POLLUTION CONTROL HEARINGS BOARD

STATE OF WASHINGTON

FRIENDS OF TOPPENISH CREEK, PUGET SOUNDKEEPER ALLIANCE, CENTER FOR FOOD SAFETY, SIERRA CLUB, WATERKEEPER ALLIANCE Appellants, v. WASHINGTON STATE DEPARTMENT OF ECOLOGY, Respondent.	Notice of Appeal

1. Identity of Appealing Parties and Representatives

The appealing parties are:

Friends of Toppenish Creek, Puget Soundkeeper Alliance, Center for Food Safety, Sierra Club, and Waterkeeper Alliance

The representatives of the appealing parties are:

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2. Identification of Other Parties

The respondent in this appeal is the Washington State Department of Ecology ("Ecology").

3. Decision Under Appeal

This is an appeal of a combined National Pollutant Discharge Elimination System and State Waste Discharge ("NPDES") General Permit for Concentrated Animal Feeding Operations ("CAFOs") ("Combined Permit"), and a State Waste Discharge General Permit for CAFOs ("State Permit") (collectively the "Permits") issued on December 7, 2022. Copies of the Permits are attached. In addition, this is an appeal of Ecology's Determination of Nonsignificance ("DNS"), under the State Environmental Policy Act ("SEPA"). A copy of Ecology's DNS is attached.

4. Short and Plain Statement of the Grounds for Appeal

The Permits are contrary to law because they are inconsistent with the requirements and intent of the federal Clean Water Act and its governing regulations promulgated by the U.S. Environmental Protection Agency ("EPA") and the Washington State Water Pollution Control Act and its governing regulations promulgated by Ecology. Ecology's issuance of the DNS and failure to comply with SEPA are contrary to law because these actions and inactions are inconsistent with the requirements and intent of SEPA and Ecology's implementing regulations.

5. Statement of Facts and Preliminary Identification of Issues

CAFOs closely confine animals, feed, manure and urine, dead animals, and production operations on a small land area. In Washington, the vast majority of CAFOs are dairies and cattle feedlots. Specifically, Washington is home to approximately 285 dairies across 28 of the 39 Washington counties. Combined, these dairies keep approximately 277,000 cows. Adult dairy cows in Washington collectively produce between 16 and 40 million pounds of manure daily.

In addition to a variety of other pollutants, the animal waste from these facilities contains nitrogen. This nitrogen transforms into ammonia, nitrite, and nitrate as it moves through the environment after being discharged. Nitrates and nitrites in drinking water are hazardous to human health, especially infants. Courts have found that CAFOs in Washington have contaminated the

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state's waters with nitrate and other pollutants, causing an imminent and substantial endangerment to health and the environment.

Nitrate contamination threatens drinking water, especially in communities with high concentrations of CAFOs. Ecology and the United States Geological Survey report that 29 percent of sampled wells in the Sumas Blaine aquifer in Whatcom County and over 20 percent of wells in the Yakima Valley exceed the nitrate maximum contaminant level. Nitrates are problematic for residents to detect because they are odorless, colorless, and flavorless. Their ingestion causes multiple adverse health outcomes such as methemoglobinemia ("blue baby syndrome"), cardiovascular harm, strokes, reproductive problems such as miscarriages, thyroid problems, and some cancers. The high costs of remedial measures (such as filtration or bottled water) impose substantial burdens on low-income community members as well as immigrants, Black, Latino, Asian American and Pacific Islanders, and other people of color living in Washington State. The added risk and cost of this polluted drinking water adds to the cumulative environmental burdens faced by these members of communities already experiencing disproportionate health impacts as a result of historic and ongoing state action. Additionally, there are disproportionate impacts, including economic burdens, on Indigenous people, Tribal members, and Tribes themselves.

The discharge of pollutants from CAFOs, including nutrients, toxics, and pathogens, also significantly impacts the surface water quality of the state's rivers, streams, and marine waters, causing or contributing to the state's water quality crisis. Indeed, Ecology itself reports that excess nutrients in the water—i.e., nitrogen and phosphorous—are driving a reduction in the levels of dissolved oxygen to the point that in parts of Puget Sound these critically low levels are negatively impacting shellfish, salmon, Southern Resident orcas, and other species, many of which are listed as threatened or endangered. Yet, despite being well aware of the threat nutrients pose to Washington State's unique waters, including many already impaired by pollutants discharged from CAFOs, Ecology's approach to CAFO management ignores the clear connection between ongoing pollution

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from these operations, the Sound's failure to meet water quality standards, and the threats to these species.

In addition to the ground- and surface-water quality impacts caused by this pollution, CAFOs significantly contribute to the climate crisis. Dairies, especially those that confine cows and use manure lagoons, drive climate change by emitting greenhouse gasses such as nitrous oxide and methane. These pollutants are less abundant than carbon dioxide (CO_2), but they are much more potent: methane has a Global Warming Potential ("GWP") 84-87 times that of CO_2 over 20 years, and nitrous oxide has a GWP of 264-268 times that of CO_2 for the same period. Livestock production is the dominant source of methane in the United States, and manure management is the fastest-growing major source of methane, increasing by more than 50 percent between 1990 and 2008.

Washington is already experiencing the catastrophic effects of climate change through dwindling snowpack and freshwater resources, unprecedented and deadly heat waves, and increased wildfire. Those most vulnerable to climate change are people of color and others already subject to disproportionate impacts from historic and ongoing systemic and structural racism. Climate change also disproportionately impacts Tribes and Indigenous people, particularly when it comes to cultural resources. Importantly, impacts to water quality caused by and exacerbated by a changing climate, such as increased temperature, lower dissolved oxygen, and nuisance algal growth, are the same impacts caused by discharges from CAFOs. As a result, CAFO pollution both causes water pollution and makes it significantly worse by driving the climate crisis. Understanding the impact of CAFO pollution on water quality requires incorporating information about the current dynamic hydrological and weather regime rather than relying on historical trends.

In Washington, state law and the federal Clean Water Act ("CWA") work in tandem to establish the regulatory framework for controlling and eventually eliminating pollution discharged into the state's waters. The Washington Water Pollution Control Act declares the "public policy of the state of Washington to maintain the highest possible standards to insure the purity of all waters of

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the state consistent with public health and public enjoyment thereof, the propagation and protection of wildlife, birds, game, fish and other aquatic life, and the industrial development of the state." RCW 90.48.010. Thus, "[c]onsistent with this policy, the state of Washington will exercise its powers, as fully and as effectively as possible, to retain and secure high quality for all waters of the state [and] work[] cooperatively with the federal government in a joint effort to extinguish the sources of water quality degradation." *Id*. To achieve these objectives, both state law and federal law make it unlawful for any person to discharge pollutants from a point source—any discernible, confined, and discrete conveyance—into the state's surface waters without a permit. RCW 90.48.080, RCW 90.48.160; WAC 173-226-020; *see also* 33 U.S.C. §§ 1311(a), 1362(12). These permits must include "effluent limitations" for the pollutants being discharged. The permit's effluent limits must ensure compliance with the laws' two independent requirements: (1) technology-based effluent limitations; and (2) water quality-based effluent limitations. 33 U.S.C. § 1342(a)(2); 40 C.F.R. §§ 122.4(a), (d); 122.44(d); RCW 90.54.020(3)(b); WAC 173-226-070.

The CWA provides that the EPA may authorize states to carry out the NPDES permit program. 33 U.S.C. § 1342(b). EPA has authorized Washington to issue some NPDES permits, and Ecology is the state Water Pollution Control Agency in Washington. RCW 90.48.260. Washington law must meet the federal minimum requirements. 33 U.S.C. § 1370.

As a threshold matter, Ecology failed to fulfill its obligation to identify the facilities that may be required to obtain permit overage under the Permits. Ecology must list in the Fact Sheet "[a] listing or some other means of identifying the facilities proposed to be covered under the general permit." WAC 173-226-110(1)(d); WAC 173-226-130(e)(v) ("The department shall make available during the public comment period . . . [a] listing or some other means of generally identifying the facilities proposed to be covered under the general permit."). By failing to identify which existing facilities may be required to obtain permit coverage, and identify those areas of the state where CAFOs may be sited in the future, Ecology has made it virtually impossible to ensure the Permits' terms and conditions will comply with the state and federal permitting requirements.

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Ecology's NPDES Permit must establish requirements at least as stringent as the federal implementing regulations for CAFO Permits. 33 U.S.C. § 1370; *see also* 33 U.S.C. § 1311(b)(1)(C); 33 U.S.C. § 1313(e)(3)(A); 40 C.F.R. § 123.25. As a result, the federal CAFO Rules, 40 C.F.R. § 122.42(e); 40 C.F.R. § 412, apply to Ecology's NPDES permits, and the Combined Permit must conform to these requirements. *See* 40 C.F.R. § 123.25. Ecology failed to adhere to these rules. In particular, the Combined Permit fails to comply with the CAFO Rule's requirements concerning the requirements for Large CAFOs, CAFOs that discharge to impaired waters, public participation in the development of pollution controls, mandatory Nutrient Management Plan requirements, and minimum enforceable and site-specific waste management and land application standards and requirements for nitrogen and phosphorus. In addition, the Combined Permit allows surface water discharges specifically prohibited under federal law, including so-called "agricultural stormwater" discharges, under a definition that conflicts with the minimum standards of the federal CAFO Rule.

