices to Reduce Nutrient Loss**

Plan Review

- Does the plan include the use of best management practices (BMPs) to control runoff from the.
  - Production area ☐ N/A ☐ Yes ☐ No
  - Land application area(s) ☐ N/A ☐ Yes ☐ No
- Do the plan and facility maps identify the specific areas that the BMPs are to be applied?

Land Application Areas	**Production Area**
☐ Vegetated Buffers (Type of vegetation _____)	☐ (Type of vegetation _____)
☐ Diversion	☐
☐ Grassed Waterway (Type of vegetation _____)	
☐ Strip Cropping	
☐ Residue Management	
☐ Terracing	
☐ Conservation Tillage	

- If any of these BMPs are being used does the plan specify how they are to be implemented? ☐ Yes ☐ No

  If yes, what does the plan require? _____

  _____

- What references are cited for the practices? ☐ USDA Practice Standards ☐ State Standards

  ☐ Other _____ (*Note: to be used to verify proper implementation*)

- Does the plan include O&M requirements for practices used to reduce nutrient loss? ☐ Yes ☐ No

On-Site Inspection

- Are the nutrient loss minimization practices in the plan being properly implemented? ☐ Yes ☐ No ✘
- If buffers are being used, are the widths in agreement with those identified in the plan? ☐ Yes ☐ No
- Is there no evidence of buffers being breached by waste? ☐ Yes ☐ No

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Minimum Practice **Protocols for Manure and Soil Testing**

Plan Review

- Does the plan include specific protocols for the sampling and analysis of manure, wastewater and soil for determining nutrient content? ☐ Yes ☐ No ✗
- Are these protocols recognized by the State or identified in the State Nutrient Management Technical Standard? ☐ Yes ☐ No ✗
- Does the plan identify the sampling frequency for manure and soil sample analysis? ☐ Yes ☐ No ✗

  (At a minimum manure/wastewater samples are to be taken annually and tested for nitrogen and phosphorous and soil samples taken and tested for phosphorous at least once every 5 years.)

On-Site Inspection

- Were the manure/wastewater and soil samples taken within 12 months of developing the site-specific NMP? ☐ Yes ☐ No
- Have manure and soil samples been collected at a frequency that is consistent with permit requirements? ☐ Yes ☐ No ✗
- Are the sampling protocols consistent with permit requirements or those specified in the state nutrient management technical standard? ☐ Yes ☐ No

  (At a minimum manure/wastewater samples are to be taken annually and tested for nitrogen and phosphorous and soil samples taken and tested for phosphorous at least once every 5 years.)
- Are the results of the sample analysis consistent with the content and analyses of the NMP? ☐ Yes ☐ No

Minimum Practice **Protocols for Land Application of Manure and Wastewater**

Plan Review

- What is the number of acres owned/acres leased or subject to an access agreement to be used for land application identified in the plan? _____acres owned _____acres leased _____acres applied
- Does the plan identify weather and soil conditions under which application activities will not be conducted (e.g., frozen ground)? ☐ Yes ☐ No
- Does the plan include a proper analysis to determine whether application rates are to be based upon N or P for each management unit? ☐ Yes ☐ No ✗
- Is the analysis consistent with the State Nutrient Management Technical Standard identified in the permit or approved by the Director of the permitting authority? ☐ Yes ☐ No ✗
- Does the plan take into account other sources of nutrients used at the operation? ☐ Yes ☐ No ✗

  If yes, what other sources of nutrients have been accounted for:

  ☐ Commercial Fertilizer ☐ Biosolids
  ☐ Bedding ☐ Legume Credits
  ☐ Wastewater ☐ Previous manure applications
  ☐ Other _____

- Does the plan include the application of wastewater to fields via an irrigation system? ☐ Yes ☐ No

  If yes:
  - → Does the plan identify the type of irrigation system? ☐ Yes ☐ No
  - → Are the nutrients contributed by the irrigation system accounted for in the nutrient budget for the operation? ☐ Yes ☐ No
  - → Does the plan include provisions to minimize ponding or puddling of wastewater on land application fields? ☐ Yes ☐ No
  - → Does the plan address the management of drainage water to prevent surface or ground water contamination? ☐ Yes ☐ No

✗ = Questions where a "no" answer may indicate that the NMP is deficient or that the facility may otherwise be in violation of permit requirements.

