WA CAFO Permit Fact Sheet

For Immediate Release: June 22, 2024

Contact: Friends of Toppenish Creek at 509-874-2798

CAFO Fact Sheet 18: Motion for Summary Judgement, Argument A

On December 7, 2023, the WA State Dept. of Ecology (Ecology) issued two new general permits for Concentrated Animal Feeding Operations (CAFOs) in our state. A "combined permit" covers facilities that discharge to both ground and surface waters. A "state only permit" covers facilities that only discharge to groundwater.[1]

The permits took effect on January 6, 2023, and are in place until January 5, 2028. A coalition of environmental groups appealed the permits on January 6, 2023. [2] On May 31, 2024, the coalition submitted a Motion for Summary Judgement (MSJ) to the PCHB.

This Fact Sheet discusses Argument A in our MSJ: *The CAFO General Permit Violates Binding Federal Regulations By Failing To Require Permittees To Conduct a Field-Specific Assessment of the Potential For Nitrogen And Phosphorus Transport From Each Land Application Field Before Permit Issuance.*

* * * * * * * * *

Federal law requires applicants for NPDES permits for CAFOs to conduct a Field-Specific Assessment BEFORE permit issuance.

This is important because public comments BEFORE permit issuance provide the best opportunity to avoid permits that allow CAFOs to pollute. People who live next to CAFOs see discharges as they happen. It is very frustrating when we report such discharges and learn that the CAFO operators have "complied with their permits".

Relevant federal laws are appended to this Fact Sheet. Those laws include:

[1] WA Ecology. Concentrated Animal Feeding Operation General Permit. https://ecology.wa.gov/regulations-permits/permits-certifications/concentrated-animal-feeding-operation

[2] FOTC. Notice of Appeal. http://www.friendsoftoppenishcreek.org/cabinet/data/CAFO%20Appeal%205%202022%20CAFO%20Permits%20Notice%20of%20Appeal%20[162023%20sig].pdf

- 33 U.S.C. § 1370 – State Authority
- 33 U.S.C. § 1251(e) PUBLIC PARTICIPATION IN DEVELOPMENT, REVISION, AND ENFORCEMENT OF ANY REGULATION, ETC.
- 40 C.F.R. § 122.42(e)(1) Concentrated Animal Feeding Operations (CAFOs) *Requirement to implement a nutrient management plan*
- 40 C.F.R. § 122.42(e)(5) *Terms of the nutrient management plan Narrative Rate Approach*
- 40 C.F.R. § 122.23(h)(1) *Procedures for CAFOs seeking coverage under a general permit.*
- 40 CFR 412.4(c) *Best management practices (BMPs) for land application of manure, litter, and process wastewater.*

Requirements for Manure Pollution Prevention Plans are listed in section S.4 of the current NPDES permits for CAFOs which is appended to this document. According to Ecology, MPPPs must have maps and/or aerial photos of the land application fields clearly indicating the following items:

a. A unique field identifier (e.g. field name, field code, name used for WSDA Dairy Nutrient Management Program required records) for each field that will be used to reference the field on all permit records and reports.
b. Field discharge management practice location, type, and width (special condition S4.N Field Discharge Management Practices).
c. Other areas that must not have manure, litter, process wastewater, or other organic by-products applied to them because application to those areas would result in a discharge.
d. Known tile drain inlets and outlets.

This is not the same as *Potential For Nitrogen And Phosphorus Transport From Each Land Application Field*.

All fields are not the same. Potential for Nitrogen and Phosphorus Transport From Each Land Application Field would include:

- Soil type and leaching potential for each field
- Residual nitrogen and phosphorous in each field
- History of elevated nitrogen, phosphorus and salts in each field
- Cropping history for each field
- Known tile drains and outlets for each field
- Proximity to drains, streams, wetlands for each field
- Slope for each field
- History of and potential for flooding for each field
- Description of buffers, setbacks and berms for each field

How does the current permit play out in the real world?

A Yakima CAFO dairy obtained an NPDES combined permit in 2023. The MPPP lists 44 manure application fields totaling about 1,850 acres that are owned or controlled by the dairy.