Under Washington law, state technology-based effluent limits in all waste discharge permits must also include "all known, available, and reasonable methods of preventing, controlling and treating" pollutants—namely, Washington's "AKART" standard. RCW 90.48.010. This fundamental permit requirement seeks to ensure that the state's waters are protected to the maximum extent possible by requiring dischargers to keep pace with improvements in treatment technology. That is, AKART "shall represent the most current methodology that can be reasonably required for preventing, controlling, or abating the pollutants associated with a discharge." WAC 173-201A-020. Once Ecology establishes what pollution removal treatment qualifies as AKART for a particular discharge, it must translate that technology into permit limitations. WAC 173-226-070. AKART is an evolving standard that mirrors the development of new pollution removal technologies because, by definition, the technology that is "known," "available," and "reasonable" will change over time. Thus, to implement AKART, Ecology must require dischargers to use increasingly more stringent treatment as technological advancements become known, available, and reasonable to prevent, control, and abate the discharge of pollutants. *See* WAC 173-201A-020 ("AKART shall represent

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the most current methodology that can be reasonably required for preventing, controlling, or abating the pollutants associated with a discharge.") (emphasis added). Despite this clear statutory mandate, Ecology has failed to ensure that the CAFOs covered under the Permits will develop, employ, implement, and maintain the measures necessary to comply with AKART to control the discharge of pollutants to surface waters and groundwater. As a result, these CAFOs will likely discharge pollutants from the liquid storage facilities, solid waste storage facilities, production areas, and manure land application sites in excess of what is allowable under state law.

While technology-based effluent limits ensure permit limits keep pace with advances in available treatment technology, the second type of required permit limit, water quality-based effluent limits ("WQBELs"), are aimed at achieving minimum water quality standards pending the eventual cessation of all polluting discharges. *See* 33 U.S.C. §§ 1311(b)(1)(C), 1342(a)(2). These limits are derived from state water quality standards, which define the minimum water quality that must be attained—without exception—in the receiving waterbody to protect human health and aquatic life. *See* 33 U.S.C. § 1313(a)(3), (c)(2)(A). Water quality-based effluent limits are necessary when, even after imposing any required technology-based controls, the discharge will still "cause [or have] the reasonable potential to cause" an exceedance of applicable water quality standards. 40 C.F.R. § 122.44(d)(1)(i); WAC 173-226-070(2), (3); Ecology, Water Quality Program Permit Writer's Manual ("When reviewing a permit application or renewal, the permit writer must first determine the proper technology-based limits. Then the writer must decide if these limits are stringent enough to ensure that water quality standards are not violated in the receiving water. If they are not, then water quality-based limits must be developed."). Specifically, every permit must include effluent limits that "control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the [permitting authority] determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality." 40 C.F.R. § 122.4(d)(1)(i); *id.* § 122.44(d)(1)(vii)(A); WAC 173-226-070(2)(b). Thus, "[n]o permit may be

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issued: . . . [w]hen the imposition of conditions cannot ensure compliance with the applicable water quality requirements of all affected States." 40 C.F.R. § 122.4(d). Accordingly, Ecology may not issue an NPDES permit that allows violations of water quality standards. *Id.*; WAC 173- 226-070(2). Ecology's rules mandate that every general NPDES permit must "insure compliance" with water quality-based effluent limits. WAC 173-226-070(2), (3). The Permits do not include the water-quality based effluent limits sufficient to meet these standards. As a result, the CAFOs operating under these Permits will likely discharge pollutants from the liquid storage facilities, solid waste storage facilities, production areas, and manure land application sites to both surface waters and groundwater in excess of what is allowed under state and federal law.

All NPDES permits must contain conditions that require both monitoring and reporting of monitoring results. 33 U.S.C. § 1342(a)(2); 40 C.F.R. § 122.44(i)(1) & (2). Similarly, Ecology's permitting regulations require the imposition of reasonable monitoring requirements on all pollutants a general permit authorizes to be discharged into state waters. WAC 173-226-090(1). Despite this, Ecology has failed to include the necessary monitoring requirements to ensure permittees will comply with the Permits' effluent limits, terms, and conditions, and ensure that the Permits' effluent limits, terms, and conditions themselves are properly implementing state and federal requirements.

For example, the Permits fail to include the monitoring requirements necessary to ensure compliance with the terms and conditions of the Permits for discharges to surface waters. For example, the Permits do not have the monitoring requirements necessary to ensure that the CAFOs will detect unpermitted discharges to surface water, or to ensure that any permitted discharges comply with state-mandated and federal-mandated effluent limits, including but not limited to ensuring compliance with numeric and narrative water quality standards. Similarly, the Permits' groundwater monitoring requirements are inadequate as they fail to ensure that all permitted facilities will monitor the pollutants being discharged, capture the information necessary to ensure the facilities comply with the Permits, and identify violations of the Permits' effluent limits, terms, or conditions.

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The legislature enacted the Washington State Environmental Policy Act ("SEPA") to carry out its policy that "each person has a fundamental and inalienable right to a healthful environment and that each person has a responsibility to contribute to the preservation and enhancement of the environment" as well as "the responsibilities of each generation as trustee of the environment for succeeding generations." RCW 43.21C.020 (2), (3). SEPA "directs that, to the fullest extent possible: (1) The policies, regulations, and laws of the state of Washington shall be interpreted and administered in accordance with the policies set forth in this chapter." RCW 43.21C.030. As a result, SEPA overlays governmental decision-making across the state.

SEPA explicitly mandates that state agencies, among other things, "[u]tilize a systematic, interdisciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts in planning and in decision making which may have an impact on the environment;" and "[r]ecognize the worldwide and long-range character of environmental problems and, where consistent with state policy, lend appropriate support to initiatives, resolutions, and programs designed to maximize international cooperation in anticipating and preventing a decline in the quality of the world environment." RCW 43.21C.030(a), (f). So, for example, under SEPA, agencies must consider climate change when making decisions. *Washington State Dairy Fed'n v. State,* 18 Wn. App. 2d 250, 490 P.3d 290 (2021). In addition to the broad effect of SEPA across agency decision-making, SEPA directs any agency proposing a major action "significantly affecting the quality of the environment" to complete an environmental impact statement ("EIS"). RCW 43.21C.030(c). Actions under SEPA include "project" actions, which include "agency decisions to [l]cense, fund, or undertake any activity that will directly modify the environment," and "nonproject" actions, which "involve decisions on policies, plans, or programs." WAC 197-11-704(1)(a), (b). The first step of the EIS process for any action involves the "threshold determination" of whether the proposed action is "likely to have a probable significant adverse environmental impact." WAC 197-11-310(1), (3).

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Under SEPA, this threshold determination is made by the lead agency's designated responsible official. RCW 43.21C.033(1) (stating that "the responsible official shall make a threshold determination on a completed application within ninety days after the application and supporting documentation are complete"). The "responsible official" is "that officer or officers, committee, department, or section of the lead agency designated by agency SEPA procedures to undertake its procedural responsibilities as lead agency (WAC 197-11-910)." WAC 197-11-788; WAC 197-11-910 (every agency must either designate the responsible official for its SEPA compliance or provide a method "of designating the responsible official with speed and certainty.").

Under SEPA, the responsible official's threshold determination must be based upon "information reasonably sufficient to evaluate the environmental impact of a proposal." WAC 197-11-335. The elements of the environment that the responsible official must consider when making the threshold determination include, but are not limited to, the earth (soils, topography, erosion), air (air quality, odor, climate), water (surface water quality, runoff, floods, groundwater quality, public water supplies), plants and animals (habitat for and numbers and diversity of species of plants, fish, or other wildlife, and unique species), natural and scenic resource; environmental health (release of toxic or hazardous materials), land and shoreline use, aesthetics, recreation, historic and cultural resources, agricultural crops, and public services and utilities (water/stormwater). WAC 197-11-444, 960. When a proponent is considering a nonproject action, as opposed to a project action, the responsible official's consideration additionally must include, but is not limited to, the extent that activities likely to result from the proposal would be affected at a "greater intensity" or "faster rate" than if the proposal was not implemented. WAC 197-11-960. This analysis cannot "balance whether the beneficial aspects of a proposal outweigh its adverse impacts, but rather, shall consider whether a proposal has any probable significant adverse environmental impact. . . ." WAC 197-11-330(5). Based on this analysis, if the responsible official determines that a proposal "may have a probable significant adverse environmental impact," they must prepare and issue a determination of significance ("DS") and initiate scoping in anticipation of the issuance of an EIS. WAC 197-11-

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360(1). Only if the responsible official determines there will be "no probable significant adverse environmental impacts from a proposal" may it prepare and issue a determination of nonsignificance ("DNS") excusing an applicant from undertaking an EIS. WAC 197-11-340(1).

Ecology violated SEPA in several ways. First, Ecology failed to identify the nature and scope of the action under review. Specifically, Ecology improperly defined its issuance of the Permits as a "nonproject" action. WAC 197-11-704(2)(a), (b); WAC 197-11-774. In addition, Ecology defined the proposal too narrowly and thus failed to evaluate the true scope of the proposed action. WAC 197-11-060(3)(a), (b); WAC 197-11-784.

Second, Ecology acted inconsistently with SEPA policies, in violation of the SEPA's broad overlay across the state's statutory schemes. Specifically, the agency failed to act consistent with its trust duty to future generations in issuing the Permits by failing to consider the individual and cumulative impact of current and future permitted CAFOs on the state's greenhouse gas emissions. Relatedly, by failing to consider these impacts, the agency also failed to comply with SEPA's mandate towards supporting international cooperation in combating the global degradation of the earth's environment. Further, Ecology failed to consider current, ongoing, and projected climate change impacts that are and will amplify the adverse environmental effects of these operations, including, but not limited to, changes in hydrological cycles, altered weather patterns, increased water temperatures, increased air pollution from forest fires, and more frequent and more extreme adverse weather events. Moreover, Ecology, when crafting the Permit's effluent limits, terms, and requirements, failed to recognize that past climatic conditions, including historical weather patterns and water conditions, do not adequately describe the current physical and biological conditions of Washington state waters under the new climate regime.