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- Does the plan identify the crop rotation system, crop nutrient requirements based on soil testing, realistic yield goals*, and crop nutrient removal? ☐ Yes ☐ No ✘
- Does the plan include restrictions or adequate management practices to prevent water pollution from the application of manure/wastewater to flooded, saturated, frozen, or snow covered ground? ☐ Yes ☐ No
- Does the plan address specific pumping and clean out schedules for all liquid storage structures? ☐ Yes ☐ No
- Does the plan require records to be maintained that document the date, location, weather, and application rate of manure and wastewater that is land applied? ☐ Yes ☐ No ✘
- Is there sufficient land owned or under the control of the operator to properly utilize all manure and wastewater generated by the operation? ☐ Yes ☐ No

  If no:
  - → Does the plan identify the quantity of excess manure being generated? _____tons/year or gallons/year
  - → Does the plan identify how the excess manure is to be utilized? _____
  - → Is excess manure/wastewater to be transferred off-site? ☐ Yes ☐ No

  If yes:
  - → Does the plan include the necessary arrangements for this transfer? ☐ Yes ☐ No
  - → Does the plan identify the recipients? ☐ Yes ☐ No
- Does the plan address the maintenance of land application equipment? ☐ Yes ☐ No
- Does the plan identify the manure application method to be used? ☐ Yes ☐ No
- Does the plan require periodic calibration of manure application equipment. ☐ Yes ☐ No
- Are the application rates identified in the plan appropriate? ☐ Yes ☐ No

Notes: _____

_____

_____

On-Site Inspection

- Does the plan reflect the current operational characteristics (number of animals, cropping, etc.)? ☐ Yes ☐ No ✘
- Are the number of acres owned/acres leased consistent with those identified in the plan? ☐ Yes ☐ No ✘
- Is the crop rotation consistent with that identified in the plan used to determine application rates and timing? ☐ Yes ☐ No
- Is the application equipment being used consistent with the equipment identified in the plan? ☐ Yes ☐ No
- Is the land application equipment being used appropriate? ☐ Yes ☐ No
- Is the amount of manure/wastewater being transferred off-site consistent with the amount identified in the plan? ☐ Yes ☐ No
- Are records (name and address of recipient and amount) of off-site manure disposal being maintained (if required)? ☐ Yes ☐ No
- Is manure and wastewater being applied within a 100' setback or within a 35' vegetated buffer to any down gradient surface waters, open tile line intake structures, agricultural well heads or other conduits to surface waters? ☐ Yes ☐ No ✘

* or other documented recommendation from local extension or other source)

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Minimum Practice **Record Keeping**

Plan Review

- Identify the required records that the plan identifies are to be maintained at the facility.
  - ☐ Manure and wastewater sample nutrient analysis results
  - ☐ Soil sample analysis results that the plan was based upon for all land application areas (Dates of sample: ___/___/___, ___/___/___, ___/___/___, ___/___/___, ___/___/___)
  - ☐ Manure/wastewater storage - date of emptying, level before emptying, and level after emptying, or quantity removed (dry manure)
  - ☐ Storage facility level (weekly)
  - ☐ Inspection log (stormwater diversions, runoff control structures, water lines, surface impoundments, and manure application equipment)
  - ☐ Maintenance log of all equipment necessary to control discharge and meet permit requirements (e.g., maintenance of land application equipment)
  - ☐ Crop planting/harvest dates by field or CMU
  - ☐ Crop type and yield by field or CMU - bushels/acre (seasonally)
  - ☐ Total amount of N and P applied - date, time, and rate (lbs/acre, gallons/acre), weather condition, application method, and equipment used by field or CMU (daily)
  - ☐ On-site precipitation
  - ☐ Animal Inventory
  - ☐ Lease/Rental/Access Agreements for all land not owned by the operator
  - ☐ Name and address of recipients and quantity of manure transferred off-site
- Does the plan require any additional records be maintained at the facility? ☐ Yes ☐ No

  If yes, what are these records? _____

  _____
- Does the plan include an emergency action plan to address spills and catastrophic events? ☐ Yes ☐ No

On-Site Inspection

- Are all of the records identified in the plan being maintained and kept current? ☐ Yes ☐ No ✘

  If no, explain: _____

  _____
- Are records being maintained at the required frequency? ☐ Yes ☐ No

  If no, explain: _____

  _____
- Are records being maintained on-site for the period required by the permit? ☐ Yes ☐ No

  If no, explain: _____

  _____
- Do the records include the date, time and estimated volume of any overflows? ☐ Yes ☐ No

✘ = Questions where a "no" answer may indicate that the NMP is deficient or that the facility may otherwise be in violation of permit requirements.

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Plan Adequacy/Discharge Potential

- Is the plan adequately addressing the storage, handling, and application of manure and wastewater to prevent the discharge of pollutants to waters of the US? ☐ Yes ☐ No ✘
- Is there evidence of a past discharge? ☐ Yes ☐ No

  If yes, what evidence was identified? _____

- Is there any evidence of discharges to waters of the US from other activities at the operation? ☐ Yes ☐ No

  If yes, what evidence was identified? _____

- Is there a risk of a future violation of permit conditions? ☐ Yes ☐ No

  If yes, what is the basis for this determination? _____

- Does the plan require revision? ☐ Yes ☐ No

  If yes, what specific components of the plan require revision? _____

Additional Comments: _____

✘ = Questions where a "no" answer may indicate that the NMP is deficient or that the facility may otherwise be in violation of permit requirements.

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