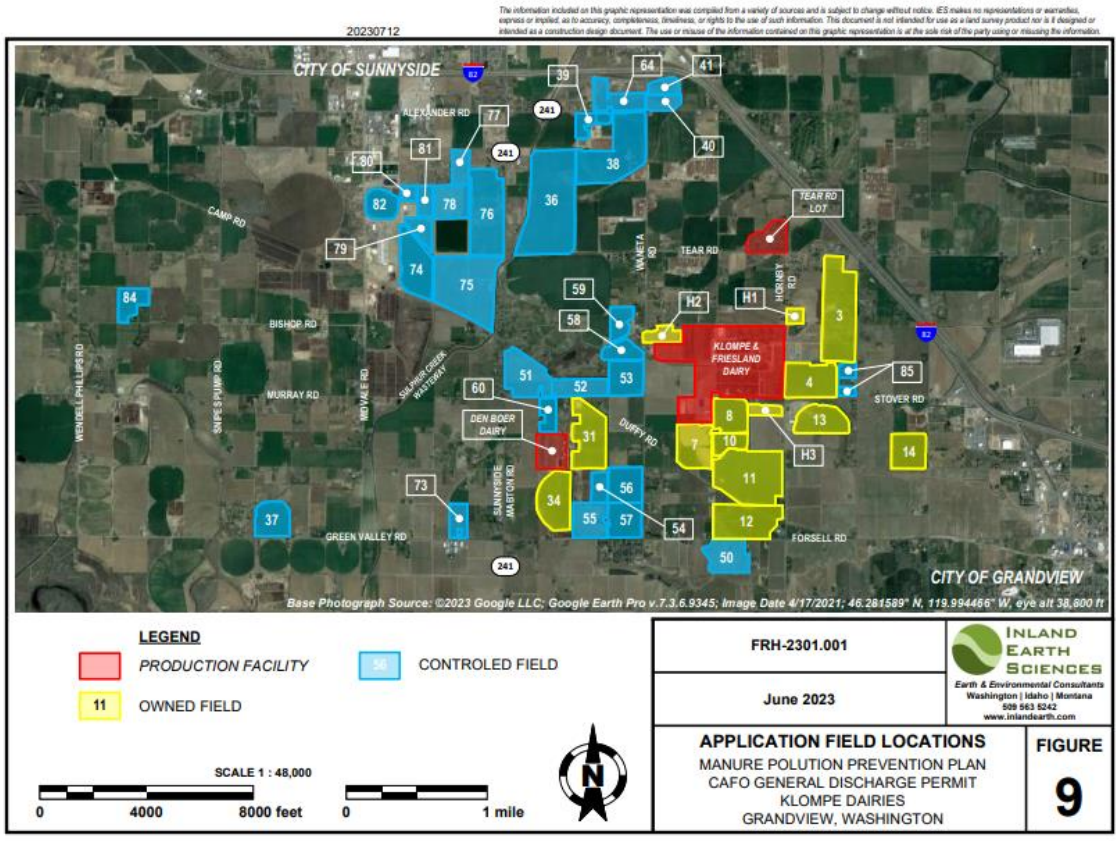
Under Land Application of Manure the MPPP states:

> *5.9.2 Field Specific Nutrient Budget*
>
> *As required by the Permit, yearly field-specific nutrient budgets will be developed for all owned, leased, or controlled fields in which the dairy plans to apply manure, litter, process wastewater, or other organic by products. These yearly field-specific nutrient budgets are developed as specified in the Dairies' DNMPs.*
>
> *The nutrient budgets will provide an estimate of the total amount of nutrients that will be needed for the crop season. If changes are required to the nutrient budget during the season, these changes will be recorded. The nutrient budgets will follow the requirements of Permit Section S4.K.1 – Annual Field Specific Crop Nutrient Budget in conjunction with the requirements of the Dairies' DNMPs. The annual nutrient budget will include the following elements:*
>
> *• Current calendar year.*
> *• Field ID identical to the field ID on maps in the MPPP.*
> *• Field acreage.*
> *• Field risk level as determined by end of season soil sample nitrate-N analysis values in Permit Special Condition S4.L – Adaptive Management of Land Application Fields.*
> *• Adaptive management actions required by Permit Special Condition S4.L – Adaptive Management of Land Application Fields.*
> *• Crop(s) planted.*
> *• Estimated planting date (or note as perennial).*
> *• Estimated harvest date.*
> *• Crop yield estimate for the field based upon prior years or expert guidance. Examples of sources for yield estimates include the field's three-year average yield, a nearby similar field's three-year average yield, land grant university guidance, commercial chemical fertilizer guides, or other national data sources.*
> *• Total amount of nitrogen and phosphorus required by the crop to reach the yield estimate;*
> *• Soil nitrogen and phosphorus content measured from the most recent soil sample required by Permit Special Condition S4.J – Soil Sampling and Nutrient Analysis. Nutrient budgets developed prior to a spring (Pre-Plant) soil test must be updated after sample is analyzed.*
> *• Estimate of nitrogen from mineralization of:*
> *• Soil organic matter*
> *• Crop residues (including grass)*
> *• Past applications of manure, process wastewater, or other organic by-products*