Third, in issuing its threshold determination, Ecology did not rely on "information reasonably sufficient to evaluate the environmental impact of a proposal." WAC 197-11-335. The responsible official relied on a SEPA checklist that failed to provide information regarding the likely impact of the proposal on most of the enumerated elements of the environment, including erosion, soils, odors,

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surface waters, floodplains, groundwater, discharged waste material, plants, threatened or endangered species, animals, plants, migration routes, environmental health, hazardous conditions, special emergency services, environmentally sensitive areas, aesthetics, and historic and cultural preservation. Moreover, Ecology relied on an impermissible balance of the "benefits" of the permit against the potential impacts to support its determination. *See* WAC 197-11-330(5).

Fourth, Ecology's issuance of the DNS is impermissible under SEPA because the permit may have probable significant direct, indirect, and cumulative adverse impacts on multiple elements of the environment, including, but not limited to, soils and the likelihood of erosion, air quality, odors, the climate, surface water quantity and quality, runoff, the probability and impact of floods, groundwater quantity and quality, availability of public water supplies, the habitat, and the numbers and diversity of plants and animals, including unique species, the conservation of natural and scenic resources, environmental health, the release of toxic or hazardous materials, land and shoreline use, aesthetics, recreation, historic and cultural preservation, and agricultural crops. Further, as articulated above, the permit violates the CWA and state water law.

Finally, Ecology did not comply with SEPA's procedural mandates. First, Ecology failed to ensure that the appropriate, designated responsible official made the threshold determination. WAC 197-11-910; WAC 173-802-050. Second, Ecology failed to provide adequate notice and the opportunity for public comment on its threshold determination. WAC 197-11-502(3).

6. Request for Relief

Appellants request that the Board order the Department of Ecology to modify the Permits to comply with all applicable legal requirements, as identified in this appeal. Appellants also request that the Board set aside the DNS, order the Department of Ecology to undertake an EIS, and otherwise comply with SEPA.

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DATED this 6th day of January 2023.

Respectfully submitted,

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Attorneys for Appellants

CERTIFICATE OF SERVICE

I certify that on January 6, 2023, I caused to be served the Notice of Appeal and attachments in the above-captioned matter upon the following:

Pollution Control Hearings Board PO Box 40903 Olympia WA 98504-0903	[X] U.S. Mail [ ] Hand Delivered [X] Email: PCHB-SHBappeals@eluho.wa.gov
Department of Ecology Appeals Processor PO Box 47608 Olympia WA 98504-7608	[X] U.S. Mail [ ] Hand Delivered [ ] Email:
Bob Ferguson Washington State Attorney General Office of the Attorney General Ecology Division 1125 Washington Street, SE Olympia, WA 98501	[X] U.S. Mail [ ] Hand Delivered [ ] Email:

the foregoing being the last known addresses.

I certify under penalty of perjury under the laws of the state of Washington that the foregoing is true and correct.

DATED this 6th day of January 2023, in Seattle, Washington.

s/ Andrew Hawley
Andrew Hawley

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Issuance Date: December 7, 2022
Effective Date: January 6, 2023
Expiration Date: January 5, 2028

CONCENTRATED ANIMAL FEEDING OPERATION GENERAL PERMIT

A NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM AND STATE WASTE DISCHARGE GENERAL PERMIT

State of Washington
Department of Ecology
Olympia, Washington

In compliance with the provisions of
The State of Washington Water Pollution Control Law
Chapter 90.48 Revised Code of Washington
and
The Federal Water Pollution Control Act
(The Clean Water Act)
Title 33 United States Code, Section 1251 et seq.

Until this permit expires, is modified or revoked, Permittees that have properly obtained coverage under this general permit are authorized to discharge in accordance with the special and general conditions, which follow.

DEPARTMENT OF ECOLOGY
State of Washington

Vincent McGowan, P.E.
Water Quality Program Manager
Washington State Department of Ecology

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ADA ACCESSIBILITY

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For document translation services, call Water Quality Reception at 360-407-6600. Por publicaciones en espanol, por favor llame Water Quality Reception al 360-407-6600.

[1] https://ecology.wa.gov/accessibility

SUMMARY OF PERMIT SUBMITTALS

Refer to the Special and General Conditions for details on permit report and submittal requirements. The text of this permit contains words and phrases in ***bold and italics***. These words and phrases are the first usage in the permit and are defined in Appendix A.

Table 1 Summary of Permit Reports and Submittals

Permit Section	Forms & Reports	Description	Frequency	First Due Date
S2.A	Permit Application (i.e. Notice of Intent, NOI)	Applying for permit coverage and submitting initial MPPP	One-time	As necessary
S2.D	Transfer form	Transfer Permit Coverage To a New Owner or Operator	As necessary	Prior to transfer
S2.E	Termination request form	Applying for cancellation of permit coverage	As necessary	As necessary
S4.A.5	Update the MPPP	Update the MPPP	As necessary	30 days from a change or 14 days from a notification of deficiency
S4.K.5.a	Email to Ecology	Prior to making any emergency land applications	As necessary	As necessary
S4.K.5.d	Email to Ecology	After making any emergency land applications	As necessary	Within 24 hours of the emergency land application
S4.K.5.e	Compliance Plan	Compliance Plan following emergency land applications	As necessary	Within 6 months of the emergency land application
S4.K.5.f	Time extension request	Extend deadline for compliance plans for emergency land applications	As necessary	As necessary
S4.L	Nutrient Budgets for Very High Risk Fields	Proposing a nutrient budget for the upcoming growing season	As necessary	Ecology must provide written approval prior to application
S5.D.1.a;	Groundwater Monitoring Work Plan	Monitoring Plan for Medium and Large CAFOs located in Nitrate Priority Areas	One-time; As necessary	Within 6 months of receiving permit coverage
S5.D.2.a	Groundwater Monitoring Work Plan	Groundwater evaluation study plan for Small CAFOs and all CAFOs located outside of Nitrate	As necessary	Within 6 months of receiving Ecology's determination

Permit Section	Forms & Reports	Description	Frequency	First Due Date
		Priority Areas meeting certain conditions		
S5.D.2.c	Groundwater Evaluation Study Results	Results of groundwater evaluation study for CAFOs meeting certain conditions	As necessary	As necessary
S5.D.1.c; S5.D.2.e	Begin Groundwater Monitoring Notification	CAFOs required to monitor groundwater water	One-time; As necessary	30 days before first monitoring report
S5.E	Phone Call to Ecology	Reporting surface water discharge	As necessary	As necessary
S5.E	Reporting Results from a Surface Water Discharge	Laboratory results of water quality samples collected after a discharge	As necessary	As necessary
S6	Ecology Request for Permit Records	Providing items such as updated MPPP or land application records	As necessary	Within 14 days of Ecology's written request
S7.C	Storage Structure Assessment	Compliance reports for each solid and liquid storage structure	One-time	Within 2 years of permit coverage
S7.C	Storage Structure Repair and Improvement Plan	Plan for repairs and improvements to waste storage structures	One-time; As necessary	6 months after initial storage assessment
S7.D	Annual Report	Report of production numbers, monitoring results, and land applications	Annually	February 1, 2024
S7.E	Reporting Permit Violations	Verbal and written notifications of permit violations	Each noncompliance	Within 24 hours and in 5 days
S7.F	Spills Reporting	Verbal report of spills oil or hazardous materials	Each noncompliance	Within 24 hours
G6	Permit Modification	Significant change in production or process	As necessary	Prior to change
G17	Permit Application	Renewal of permit coverage	One-time	180 days before expiration date of this general permit

SPECIAL CONDITIONS

S1. PERMIT COVERAGE

S1.A. Facilities Required to Seek Coverage under This General Permit

This ***permit*** applies to lots or facilities (other than aquatic animal production facilities) defined as concentrated animal feeding operations (CAFOs) in 40 CFR 122.23. The permit requires the owner or operator of a CAFO to apply for coverage under this permit if all of the following conditions are met:

- The facility has a ***discharge*** to surface water, or to surface and ***groundwater***.[2]
- Animals are or will be stabled or confined and fed or maintained for a total of 45 days or more in any 12-month period.[3]
- Crops, vegetation, forage growth, or post-harvest residues are not sustained in the normal growing season over any portion of the lot or facility where the animals are confined.
- The facility is either a medium or large CAFO as defined in Table 2, or Ecology has designated the facility a significant contributor of ***pollutants*** to ***waters of the state*** in accordance with the procedures in S1.A.1 below.

1. **How Ecology Determines Significant Contributors of Pollutants**

   Facilities that meet all of the above conditions, but do not meet the definition of a medium or large CAFO may be designated a small CAFO if Ecology determines the facility is a significant contributor of pollutants under 40 CFR 122.23(c).

   If Ecology has designated the CAFO to be a significant contributor of pollutants to surface water, the owner or operator of a small CAFO must apply for coverage under this permit.

2. **Multiple Facilities with common ownership**

   Two or more CAFOs under common ownership are considered a single CAFO for the purposes of permitting if they adjoin each other or if they use a common area or system for handling ***manure***, ***litter***, ***process wastewater***, and ***other organic by-products***.

[2] CAFOs discharging only to groundwater must apply for coverage under either this permit or the CAFO State Waste Discharge General Permit.