• *Estimate of nitrogen and phosphorus from other sources (e.g. precipitation, irrigation, atmospheric deposition).*
• *Estimated loss of nitrogen due to volatilization during land application.*

This is all very nice – and all postponed to the future, after the NPDES permit is authorized and after the time when neighbors might examine the MPPP and comment.

None of the 44 application fields are examined in detail. There is a single map that shows the numbered fields, with no buffers, berms, tile drains or water bodies – The Sulphur Creek wasteway runs through this area. See below:



No doubt readers will ask why CAFO dairies are required to expend so much time and energy documenting best management practices and measures to prevent discharge to waters of the state.

FOTC's answer is twofold:

1. This is a common sense requirement that applies to every industrial facility that may release pollutant in the water. The goal of the Clean Water Act and state law is to ultimately eliminate these types of discharges, by requiring these types of facilities to put in better and better treatment or change their practices over time, but before that happens these types of facilities must take the steps necessary to reduce the likelihood of these

discharges. And that only makes sense because to allow otherwise would let these facilities to use our waterway to 'get rid' of their waste products, harming everyone downstream. CAFO owners in Washington need to be held to account for the impacts they can have on the environment and shouldn't be allow to cut corners, to save a few bucks, at the excess of their neighbors and the environment. And some of these solutions are easy fixes. For example, robust vegetated buffers are proven ways to prevent runoff into rivers and streams. But land owners see buffers as lost cropland, so they advocate for alternatives. But when those alternatives don't work, it is everyone else, the nearby communities and local fish and wildlife, that suffer the consequences.

2. For many years CAFO dairies in Washington State have disposed of excess manure on cropland, well beyond what is necessary to support crop growth. In fact, Ecology admitted that "It is highly likely that if Ecology were to require phosphorus based nutrient budgets that many land application fields would no longer be available to use for manures due to the current phosphorus levels from many years of receiving manure." As a result of these excesses, a federal district court previously held with respect to one Washington dairy:

> The undisputed facts are that residential wells downgradient of the Dairy exceed the maximum contaminant level [for drinking water], as established by the EPA, and even if the Dairy's AOC obligations are helping to "reduce" the risk of the adverse health effects of the nitrate-contaminated water to nearby residents, the risk still remains to these residents, as well as to those beyond this limited one-mile downgradient zone. Considering their installation of reverse osmosis units in all Dairy employee housing, this Court questions whether Defendants truly believe the risk of nitrate contamination to be overstated. … Accordingly, there can be no dispute that the Dairy's operations may present an imminent and substantial endangerment to the public who is consuming the contaminated water.

Cmty. Ass'n for Restoration of the Env't, Inc. v. Cow Palace, LLC, 80 F. Supp. 3d 1180, 1228 (E.D. Wash. 2015).

Because many Washington CAFOs have polluted ground and surface waters so badly, it is necessary for all CAFOs to comply with these common sense measures.

We hope this information is enlightening and explains why environmental groups continue to pressure Ecology to protect the environment more aggressively from CAFO harms.

Thank you for reading.

Friends of Toppenish Creek

You have received this Fact Sheet because you are on a list of potentially interested parties. If you do not want to receive further information, please contact Jean Mendoza at jeanrmendoza@icloud.com

33 U.S.C. § 1370 – State Authority

Except as expressly provided in this chapter, nothing in this chapter shall (1) preclude or deny the right of any State or political subdivision thereof or interstate agency to adopt or enforce (A) any standard or limitation respecting discharges of pollutants, or (B) any requirement respecting control or abatement of pollution; except that if an effluent limitation, or other limitation, effluent standard, prohibition, pretreatment standard, or standard of performance is in effect under this chapter, such State or political subdivision or interstate agency may not adopt or enforce any effluent limitation, or other limitation, effluent standard, prohibition, pretreatment standard, or standard of performance which is less stringent than the effluent limitation, or other limitation, effluent standard, prohibition, pretreatment standard, or standard of performance under this chapter; or (2) be construed as impairing or in any manner affecting any right or jurisdiction of the States with respect to the waters (including boundary waters) of such States.

(June 30, 1948, ch. 758, title V, § 510, as added Pub. L. 92–500, § 2, Oct. 18, 1972, 86 Stat. 893.)

33 U.S.C. § 1251(e)

PUBLIC PARTICIPATION IN DEVELOPMENT, REVISION, AND ENFORCEMENT OF ANY REGULATION, ETC.

Public participation in the development, revision, and enforcement of any regulation, standard, effluent limitation, plan, or program established by the Administrator or any State under this chapter shall be provided for, encouraged, and assisted by the Administrator and the States. The Administrator, in cooperation with the States, shall develop and publish regulations specifying minimum guidelines for public participation in such processes.

40 C.F.R. § 122.42(e)(1).

Concentrated animal feeding operations (CAFOs). Any permit issued to a CAFO must include the requirements in paragraphs (e)(1) through (e)(6) of this section.

(1) ***Requirement to implement a nutrient management plan.*** Any permit issued to a CAFO must include a requirement to implement a nutrient management plan that, at a

minimum, contains best management practices necessary to meet the requirements of this paragraph and applicable effluent limitations and standards, including those specified in 40 CFR part 412. The nutrient management plan must, to the extent applicable:

(i) Ensure adequate storage of manure, litter, and process wastewater, including procedures to ensure proper operation and maintenance of the storage facilities;

(ii) Ensure proper management of mortalities (***i.e.***, dead animals) to ensure that they are not disposed of in a liquid manure, storm water, or process wastewater storage or treatment system that is not specifically designed to treat animal mortalities;

(iii) Ensure that clean water is diverted, as appropriate, from the production area;

(iv) Prevent direct contact of confined animals with waters of the United States;

(v) Ensure that chemicals and other contaminants handled on-site are not disposed of in any manure, litter, process wastewater, or storm water storage or treatment system unless specifically designed to treat such chemicals and other contaminants;

(vi) Identify appropriate site specific conservation practices to be implemented, including as appropriate buffers or equivalent practices, to control runoff of pollutants to waters of the United States;

(vii) Identify protocols for appropriate testing of manure, litter, process wastewater, and soil;

(viii) Establish protocols to land apply manure, litter or process wastewater in accordance with site specific nutrient management practices that ensure appropriate agricultural utilization of the nutrients in the manure, litter or process wastewater; and

(ix) Identify specific records that will be maintained to document the implementation and management of the minimum elements described in paragraphs (e)(1)(i) through (e)(1)(viii) of this section.

40 C.F.R. § 122.42(e)(5):

Terms of the nutrient management plan. Any permit issued to a CAFO must require compliance with the terms of the CAFO's site-specific nutrient management plan. The terms of the nutrient management plan are the information, protocols, best management practices, and other conditions in the nutrient management plan determined by the Director to be necessary to meet the requirements of paragraph (e)(1) of this section. The terms of the nutrient management plan, with respect to protocols for land application of manure, litter, or process wastewater required by paragraph (e)(1)(viii) of this section and, as applicable, 40 CFR 412.4(c), must include the fields available for land application; field-specific rates of application properly developed, as specified in paragraphs (e)(5)(i) through (ii) of this section, to ensure appropriate agricultural utilization of the nutrients in the manure,

litter, or process wastewater; and any timing limitations identified in the nutrient management plan concerning land application on the fields available for land application. The terms must address rates of application using one of the following two approaches, unless the Director specifies that only one of these approaches may be used:

(i) ***Linear approach.*** An approach that expresses rates of application as pounds of nitrogen and phosphorus, according to the following specifications:

(A) The terms include maximum application rates from manure, litter, and process wastewater for each year of permit coverage, for each crop identified in the nutrient management plan, in chemical forms determined to be acceptable to the Director, in pounds per acre, per year, for each field to be used for land application, and certain factors necessary to determine such rates. At a minimum, the factors that are terms must include: The outcome of the field-specific assessment of the potential for nitrogen and phosphorus transport from each field; the crops to be planted in each field or any other uses of a field such as pasture or fallow fields; the realistic yield goal for each crop or use identified for each field; the nitrogen and phosphorus recommendations from sources specified by the Director for each crop or use identified for each field; credits for all nitrogen in the field that will be plant available; consideration of multi-year phosphorus application; and accounting for all other additions of plant available nitrogen and phosphorus to the field. In addition, the terms include the form and source of manure, litter, and process wastewater to be land-applied; the timing and method of land application; and the methodology by which the nutrient management plan accounts for the amount of nitrogen and phosphorus in the manure, litter, and process wastewater to be applied.

(B) Large CAFOs that use this approach must calculate the maximum amount of manure, litter, and process wastewater to be land applied at least once each year using the results of the most recent representative manure, litter, and process wastewater tests for nitrogen and phosphorus taken within 12 months of the date of land application; or

(ii) ***Narrative rate approach.*** An approach that expresses rates of application as a narrative rate of application that results in the amount, in tons or gallons, of manure, litter, and process wastewater to be land applied, according to the following specifications:

(A) The terms include maximum amounts of nitrogen and phosphorus derived from all sources of nutrients, for each crop identified in the nutrient management plan, in chemical forms determined to be acceptable to the Director, in pounds per acre, for each field, and certain factors necessary to determine such amounts. At a minimum, the factors that are terms must include: the outcome of the field-specific assessment of the potential for nitrogen and phosphorus transport from each field; the crops to be planted in each field or any other uses such as pasture or fallow fields (including alternative crops identified in accordance with paragraph (e)(5)(ii)(B) of this section); the realistic yield goal for each crop or use identified for each field; and the nitrogen and phosphorus

recommendations from sources specified by the Director for each crop or use identified for each field. In addition, the terms include the methodology by which the nutrient management plan accounts for the following factors when calculating the amounts of manure, litter, and process wastewater to be land applied: Results of soil tests conducted in accordance with protocols identified in the nutrient management plan, as required by paragraph (e)(1)(vii) of this section; credits for all nitrogen in the field that will be plant available; the amount of nitrogen and phosphorus in the manure, litter, and process wastewater to be applied; consideration of multi-year phosphorus application; accounting for all other additions of plant available nitrogen and phosphorus to the field; the form and source of manure, litter, and process wastewater; the timing and method of land application; and volatilization of nitrogen and mineralization of organic nitrogen.

(B) The terms of the nutrient management plan include alternative crops identified in the CAFO's nutrient management plan that are not in the planned crop rotation. Where a CAFO includes alternative crops in its nutrient management plan, the crops must be listed by field, in addition to the crops identified in the planned crop rotation for that field, and the nutrient management plan must include realistic crop yield goals and the nitrogen and phosphorus recommendations from sources specified by the Director for each crop. Maximum amounts of nitrogen and phosphorus from all sources of nutrients and the amounts of manure, litter, and process wastewater to be applied must be determined in accordance with the methodology described in paragraph (e)(5)(ii)(A) of this section.

(C) For CAFOs using this approach, the following projections must be included in the nutrient management plan submitted to the Director, but are not terms of the nutrient management plan: The CAFO's planned crop rotations for each field for the period of permit coverage; the projected amount of manure, litter, or process wastewater to be applied; projected credits for all nitrogen in the field that will be plant available; consideration of multi-year phosphorus application; accounting for all other additions of plant available nitrogen and phosphorus to the field; and the predicted form, source, and method of application of manure, litter, and process wastewater for each crop. Timing of application for each field, insofar as it concerns the calculation of rates of application, is not a term of the nutrient management plan.

(D) CAFOs that use this approach must calculate maximum amounts of manure, litter, and process wastewater to be land applied at least once each year using the methodology required in paragraph (e)(5)(ii)(A) of this section before land applying manure, litter, and process wastewater and must rely on the following data:

(1) A field-specific determination of soil levels of nitrogen and phosphorus, including, for nitrogen, a concurrent determination of nitrogen that will be plant available consistent with the methodology required by paragraph (e)(5)(ii)(A) of this section, and for phosphorus, the results of the most recent

soil test conducted in accordance with soil testing requirements approved by the Director; and

(2) The results of most recent representative manure, litter, and process wastewater tests for nitrogen and phosphorus taken within 12 months of the date of land application, in order to determine the amount of nitrogen and phosphorus in the manure, litter, and process wastewater to be applied.