[3] The same animal individuals need not be confined for the entire 45 day period.

Table 2 Size of CAFO by Animal Type

Animal Type	Number of Animals in Medium CAFO[c]	Number of Animals in Large CAFO[d]
Mature Dairy Cows[a]	200-699	700 or more
Veal Calves	300-999	1,000 or more
Other Cattle[b]	300-999	1,000 or more
Swine (55 lbs. or more)	750-2,499	2,500 or more
Swine (less than 55 lbs.)	3,000-10,000	10,000 or more
Horses	150-499	500 or more
Sheep and Lambs	3,000-9,999	10,000 or more
Turkeys	16,500-54,999	55,000 or more
Laying Hens or Broilers, with liquid waste system	9,000-29,999	30,000 or more
Chickens, other than layers, with dry waste system	37,500-124,999	125,000 or more
Laying Hens, with dry waste system	25,000-81,999	82,000 or more
Ducks, with liquid waste system	10,000-29,999	30,000 or more
Ducks, with dry waste system	1,500-4,999	5,000 or more

[a] Milked or Dry

[b] Including, but not limited to Heifers, Steers, Bulls, Cow/Calf Pairs

[c] 40 CFR 122.23(b)(6)

[d] 40 CFR 122.23(b)(4)

S1.B. Activities Covered Under This Permit

This statewide ***general permit*** conditionally authorizes the discharge of pollutants to both surface and groundwater from the ***production area*** and ***land application fields*** that result from operating a CAFO.

S1.C. Geographic Area Covered

This permit covers the activities listed in special condition S1.A within the State of Washington. This permit does not apply to ***Indian Country*** and ***trust or restricted lands*** except portions of the Puyallup Reservation as noted. Puyallup Exception: Following the Puyallup Tribe of Indians Land Claims Settlement Act of 1989, 25 U.S.C. §1773; this permit does apply to land within the Puyallup Reservation except for discharges to surface water on land held in trust by the federal government.

Some conditions in this permit 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.

S2. PERMIT ADMINISTRATION

S2.A. How to Apply for Permit Coverage

Unpermitted CAFOs seeking coverage under this permit must do the following:

1. **Submit an application**

   Submit a complete and signed ***Notice of Intent*** form (NOI) and a Manure Pollution Prevention Plan (MPPP) that meets the requirements of special conditions S4 *Manure Pollution Prevention* in this permit. A Responsible Person, in accordance with General Condition G14 *Signatory Requirements*, must sign the signature page of the NOI and submit it to Ecology.

   Submit the NOI and MPPP using Ecology's Water Quality Permitting Portal. If the ***applicant*** is unable to submit electronically (for example, they do not have access to the internet), contact Ecology to request an Electronic Reporting Waiver form and submit the completed form to Ecology at:

   Department of Ecology
   Water Quality Program
   Attn: CAFO Permit Administrator
   PO Box 47600
   Olympia, WA 98504

2. **Revise application, if needed**

   Ecology will review the NOI and MPPP for completeness and may request additional information from the applicant if it is necessary to complete the NOI and MPPP or to clarify, modify, or supplement previously submitted material. Ecology will notify the applicant of the application's status within 30 days.

3. **Publish public notice**

   When Ecology determines that the NOI and MPPP are complete, the applicant must publish a public notice using the template on the NOI. The public notice must be published once a week for two (2) weeks with at least seven (7) days between publications in a single newspaper of general circulation in the county where the operation is located.

   Publish the public notice only after Ecology has made a preliminary determination and notified the applicant in writing that the ***application for coverage*** is complete.

   The second publication date of the public notice starts a thirty (30)-day public comment period. At the end of the thirty (30)-day public comment period, Ecology will consider any comments received about the applicability of this permit to the operation before issuing a decision on permit coverage pursuant to special condition S2.B *When Permit Coverage is Effective*.

Ecology may, at its option, publish public notice of multiple applications for coverage under this permit at one time in the Washington State Register (WSR) which is published the first and third Wednesday of the month. If Ecology publishes public notice in the WSR, the permit coverage timeline will be longer than the timeline listed in special condition S2.B *When Permit Coverage is Effective*.

S2.B. When Permit Coverage is Effective

Ecology will notify the applicant in writing of the final decision. Once Ecology issues permit coverage, the CAFO owner or operator who applied for coverage becomes a ***Permittee***.

When Ecology needs additional time to reach a decision, we will notify the applicant in writing within 30 days of receiving the application for coverage and identify the issues that the applicant must resolve before Ecology can reach a decision. Ecology may need additional time to review the application:

1. If the application is incomplete.
2. If the application requires additional site-specific information.
3. If the public requests a public hearing about the applicability or non-applicability of this permit to the operation proposed for coverage.
4. If members of the public submit comments.
5. When more information is necessary to determine whether coverage under the general permit is appropriate.

S2.C. How to Transfer Permit Coverage

Coverage under this general permit shall automatically transfer to a new ***discharger***, if all of the following conditions are met:

1. The original Permittee and the new Permittee submit to Ecology a complete, written, signed agreement (Transfer of Coverage Form) containing a specific date for transfer of permit responsibility, coverage and liability. The Transfer of Coverage form is available on the CAFO permit webpage[4].
2. The volume and characteristics of the wastewater and management practices remain substantially unchanged.
3. Ecology does not notify the Permittee of the need to submit a new application for coverage under the general permit or for an individual permit pursuant to Chapters 173-216, 173-220, and 173-226 WAC.

The original Permittee remains responsible for, and subject to, all permit conditions and permit fees until the transfer of permit coverage is effective.

[4] https://ecology.wa.gov/cafo

As part of the transfer, the original Permittee must supply the new Permittee with copies of all permit documents, based on current facility conditions, used to comply with this permit.

Once the permit has been transferred, the new Permittee is required to use the existing permit documents (e.g. MPPP) provided by the original Permittee until the new Permittee updates the documents to reflect any changes to facility operation the new Permittee makes.

S2.D. How to Terminate Permit Coverage

1. **Eligibility for Terminating Permit Coverage**

   A Permittee may request termination of their permit coverage when one of the following conditions is met:

   a. The Permittee can document that they no longer have a discharge to surface or groundwater from their production area or land application fields except for ***agricultural stormwater*** from their land application fields.

   b. The Permittee did not have a discharge but voluntarily obtained permit coverage, no longer wishes to be covered by this permit, and the Permittee has or had no discharge to surface or groundwater from their production area or land application fields except for agricultural stormwater from their land application fields.

   c. The Permittee operates a CAFO and reduces the CAFO size to a small CAFO pursuant to special condition S1.A *Facilities Required to Seek Coverage under This General Permit*. When Ecology receives a request to terminate permit coverage because of a reduction in facility size to a small CAFO, Ecology will make a significant contributor determination pursuant to special condition S1.A.1. *How Ecology Determines Significant Contributors of Pollutants* to determine if the CAFO must remain covered by the permit.

   d. The Permittee no longer meets the definition of a CAFO pursuant to special condition S1.A. *Facilities Required to Seek Coverage under This General Permit*.

2. **Facility Cleaning Requirements**

   If the Permittee no longer meets the definition of a CAFO pursuant to special condition S1.A. *Facilities Required to Seek Coverage under This General Permit*, the permittee must clean, re-purpose, or decommission facility infrastructure that will no longer be used. The following facility cleaning and re-purposing requirements must be completed before the termination of permit coverage:

   a. All manure, litter, ***feed***, process wastewater, and other organic by-products must be removed from storage, management, and other facility infrastructure and land applied in accordance with the Permittee's yearly nutrient budgets, or ***exported*** in accordance special condition S4.O *Manure Export* as appropriate.

b. All manure, litter, feed, process wastewater, and other organic by-product management systems and facilities that could fill with water from precipitation must be flushed with clean water. The water from flushing must be land applied in accordance with the Permittee's yearly nutrient budgets or exported in accordance with special condition S4.O *Manure Export*.

c. After flushing/cleaning, if the manure, litter, feed, process wastewater, and other organic by-product storage, management, and other facility infrastructure will no longer be used, the infrastructure must be modified, if necessary, so it is not a conduit for any pollutants to enter surface or groundwater.

d. Temporary closures, permanent decommissioning, or other changes to ***waste storage ponds*** must follow the relevant requirements in special condition S4.C.4 *Waste Storage Pond Closure Procedures.*

3. **Requesting Termination of Permit Coverage**

The Permittee may request termination of permit coverage using the ***Notice of Termination*** form available on the CAFO permit webpage[5]. The Permittee must submit the signed form through Ecology's Water Quality Permitting Portal[6].

If the Permittee is unable to submit electronically (for example, they do not have access to the internet), they must contact Ecology to request an Electronic Reporting Waiver form and submit the completed form to Ecology at:

Department of Ecology
Water Quality Program
Attn: CAFO Permit Administrator
PO Box 47600
Olympia, WA 98504

The termination of permit coverage is effective on the date 61 days after Ecology receives the complete Notice of Termination form, unless Ecology notifies the Permittee in writing that their request is denied because either the Permittee has not met the eligibility requirements or information is insufficient to make a determination.

The Permittee will continue to incur an annual permit fee (chapter 173-224 WAC) until they submit a completed Notice of Termination form signed in accordance with general condition G14 and Ecology terminates the permit coverage. The Permittee will receive a letter from Ecology notifying them that their permit coverage is terminated.