40 C.F.R. § 122.23(h)(1)

Procedures for CAFOs seeking coverage under a general permit.

(1) CAFO owners or operators must submit a notice of intent when seeking authorization to discharge under a general permit in accordance with § 122.28(b). The Director must review notices of intent submitted by CAFO owners or operators to ensure that the notice of intent includes the information required by § 122.21(i)(1), including a nutrient management plan that meets the requirements of § 122.42(e) and applicable effluent limitations and standards, including those specified in 40 CFR part 412. When additional information is necessary to complete the notice of intent or clarify, modify, or supplement previously submitted material, the Director may request such information from the owner or operator. If the Director makes a preliminary determination that the notice of intent meets the requirements of §§ 122.21(i)(1) and 122.42(e), the Director must notify the public of the Director's proposal to grant coverage under the permit to the CAFO and make available for public review and comment the notice of intent submitted by the CAFO, including the CAFO's nutrient management plan, and the draft terms of the nutrient management plan to be incorporated into the permit. The process for submitting public comments and hearing requests, and the hearing process if a request for a hearing is granted, must follow the procedures applicable to draft permits set forth in 40 CFR 124.11 through 124.13. The Director may establish, either by regulation or in the general permit, an appropriate period of time for the public to comment and request a hearing that differs from the time period specified in 40 CFR 124.10. The Director must respond to significant comments received during the comment period, as provided in 40 CFR 124.17, and, if necessary, require the CAFO owner or operator to revise the nutrient management plan in order to be granted permit coverage. When the Director authorizes coverage for the CAFO owner or operator under the general permit, the terms of the nutrient management plan shall become incorporated as terms and conditions of the permit for the CAFO. The Director shall notify the CAFO owner or operator and inform the public that coverage has been authorized and of the terms of the nutrient management plan incorporated as terms and conditions of the permit applicable to the CAFO.

40 CFR § 412.4

Best management practices (BMPs) for land application of manure, litter, and process wastewater.

(a) ***Applicability.*** This section applies to any CAFO subject to subpart C of this part (Dairy and Beef Cattle other than Veal Calves) or subpart D of this part (Swine, Poultry, and Veal Calves).

(b) ***Specialized definitions.***

(1) ***Setback*** means a specified distance from surface waters or potential conduits to surface waters where manure, litter, and process wastewater may not be land applied. Examples of conduits to surface waters include but are not limited to: Open tile line intake structures, sinkholes, and agricultural well heads.

(2) ***Vegetated buffer*** means a narrow, permanent strip of dense perennial vegetation established parallel to the contours of and perpendicular to the dominant slope of the field for the purposes of slowing water runoff, enhancing water infiltration, and minimizing the risk of any potential nutrients or pollutants from leaving the field and reaching surface waters.

(3) Multi-year phosphorus application means phosphorus applied to a field in excess of the crop needs for that year. In multi-year phosphorus applications, no additional manure, litter, or process wastewater is applied to the same land in subsequent years until the applied phosphorus has been removed from the field via harvest and crop removal.

(c) ***Requirement to develop and implement best management practices.*** Each CAFO subject to this section that land applies manure, litter, or process wastewater, must do so in accordance with the following practices:

(1) ***Nutrient Management Plan.*** The CAFO must develop and implement a nutrient management plan that incorporates the requirements of paragraphs (c)(2) through (c)(5) of this section based on a field-specific assessment of the potential for nitrogen and phosphorus transport from the field and that addresses the form, source, amount, timing, and method of application of nutrients on each field to achieve realistic production goals, while minimizing nitrogen and phosphorus movement to surface waters.

(2) ***Determination of application rates.*** Application rates for manure, litter, and other process wastewater applied to land under the ownership or operational control of the CAFO must minimize phosphorus and nitrogen transport from the field to surface waters in compliance with the technical standards for nutrient management established by the Director. Such technical standards for nutrient management shall:

(i) Include a field-specific assessment of the potential for nitrogen and phosphorus transport from the field to surface waters, and address the form, source, amount, timing, and method of application of nutrients on each field to achieve realistic

production goals, while minimizing nitrogen and phosphorus movement to surface waters; and

(ii) Include appropriate flexibilities for any CAFO to implement nutrient management practices to comply with the technical standards, including consideration of multi-year phosphorus application on fields that do not have a high potential for phosphorus runoff to surface water, phased implementation of phosphorus-based nutrient management, and other components, as determined appropriate by the Director.

(3) ***Manure and soil sampling.*** Manure must be analyzed a minimum of once annually for nitrogen and phosphorus content, and soil analyzed a minimum of once every five years for phosphorus content. The results of these analyses are to be used in determining application rates for manure, litter, and other process wastewater.

(4) ***Inspect land application equipment for leaks.*** The operator must periodically inspect equipment used for land application of manure, litter, or process wastewater.

(5) ***Setback requirements.*** Unless the CAFO exercises one of the compliance alternatives provided for in paragraph (c)(5)(i) or (c)(5)(ii) of this section, manure, litter, and process wastewater may not be applied closer than 100 feet to any down-gradient surface waters, open tile line intake structures, sinkholes, agricultural well heads, or other conduits to surface waters.

(i) ***Vegetated buffer compliance alternative.*** As a compliance alternative, the CAFO may substitute the 100-foot setback with a 35-foot wide vegetated buffer where applications of manure, litter, or process wastewater are prohibited.

(ii) ***Alternative practices compliance alternative.*** As a compliance alternative, the CAFO may demonstrate that a setback or buffer is not necessary because implementation of alternative conservation practices or field-specific conditions will provide pollutant reductions equivalent or better than the reductions that would be achieved by the 100-foot setback.

WA State NPDES Combined Permit for Concentrated Animal Feeding Operations

S4. MANURE POLLUTION PREVENTION
S4.A Pollution Prevention Plan

1. General Requirements

All Permittees and applicants for coverage under this permit must prepare, keep up-to-date, and implement a Manure Pollution Prevention Plan (MPPP) for their CAFO. The MPPP must specify the site-specific practices and procedures that:

- Meet the pollution prevention performance objectives in special conditions S4.A through S4.Q.

• Ensure the discharge of manure, litter, process wastewater, other organic byproducts, and other sources of pollution related to the operation of a CAFO does not cause or contribute to a violation of the water quality standards.
• Comply with applicable federal requirements in 40 CFR 122.42(e)(1).

The MPPP must include a narrative description of how the CAFO will meet the performance objectives in special conditions S4.A through S4.Q and, if applicable, drawings or diagrams of facility infrastructure. If a performance objective in special conditions S4.A through S4.Q does not apply to a facility, the Permittee or applicant must explain why the performance objective does not apply to their operation.

Some permit conditions include separate requirements for wetter and drier climates. Wetter climates are defined as receiving 25 inches of precipitation or more per year, while drier climates are defined as receiving 25 inches of precipitation or less annually.

The Permittee or applicant must prepare and submit their initial MPPP with the application for permit coverage or renewal according to procedures in special condition S2.A. How to Apply for Permit Coverage and general condition G17 Duty to Reapply.

When permit coverage is granted, the MPPP becomes an enforceable effluent limitation of the permit and the permittee must implement the MPPP.

2. Production Area Drawings and Maps

The MPPP must have map and/or aerial photos of the CAFO production area clearly indicating the location of the following items:

a. Solid and liquid manure and process wastewater storage structures (e.g. pits, tanks), including those used for moving liquid manure and process wastewater around the facility.
b. Composting facilities.
c. Feed storage (e.g. silage bunker) structures.
d. Known underground piping for liquid manure and process wastewater.
e. Electrical lines that control pumps or valves that if broken would result in uncontrolled flow of liquid manure or process wastewater.
f. Animal housing.
g. Areas where animal mortalities are stored or composted.
h. Direction(s) of run-off or overland flow on the production area.
i. Groundwater wells, noting their use (e.g. drinking, livestock watering, irrigation) and well tag or ID number.

3. Land Application Drawings and Maps

The MPPP must have maps and/or aerial photos of the land application fields clearly indicating the following items:

a. A unique field identifier (e.g. field name, field code, name used for WSDA Dairy Nutrient Management Program required records) for each field that will be used to reference the field on all permit records and reports.
b. Field discharge management practice location, type, and width (special condition S4.N Field Discharge Management Practices).
c. Other areas that must not have manure, litter, process wastewater, or other organic by-products applied to them because application to those areas would result in a discharge.
d. Known tile drain inlets and outlets.