[5] https://ecology.wa.gov/cafo
[6] https://secureaccess.wa.gov/ecy/wqwebportal

S3. DISCHARGE LIMITS

Discharges conditionally authorized by this permit must not cause or contribute to a violation of ***water quality standards***. Discharges not in compliance with these standards are not authorized. The Permittee must also be in compliance with other discharge limits (e.g. special condition S4. Manure Pollution Prevention) in order for discharges to be conditionally authorized.

S3.A Total Maximum Daily Loads (TMDL)

Discharges conditionally authorized by this permit to waterbodies which have an EPA-approved TMDL must not exceed an established waste load allocation for CAFOs. Discharges not consistent with an approved TMDL are not authorized. To determine if a discharge may be to a waterbody with a TMDL in place, refer to Ecology's list of TMDLs[7].

S3.B Impaired Waterbodies

Discharges conditionally authorized by this permit to an EPA-approved 303(d)-listed waterbody (Category 5) that do not have a completed TMDL in place must not contain the pollutant(s) for which the waterbody is listed as impaired.

To determine if a discharge may occur to an impaired waterbody, refer to Ecology's impaired waterbody database[8].

S3.C Production Area

The Permittee is prohibited from discharging manure, litter, feed, process wastewater, other organic by-products, or water that has come into contact with manure, litter, feed, process wastewater, or other organic by-products, to surface waters of the state from the production area except when both conditions are met:

1. Precipitation events cause an overflow of manure, litter, feed, process wastewater, or other organic by-product management and storage facilities which are designed, constructed, operated, and maintained to contain all manure, litter, feed, process wastewater, and other organic by-products including the contaminated runoff and direct precipitation from a ***25-year, 24-hour storm event*** for the location of the facility and still have waste storage pond design ***freeboard***; and
2. The production area is operated in accordance with the applicable inspection, maintenance, recordkeeping, and reporting requirements of this permit.

[7] https://ecology.wa.gov/TMDLs
[8] https://ecology.wa.gov/303d

S3.D Land Application Fields

The Permittee is prohibited from discharging manure, litter, feed, process wastewater, or other organic by-products from their land application fields, unless the discharge meets the definition of agricultural stormwater.

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 by-products, 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 by-products 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.

5. **Update of the MPPP**

   a. When the Permittee proposes changes to the facility

   Whenever the permittee proposes a change in design, construction, operation, or maintenance of the Permittee's facility infrastructure that will increase the risk of manure, litter, feed, process wastewater, or other organic by-products entering surface or groundwaters, the Permittee must update their MPPP and submit the updated MPPP at least 60 days prior to implementing any proposed changes.

Ecology will review the modified MPPP and may request additional information to clarify, modify, or supplement previously submitted material. If Ecology determines the changes to the modified MPPP are substantial, we will notify the Permittee of the need to publish public notice.

When Ecology determines that the modified MPPP is complete, the Permittee must publish a public notice using the template on the Coverage Modification form. The public notice must be published once a week for two (2) weeks with at least seven (7) days between publications in a single newspaper of general circulation in the county where the operation is located.

The second publication date of the public notice starts a thirty (30)-day public comment period. At the end of the thirty (30)-day public comment period, Ecology will consider any comments received on the proposed changes before issuing a decision on the coverage modification.

b. When Ecology, WSDA, or Permittee assessments require MPPP updates

If Ecology or WSDA staff determine that the MPPP is, or would be, ineffective in eliminating discharges not authorized by this permit, the Permittee must submit an updated MPPP within 14 days of a notification of the deficiency by Ecology or WSDA. The Permittee must also immediately begin the process to fully implement and maintain appropriate source control and/or treatment practices, addressing the deficiencies no later than 45 days from date of notification.

If Permittee assessments per S4.K.5, S7.C, or S7.E identify deficiencies, the Permittee must update the MPPP and submit it to Ecology along with the associated repair or compliance plans according to the timelines set in the applicable special condition.

If installation of necessary infrastructure or practices is not feasible within 45 days, Ecology may approve additional time when an extension is requested by a Permittee within the initial 45-day period.

Ecology will review the modified MPPP and may request additional information to clarify, modify, or supplement previously submitted material. If Ecology determines the changes to the modified MPPP are substantial, we will notify the Permittee of the need to publish public notice. If the permittee requests a time extension for facility improvement, public noticing is required. To publish a public notice, the Permittee must use the template on the Coverage Modification form. The public notice must be published once a week for two (2) weeks with at least seven (7) days between publications in a single newspaper of general circulation in the county where the operation is located.

The second publication date of the public notice starts a thirty (30)-day public comment period. At the end of the thirty (30)-day public comment period,

Ecology will consider any comments received on the proposed changes before issuing a decision on the coverage modification.

c. When the Permittee proposes alternatives

Permittees proposing alternative procedures or practices under S4.J.3 *Application Restrictions* or S4.N *Field Discharge Management Practices* must submit a modified MPPP with supporting information. Ecology will review the proposal and may request additional information to clarify, modify, or supplement previously submitted material.

When Ecology determines that the modified MPPP is complete, the Permittee must publish a public notice using the template on the Coverage Modification form. The public notice must be published once a week for two (2) weeks with at least seven (7) days between publications in a single newspaper of general circulation in the county where the operation is located.

The second publication date of the public notice starts a thirty (30)-day public comment period. At the end of the thirty (30)-day public comment period, Ecology will consider any comments received on the proposed changes before issuing a decision on the coverage modification.

S4.B Production Area Run-off Controls

The Permittee must prevent discharges to surface water from its production area except in accordance with special condition S3.C *Production Area*. The confinement areas, and waste handling and waste storage facilities must be designed, constructed, operated and maintained to contain all manure, litter, feed, process wastewater, and other organic by-products including the contaminated runoff and direct precipitation from a 25-year, 24-hour rainfall event.

The Permittee must keep manure, litter, and process wastewater from being tracked out onto public roadways. If manure, litter, process wastewater, or other sources of pollutants are tracked out onto public roadways, the Permittee must clean-up the material tracked onto the roadway. Materials cleaned-up on from the roadway must be disposed of appropriately and may not be placed in ditches, other conduits to surface or groundwater, or left along right-of-ways.

Vegetated treatment areas may be used to treat and infiltrate run-off into the ground, provided the treatment area's hydraulic capacity is greater than design flows and the vegetation cover is suitable to the site and run-off treatment performance needs. A site is not suitable if the vegetated treatment area will cause a violation of groundwater standards. The Permittee must document the treatment design, including nutrient uptake and hydraulic capacity, and the operation and maintenance plan in the MPPP.

If a discharge to surface waters occurs from the production area, including a vegetated treatment area, the discharge must be monitored according to S5.E *Surface Water Monitoring*.

S4.C Storage of Manure, Litter, Process Wastewater, Other Organic By-Product, and Feed

The Permittee must have adequate storage space for the manure, litter, process wastewater, feed, and any other sources of pollutants on-site during the ***storage period*** for the area where the CAFO is located in order to comply with special condition S3 *Discharge Limits*. The following are performance objectives for storage of liquid and solid materials:

1. **Liquid Waste Storage Structures**

   Liquid waste storage structures must be designed, constructed, operated and maintained to contain all manure, litter, feed, process wastewater, and other organic by-products including the contaminated runoff and direct precipitation from a 25-year, 24-hour rainfall event.

   Liquid waste storage structures must be designed, constructed, and maintained to have a maximum water specific discharge of $1x10^{-6}cm^3/cm^2/s$ without consideration for manure sealing and there must be a minimum of two feet of vertical separation between the bottom of the waste storage pond (inside the pond above the liner) and the seasonal high ***water table***.

   Design and installation of waste storage ponds and other liquid storage structures being built, expanded, or having major refurbishment must be overseen by a licensed professional engineer.

   Permittees must have a depth gauge in each liquid storage structure that clearly indicates the minimum capacity necessary to contain the contaminated runoff and direct precipitation from a 25-year, 24 hour precipitation event and still have design freeboard.

2. **Solid Materials Storage Facilities**

   Permittees must design, install, implement and maintain effective pollution prevention measures to minimize the discharge of pollutants from solid manure, litter, compost, and feed storage areas. At a minimum:

   a. Locate structures on impervious surfaces (such as concrete) or soil pads with low permeability.

   b. Direct contaminated runoff to structures designed to store liquid manure and process wastewater or through a vegetated treatment area designed and operated in accordance with S4.B *Production Area Run-off Controls*.

   c. If the storage area is covered (e.g. tarp, roof), divert clean water in accordance with special condition S4.E *Diversion of Clean Water*.

3. **Maintain Storage Facilities**

   The permittee must conduct weekly visual inspections of manure, litter, process wastewater, other organic by-product, and feed storage facilities according to provisions in special condition S5.A *Operations and Maintenance*. If a storage

facility is equipped with a leak detection system, the permittee must monitor for leaks according to the leak detection plan included in the MPPP.

The Permittee must prevent damage and maintain the integrity of their storage facilities by controlling vegetation and animals on the structure and by repairing structures as necessary to bring it back up to design specifications.

If necessary, the Permittee must periodically remove accumulated solids from liquid storage structures in order to maintain design volume. Ensure that any liner in the liquid storage structure is not damaged during maintenance. The MPPP must specify how leaks, if using a **synthetic liner** (e.g. punctures in the plastic), will be detected and repaired.

4. **Waste Storage Pond Closure Procedures**

d. Temporary Closures

If the Permittee has a waste storage pond or other liquid storage structure that is temporarily not in use, but will be used again, the pond must be maintained as though it were in use so that it remains in good working order.

e. Permanent Decommissioning

If a waste storage pond or other liquid storage structure is being decommissioned, the permittee must render the pond unusable and minimize the risk of leftover nutrients converting to mobile forms (e.g. ammonia to nitrate) which pose a risk to groundwater by implementing the following requirements:

i. Any manure, litter, feed, process wastewater, or other organic by-products contained in the structure must be removed and land applied in accordance with the Permittees yearly nutrient budgets or exported in accordance with special condition S4.O *Manure Export*.

ii. If converting the site to another use requires complete removal of the structure, high nutrient soils above grade must be land applied according to the Permittee's yearly nutrient budgets (special condition S4.K.1 *Annual Field-Specific Crop Nutrient Budget)* or exported in accordance with special condition S4.O *Manure Export*.

iii. If the pond has a synthetic liner, the liner must be removed and disposed of or recycled in a lawful manner. If the liner prevented nutrients from building up in the soils of the structure, special condition S4.C.4.b.ii above does not apply.

iv. After completion of special condition S4.C.4.b.i through S4.C.4.b.iii, any earthen structure must be filled with soil, made unable to contain liquid, or returned to grade matching the surrounding area. All exposed soil must be seeded with site appropriate plant species or site appropriate land management implemented to prevent erosion unless

the Permittee is planning to build a structure on the site where the waste storage pond existed within 3 months of pond decommissioning.

f. Use as Irrigation Pond

If a waste storage pond or other liquid storage structure will no longer be used to store manure, litter, process wastewater, or other organic by-products, and will be used as an irrigation pond the Permittee must remove all manure, litter, feed, process wastewater, or other organic by-products, and ***land apply*** the removed materials in accordance with their yearly field nutrient budgets or exported in accordance with special condition S4.O *Manure Export*.

S4.D. Other Above and Below Ground Infrastructure

The Permittee must operate and maintain infrastructure used on-site to prevent discharges due to physical failure of the infrastructure.

Other infrastructure (such as pipes, valves, tile lines, etc.) used to manage manure, litter, feed, process wastewater, and other organic by-products must be regularly inspected according to special condition S5.A *Operations and Maintenance* and tested (if applicable) to ensure it is in proper working order. Results from inspections must be used to make repairs or replacements to infrastructure in a timely manner. Document the reasons that repairs were not completed in a timely manner in the Manure Pollution Prevention Plan (MPPP) and include a schedule of when the work will be completed.

Discharge to groundwater from backflow through wells is prohibited and must be prevented.

S4.E Diversion of Clean Water

Clean water that has not come into contact with manure, litter, feed, process wastewater, other organic by-products, or other contaminants generated by the CAFO may be diverted from the CAFO production area instead of being stored. Clean water must be diverted to a location that is able to handle the volume of clean water generated and not cause other water quality problems (e.g. erosion, sediment build-up, flooding).

If the Permittee chooses to divert clean water from storage, they must describe how the diversion will prevent contact with contaminants, the location where the diverted clean water will go, and how that location is able to handle the volume of clean water generated without causing water quality problems.

S4.F Prevent Direct Animal Contact with Water

Livestock must not be allowed to come into contact with surface waters or cause pollutants to enter surface waters. This prohibition does not apply to small amounts of standing water (e.g. puddles, saturated areas) on pastures, land application fields

where livestock are temporarily housed, or in the production area as long as they are not draining to other surface waters or conduits to surface waters.

Livestock must be excluded from the field discharge management areas established according to S4.N *Field Discharge Management Practices*.

S4.G Chemical Handling

All chemicals (e.g. pesticides, cleaning agents) must be disposed of in accordance with the disposal requirements of the chemical's Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) product label or Safety Data Sheet (SDS) if it is not a FIFRA labeled product.

Excess or unused chemicals and empty chemical container wash water may not be disposed of in manure, litter, feed, process wastewater, or other organic by-product management systems, or any surface waters or conduits to surface or groundwater.

The Permittee must have and implement emergency procedures for containment and clean-up in the event of a chemical spill that could impact surface or groundwater.

S4.H Livestock Mortality Management

Mortalities must be handled such that they do not pose a threat to surface or groundwater quality. Until properly disposed of, mortalities must be stored in a location that does not allow run-off to surface waters or leaching to groundwater. All runoff from stored mortalities must be directed to liquid storage facilities. Mortalities must not be disposed of in a waste storage pond or other liquid storage structure unless it is specifically designed to handle mortalities.

Unless prohibited by local ordinances, the Permittee must follow state requirements for mortality handling including WAC 16-25-025. Examples of mortality management include composting, rendering, burial and natural decomposition. If on-site composting is used, it must be conducted compliance with chapter 70A.205 RCW and chapter 173-350 WAC.

S4.I Manure, Litter, Process Wastewater, and Other Organic By-Products Sampling and Nutrient Analysis

The Permittee must sample all sources of manure, litter, process wastewater, and other organic by-products that will be land applied and analyze the samples for nutrient content prior to ***land application***. Sampling and analysis must follow the requirements of special condition S5.B *Manure, Litter, and Process Wastewater Monitoring* and should be representative of the nutrient source as applied.

During the application season, if the permittee begins to use a new source of manure, litter, process wastewater or other organic by-product, the Permittee must sample and analyze the new source for nutrient content prior to land applying the new source.

The Permittee must sample and analyze all sources of manure, litter, process wastewater, and other organic by-products at least three times, spaced evenly throughout the land application season.

The Permittee is not required to sample and analyze the commercial chemical fertilizers for nutrient content, but is required to record the amount of nutrients applied according to special condition S6.B *Land Application Records*.

S4.J Soil Sampling and Nutrient Analysis

The Permittee must sample and analyze all land application fields to which they apply manure, litter, process wastewater, or other organic by-products for nutrient content at least twice each year—before land application and in the late summer or early fall.

1. **Soil Sampling Depth**

   Soil samples must be taken at the depths specified according to annual precipitation:

   - Drier climates must collect separate composite soil samples for the 0-12 inch depth and the 12-24 inch depth.
   - Wetter climates must collect one composite soil sample for the 0-12 inch depth.

   If the field does not have the required soil depth before refusal or groundwater is reached, the Permittee must take samples in 12-inch increments until reaching refusal or groundwater. The Permittee must indicate in its records and annual report (special conditions S6.B and S7.D) at what depth refusal or groundwater was reached.

2. **Spring Soil Sampling and Analysis**

   Soil samples collected and analyzed early in the growing season must be considered when developing or updating the field nutrient budget in that same season. Samples must be collected and analyzed before land application begins, unless applied in accordance with special condition S4.K.4 *Double Cropping, Winter Cover Crops, Perennial Crops*.

3. **Late Summer-Early Fall Soil Sampling and Analysis**

   Post-harvest soil samples are primarily used to assess nitrogen management, but may also be used in nutrient budgeting of double or winter crops.

   Post-harvest soil samples must be taken after harvest of annual crops and before 3 inches of rainfall accumulates. Use September 1 as start date for tallying the accumulation of rainfall.

   If the soil sample is taken after 3 inches of rainfall accumulates or if the field was categorized as high or very high risk level the previous year (special condition S4.L *Adaptive Management of Land Application Fields*), the Permittee must take an

additional composite soil sample at the next vertical foot to account for nutrient leaching:

- Drier climates must collect an additional composite soil samples for the 24-36 inch depth.
- Wetter climates must collect an additional composite soil sample for the 12-24 inch depth.

4. **Sampling and Analysis Methods**

   Soil sampling and analysis must follow the monitoring requirements of special condition S5.C *Soil Monitoring*.

S4.K Land Application

The Permittee must land apply manure, litter, process wastewater, or other organic by-products in accordance with their yearly field nutrient budgets and at the appropriate rates and times to comply with permit conditions. If the Permittee generates more manure, litter, process wastewater, or other organic by-products than the land application fields available to the Permittee can appropriately utilize according to their yearly field nutrient budgets, the Permittee must find other avenues of appropriately utilizing the excess manure, litter, process wastewater, or other organic by-products (e.g. export, composting).

The Permittee's staff must have sufficient training to be able to land apply in accordance with the yearly field nutrient budgets and at appropriate rates and times to comply with permit conditions.

1. **Annual Field-Specific Crop Nutrient Budget**

   The Permittee must develop a field-specific nutrient budget for each land application field they will ***control*** and plan to apply manure, litter, process wastewater, or other organic by-products. The permittee shall ensure that plant-available nutrients do not exceed nutrients required to reach crop's estimated yield. The yearly nutrient budget determines the maximum amount of nitrogen and phosphorus that may be land applied to the field.

   Annual nutrient budgets must be developed before the first land application of the growing season, and should be developed to cover the entire growing season (annual and double crop until final harvest). If the Permittee makes changes to their annual nutrient budget for a land application field they must update the nutrient budget to reflect the changes. The yearly nutrient budget must include:

   a. Current calendar year.
   b. Field ID identical to the field ID on maps in the MPPP.
   c. Field acreage.

d. Field risk level as determined by end of season soil sample nitrate-N analysis values in special condition S4.L *Adaptive Management of Land Application Fields*.

e. Adaptive management actions required by special condition S4.L *Adaptive Management of Land Application Fields*.

f. Crop(s).

g. Estimated planting date (or note as perennial).

h. Estimated harvest date.

i. Crop yield estimate for the field based upon prior years or expert guidance. Examples of sources for yield estimates include the field's 3-year average yield, a nearby similar field's 3-year average yield, land grant university guidance, commercial chemical fertilizer guides, or other national data sources.

j. Total amount of nitrogen and phosphorus required by the crop to reach the yield estimate.

k. Soil nitrogen and phosphorus content measured from the most recent soil sample required by special condition S4.J *Soil Sampling and Nutrient Analysis*. Nutrient budgets developed prior to a spring soil test must be updated after sample is analyzed.

l. Estimate of nitrogen from mineralization of:

- Soil organic matter.
- Crop residues, including grass
- Past applications of manure, process wastewater, or other organic by-products.

m. Estimate of nitrogen and phosphorus from other sources (e.g. precipitation, irrigation, atmospheric deposition).

n. Estimated loss of nitrogen due to volatilization during land application.