4. Facility Information

The following documentation about the Permittee's facility must be included in the MPPP and kept up-to-date as changes are made to the facility.

a. Information about existing site conditions (topography, drainage, soils, vegetation, etc.).
b. The maximum number of animals the current infrastructure was designed to manage and store manure, litter, process wastewater, or other organic byproducts from.
c. Potential surface or groundwater discharge problem areas (e.g. high risk areas).
d. Whether the facility is located within an area where there are higher risk conditions for groundwater contamination. Use Ecology's Nitrate Priority Areas Map in Appendix C to determine if the facility is within a priority area.
    i. If the facility is located within a Nitrate Priority Area, the applicant must complete the requirements in S5.D Groundwater Monitoring.
    ii. If a facility is located outside of a Nitrate Priority Area, the facility may be required to monitor groundwater if the groundwater impact monitoring (special condition S4.L) or the results of waste storage structure assessment (special condition S7.C) indicates that an adverse impact to groundwater may be occurring. See the requirements in S5.D Groundwater Monitoring.
e. The total long-term storage capacity for all manure, litter, feed, process wastewater, and other organic by-product storage structures (e.g. waste storage pond, above ground or in-ground storage tank, bunker, concrete storage pad). This does not include structures intended to only hold manure, litter, feed, process wastewater, or other organic by-products on a temporary basis while pumping from one location to another or while processing the materials, for example pits used for pumping liquid manure from one location to another or equipment/buildings used to process feed into a mixed ration. This also does not include structures used to control clean water pursuant to special condition S4.E Diversion of Clean Water.
f. Information about each storage structure. The MPPP must include:
    • The total designed storage volume.
    • The number of days of storage capacity as designed and as currently maintained.
    • Design treatment volume (liquid storage structures only).

• Volume available for solids build-up (liquid storage structures only).
• Leak detection plan if the storage structure has a leak detection system. The plan must describe how the Permittee will test and monitor for leaks.

S4.N Field Discharge Management Practices

The Permittee must use field discharge management practices on each land application field to limit the discharge of manure, litter, process wastewater, and other organic matter as follows:

1. Use field discharge management practices to limit the discharge of pollutants to any down-gradient surface waters, open tile line intake structures, sinkholes, agricultural or drinking water well heads, or other conduits to surface or groundwater.
2. Field discharge management practices are not considered part of the Permittee's land application area for calculating yearly field nutrient budgets and may not have manure, litter, process wastewater, or other organic by-products applied to them. Livestock must be excluded from these areas.
3. Include one or more of the following compliant field discharge management practices used singly or in combination:

a. Vegetated filter strip between land application fields or pastures and down gradient surface water conveyances. Filter strips must be at least 35 feet wide measured horizontally from the top of the bank on the surface water or conduit to surface water that is being protected.

b. Land application setback where manure, litter, or process wastewater may not be applied closer than 100 feet from the top of the bank on the surface water or conduit to surface water that is being protected.

c. Berm which prevents surface water discharge from the land application field and where application of manure, litter, process wastewater, or other organic by-products is prohibited. Berms must be designed, installed, and maintained to perform their function considering the following factors:

i. Weather characteristics for the area where the facility is located such as precipitation, storm events, and volume of field run-off.

ii. Land application methods used by the Permittee, form of land applied manure, litter, process wastewater, or other organic by-products, timing of land application, and application rates.

iii. Field characteristics such as soil types, infiltration rates, field slope, presence of other conduits to surface waters (e.g. drainage ditches, tile drains), crop type, cropping cycles, and flooding.

iv. Installation timing, time from installation to full performance, and maintenance period and activities.

d. An approved alternative management practice that provides pollutant reductions equivalent to or better than the reductions that would be achieved by the 100-foot setback. Alternative practices must be approved by Ecology prior to use. Submit an updated MPPP to Ecology according to procedures in S4.A.5.c When the Permittee proposes alternatives. The updated MPPP must include maps showing the field IDs and locations where the practice will be implemented and

supporting information demonstrating that the practice will be as effective as the 100-foot application setback.