A nutrient budget worksheet that incorporates requirements of special condition S4.K.1 is available on Ecology's CAFO permit webpage[9].

If the Permittee chooses to use their own form, it must account for the same parameters as the Ecology form and show the calculations used to reach the final maximum amount of nutrients that may be land applied to each field for the year.

[9] https://ecology.wa.gov/cafo

2. **Application Rates**

   Land application of manure, litter, process wastewater, and other organic by-products must be at times and at rates which can be utilized by the crop.

   The Permittee must base their ***application rates*** on the most current manure, litter, process wastewater, and other organic by-product nutrient analysis required by special condition S4.I and crop needs.

   Equipment used for land application of manure and other material that can have a variable application rate (e.g. pumps, injectors, sprinklers, splash plate applicators) must be calibrated so that the Permittee has an accurate measure of how much manure is applied per unit of time or area (e.g. x gallons per hour, y gallons per acre).

   The Permittee must use the applicable adaptive management actions specified in special condition S4.L *Adaptive Management of Land Application Fields* to modify their land application of nutrients.

   During land application, the Permittee must not cause direct, indirect, or precipitation related discharge to surface waters and must follow the minimum field discharge management practices required by special condition S4.N *Field Discharge Management Practices*. The permittee must visually monitor land application fields for surface and tile drainage discharges when land applying manure, litter, process wastewater, or other organic by-products. If a discharge occurs, the permittee shall follow sampling procedures in special condition S5.E *Surface Water Monitoring* and reporting requirements in special condition S7.E *Reporting Permit Violations*.

3. **Application Restrictions**

   The Permittee must not land apply more nitrogen and phosphorus to a field than calculated in their yearly nutrient budget (special condition S4.K.1) for that field.

   No land application of manure, litter, process wastewater, or other organic by-products may occur:

   a. To fields with a frozen surface crust (2 inches) or deeper, or if the soil is at or below zero degrees Celsius (32 degrees Fahrenheit).
   b. To fields that are snow covered.
   c. To fields with soils that are or will become ***saturated*** with forecasted precipitation prior to infiltration or incorporation.
   d. If the water table is within 12 inches or less of the surface.
   e. If precipitation is forecast in the next 24 hours for the facility location that will cause a discharge from the Permittee's land application fields.

f. After October 1 and prior to ***T-SUM 200*** unless applied in accordance with special condition S4.K.4 *Double Cropping, Winter Cover Crops, Perennial Crops*.

g. To fields that are bare (no perennial crop) unless the Permittee is preparing the bare field for the current year's annual crop (planting within 30 days of land application).

The Permittee may use an alternative to T-SUM 200 restriction above if the alternative demonstrates that crop growth and nutrient uptake begins before TSUM200. The alternative method must be approved by Ecology prior to utilizing the alternative to TSUM200. Submit an updated MPPP to Ecology per S4.A.5.c *When the Permittee proposes alternatives*. The alternative starting application dates must be site and crop specific. The updated MPPP must include supporting information demonstrating that the alternative method will be as effective as the T-SUM200 method in determining that crop growth and nutrient uptake is adequate to prevent discharges of excess nutrients to surface and groundwaters.

4. **Double Cropping, Winter Cover Crops, Perennial Crops**

After late summer or early fall soil sampling, any land application taking place must be demonstrated to be necessary because current soil nitrogen plus estimated nitrogen mineralization will not provide the nutrients necessary for the double crop, winter cover crop, or perennial crop.

Before land application may take place for a double crop, winter cover crop, or perennial crop the Permittee must have taken fall soil samples, had the soil samples analyzed as required by special condition S4.J *Soil Sampling and Nutrient Analysis*, and shown how a land application of nitrogen is necessary to support estimated crop yield according to special condition S4.K.1 *Annual Field-Specific Crop Nutrient Budget*.

If the nutrient budget shows that soil nitrogen plus estimated nitrogen mineralization will not provide the nutrients necessary during the winter for a double crop, cover crop, or perennial crop, the Permittee may land apply manure, litter, process wastewater, or other organic by-products in compliance with the land application restrictions in special condition S4.K.1 through S4.K.3 above.

5. **Emergency Winter Land Application**

Land application of manure, litter, process wastewater, or other organic by-products outside of the limits set by special condition S4.K.1 through S4.K.4 or in amounts greater than the Permittee's yearly field nutrient budgets is a violation of this permit. Any land application outside of the permit requirements must be due to the need to protect public health and safety (e.g. to prevent waste storage pond ***over-topping***).

In the event that a Permittee makes an emergency land application outside of permit requirements, the Permittee must follow the noncompliance procedure:

a. Prior to making any emergency land applications, notify Ecology by phone or email at cafopermit@ecy.wa.gov.

b. Document the reason for emergency application and keep records of:

   i. Dates and times of land application

   ii. Field IDs for the fields where land application took place

   iii. Nutrient content of applied material

   iv. Amount of material (e.g. gallons) land applied

c. Monitor fields and tile drain outlets for discharges to surface waters or conduits to surface waters. If a discharge occurs, collect and analyze a sample or samples representative of the discharge. Follow sample collection and analysis procedures in S5.E *Surface Water Monitoring*. Report the results to Ecology within 15 days of collecting the sample(s) using the Water Quality Permitting Portal, unless granted a waiver from electronic reporting according to S7.A *How to Submit Documents to Ecology*.

d. Within 24 hours of the application, report the information recorded in b. to Ecology via email at cafopermit@ecy.wa.gov.

e. Develop a plan to remain in compliance with the permit within 6 months of the emergency winter land application and submit that plan and an updated MPPP if necessary, to Ecology according to the procedure in special condition S4.A.5.b *When Ecology, WSDA, or Permittee assessments require MPPP updates*.

f. Work proposed in the plan must be completed within 18 months of the emergency land application.

To request a time extension, a Permittee shall submit a detailed explanation of why it is making the request (technical basis) to Ecology in accordance with special condition S4.A.5.b *When Ecology, WSDA, or Permittee assessments require MPPP updates*, 120 days prior to the deadline. The permittee must publicly notice this request for modification of coverage following the procedures in S4.A.5.b *When Ecology, WSDA, or Permittee assessments require MPPP updates*. Ecology will approve or deny the request within 60 days of receipt of a complete request.

S4.L Adaptive Management of Land Application Fields

The Permittee must use adaptive management to prevent the build-up of excess nutrients in the soil. The goal is to reduce fall soil nitrate concentrations in land application fields to a Risk Level of Medium or less.

1. **Step 1: Determine Field Risk Level**

   Use Table 3 below to determine land application field risk level.

- For each field in drier climates, use the fall soil test nitrate results (special condition S4.J *Soil Sampling and Nutrient Analysis*) from the second foot (12-24 inches) to determine the field risk level.
- For each field in wetter climates, use the fall soil test nitrate results (special condition S4.J *Soil Sampling and Nutrient Analysis*) from first foot (1-12 inches) to determine the field risk level.

Table 3 Field Risk Level

Field Risk Level	Fall Soil Test Nitrate Range in ppm	Fall Soil Test Nitrate Range in pounds per acre
Low	Less than 15	Less than 55
Medium	15 - 30	55 - 110
High	31 - 45	111 - 165
Very High	More than 45	More than 165

2. **Step 2: Take Required Adaptive Management Actions**

   Take the required adaptive management actions specified in the *Required Actions* column corresponding to the field risk level.

   - Use Table 4 Adaptive Management Actions for areas in drier climates.
   - Use Table 5 Adaptive Management Actions for areas in wetter climates.

   Where the field risk level remains High or Very High for two consecutive years, in addition to taking the actions in the *Required Actions* column, take the actions in the *Required Actions Based upon Trends* column. Continue these actions until the field risk level is reduced to Medium or Low risk.

   - Use Table 4 Adaptive Management Actions for areas in drier climates.
   - Use Table 5 Adaptive Management Actions for areas in wetter climates.

3. **Step 3: Submit Deeper Soil Test Results**

   For fields in the Very High risk category for two consecutive years, the Permittee must sample and analyze soil at the depths specified in the *Required Actions Based upon Trends* column of Table 4 or Table 5.

   Collect and analyze these soil samples in the fall according to timings in special condition S4.J *Soil Sampling and Nutrient Analysis*. Collect the samples according to procedures in special condition S5.C. *Soil Monitoring*. Analyze the samples for parameters in Table 9 of special condition S5.C. *Soil Monitoring*.

   Submit these results to Ecology using WQWebPortal as described in special condition S7.A *How to Submit Documents to Ecology*. If results of a nitrate loading analysis demonstrate a potential to impact groundwater, Ecology will notify the

Permittee of the need to develop a groundwater monitoring plan according to procedures in S5.D *Groundwater Monitoring*.

Table 4 Adaptive Management Actions for areas in drier climates

Field Risk Level	Required Actions After 1 Year	Required Actions After 2 Consecutive Years
Low	• No changes to current practices required.	• N/A
Medium	• Reevaluate nutrient budget assumptions for estimated crop yield, nitrogen volatilization, mineralization (special condition S4.K), and other sources of nutrients (e.g. irrigation water and atmospheric/precipitation deposition). • Verify actual land application rates and recalibrate land application equipment if necessary.	• N/A
High	**Continue the actions required by Medium risk level and:** ○ Document reason(s) for fall soil sample analysis result and associated risk level in Annual Report (special condition S7.D). ○ Adjust land application timing so nutrient availability aligns with peak crop uptake. ○ Stop land application after peak crop uptake. ○ Collect and analyze an additional late-summer/early fall soil sample at the third foot depth (25-36 inches) according to special condition S4.L.3.	**Continue the actions in the Required Action column for Medium and High risk levels and:** ○ Reduce nutrient application to the field. ○ Hire a professional/consultant to develop yearly nutrient budgets and application rates.
Very High •	**Continue the actions required by High risk level and:** ○ Assume no nitrogen losses from denitrification and volatilization on the yearly nutrient budget for this field. ○ Submit the yearly nutrient budget for this field prior to land application for approval by Ecology. ○ Enhance nutrient removal via cropping. ○ Reduce nutrient application amount to field.	**Continue the actions required by Very High, High, and Medium risk levels and:** ○ Stop land application of nutrients to the field. ○ Hire a professional/consultant to develop yearly nutrient budgets and application rates. ○ Collect additional fall soil samples at the third, fourth, and fifth foot depth or until refusal or groundwater is reached and analyze for nitrate. Follow procedures in Step 3.

Table 5 Adaptive Management Actions for areas in wetter climates

Field Risk Level	Required Actions	Required Actions After 2 Consecutive Years
Low	• No changes to current practices required.	• N/A
Medium	• Reevaluate nutrient budget assumptions for estimated crop yield, nitrogen volatilization, mineralization (special condition S4.K), and other sources of nutrients (e.g. irrigation water and atmospheric/precipitation deposition). • Verify actual land application rates and recalibrate land application equipment if necessary.	• N/A
High	**Continue the actions required by Medium risk level and:** ○ Document reason(s) for fall soil sample analysis result and associated risk level in Annual Report (special condition S7.D). ○ Adjust land application timing so nutrient availability aligns with peak crop uptake. ○ Stop land application after peak crop uptake. ○ Collect and analyze an additional fall soil sample at the second foot depth (12-24 inches) according to special condition S4.L.3.	**Continue the actions in the Required Action column for Medium and High risk levels and:** ○ Reduce nutrient application to the field. ○ Hire a professional/consultant to develop yearly nutrient budgets and application rates.
Very High	**Continue the actions required by High risk level and:** ○ Assume no nitrogen losses from denitrification and volatilization on the yearly nutrient budget for this field. ○ Submit the yearly nutrient budget for this field prior to land application for approval by Ecology. ○ Enhance nutrient removal via cropping. ○ Reduce nutrient application amount to field.	**Continue the actions in the Required Action column for Very High, High, and Medium risk levels and:** • Stop land application of nutrients to the field. • Hire a professional/consultant to develop yearly nutrient budgets and application rates. • Collect additional fall soil samples at the second, third, and fourth foot depth or until refusal or groundwater is reached and analyze for nitrate. Follow procedures in Step 3.

S4.M Irrigation Water Management

The Permittee must prevent the downward movement of nitrate by managing their irrigation water so that the amount of water applied from precipitation and irrigation does not exceed the water holding capacity of the soil beyond the crop rooting depth.

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.

S4.O Manure Export

Manure is exported from the Permittee's CAFO to an unaffiliated party when the Permittee no longer has control of how the manure is used.

The Permittee must provide the most recent manure, litter, process wastewater, or other organic by-product nutrient analysis to the recipient as part of export. If the Permittee is exporting digestate, the nutrient analysis must be from within the last 5000 cubic yards (approximately 1,010,000 gallons) of digestate generated.

The Permittee must keep records of its manure exports as required by special condition S6.C *Export Records*.

If the Permittee has an agreement with another party (contracted composter) for the contracted composter to process (manure "composting" or drying) manure solids from the Permittee on-site, the solids which go to the contracted composter must be tracked as export by the Permittee. After the solids are under the control of the contracted composter, the Permittee is not responsible for tracking sales and movement off-site of the processed manure solids as part of export unless the solids come under the Permittee's control again.

S4.P Emergency Procedures

The Permittee must develop emergency procedures in the event of a failure in their infrastructure (e.g. burst pipe, waste storage pond embankment failure) that will direct the Permittee's actions to prevent, control, or reduce discharges to ground and surface waters. Emergency procedures must include discharge sampling as required by this permit. The emergency procedures must include the noncompliance notification requirements required by special condition S7.E *Reporting Permit Violations* and special condition S7.F *Spills Reporting*.

S4.Q Training

Either the Permittee or at least one of the Permittee's employees must be familiar with the monitoring and inspections required by special condition S5.A *Operations and Maintenance*.

If the Permittee chooses to train their employee(s) to look for and notice problems with facility infrastructure during their daily work to meet the visual inspection/monitoring requirements of special condition S5.A *Operations and Maintenance* so that these requirements do not become a separate activity, the employee training must incorporate what to look for, who to notify (if there is a

designee other than the Permittee) about problems or potential problems, and where and how to record the information at the end of shift as required by special condition S6.A *Operations and Maintenance*.

S5. MONITORING

S5.A. Operations and Maintenance

The Permittee must perform the visual inspections of the facility indicated in Table 6 below, to ensure that equipment, infrastructure, and field discharge management practices are in proper working order.

Table 6 Routine Visual Inspections

Inspection	Frequency
Clean and wastewater lines	Daily
Clean water diversion (e.g. roof gutters)	Weekly
Storage ponds and waste handling infrastructure	Weekly
Field run-off management	Monthly

The Permittee must record the outcome of the visual inspections according to special condition S6.A *Operations and Maintenance Records*. A template for this record keeping is available on Ecology's CAFO Permit webpage[10].

Other templates which document the required information may be used. For example, the most recent Oregon Department of Agriculture Large CAFO Record Keeping Calendar, which is available (at the time this permit was issued) under the Resources section of the Oregon CAFO web page[11]:

S5.B. Manure, Litter, and Process Wastewater Monitoring

1. **When to collect and analyze samples**

   The Permittee must sample the manure, litter, process wastewater, and other organic by-products prior to its application to land, up to three times annually as laid out in the schedule in Table 7.

   During the land application season, if the Permittee begins to use a new source of nutrients for crops, the Permittee must have the new source sampled and analyzed for nutrient content prior to land applying the new source.

   The Permittee is not required to have commercial chemical fertilizers sampled and analyzed for nutrient content, but is required to record the amount of nutrients applied in special condition S6.B *Land Application Records*.

2. **How to collect and analyze samples**

   Manure, litter, process wastewater, and other organic by-product samples must be representative of the source (***composite sample***), and taken following the most

[10] https://ecology.wa.gov/cafo
[11] http://www.oregon.gov/ODA/programs/NaturalResources/Pages/CAFO.aspx

recent guidance provided in either Extension Publication PNW 533[12] or PNW 673[13]. Copies of these documents are available on Ecology's CAFO permit webpage[14].

The permittee must use the analytical methods specified in Table 7 unless a different method used is sufficiently sensitive and produces measurable results in the sample and EPA has listed it as an EPA-approved method in 40 CFR Part 136. If the Permittee uses an alternative method, not specified in the permit and as allowed above, it must report the test method, detection level (DL), and quantification level (QL) on the discharge monitoring report or in the required report. If the Permittee is unable to obtain the required DL and QL in its effluent due to matrix effects, the Permittee must submit a matrix-specific detection limit (MDL) and a QL to Ecology with appropriate laboratory documentation.

If a waste storage structure is equipped with a leak detection system, monitor for leaks according to the leak detection plan included in the MPPP.

Table 7 Manure, Litter, and Process Wastewater Sampling

Parameter	Units & Speciation (Liquid Materials)	Units & Speciation (Solid Materials)	Laboratory Method	Sampling Frequency	Sample Type
Ammonia-N (NH_3-N)	Lbs/1000 gal as N, as received	Lbs/ton as N, as received	SM 4500-NH_3 G/H-2011	Up to 3 times per year, per source	Composite
Nitrate plus Nitrite-N (NO_3-N + NO_2-N)	Lbs/1000 gal as N, as received	Lbs/ton as N, as received	SM 4500-NO_3 E/F/H-2011	Up to 3 times per year, per source	Composite
Total Phosphorus[a]	Lbs/1000 gal as P_2O_5, as received	Lbs/ton as P_2O_5, as received	SM 4500-P E-2011	Up to 3 times per year, per source	Composite
Liner Leak[b]	Yes/No	NA	NA	Weekly	Visual Observation
Volume of Leaked Water	gallons/day	NA	NA	Daily, if leak detected	Measurement

[a] If laboratory reports results as elemental phosphorus, multiply the result by 2.29 to convert to the fertilizer form P_2O_5.

[b] If leaked water is observed report yes, if not report no.

[12] Bary, A., Cogger, C., Sullivan, D. (2016). *Fertilizing with Manure and Other Organic Amendments*. Pacific Northwest Extension, Washington State University.

[13] Moore, A., de Haro-Marti, M., Chen, L. (2015). *Sampling Dairy Manure and Compost for Nutrient Analysis*. Pacific Northwest Extension, University of Idaho.

[14] https://ecology.wa.gov/cafo

S5.C. Soil Monitoring

1. **When to collect and analyze soil samples**

   The permittee must monitor soil on land application fields. Soil samples must be taken at least twice a year according to requirements in S4.J *Soil Sampling and Nutrient Analysis*.

   - Collect soil samples prior to land application and analyze them for the parameters listed in Table 8.
   - Collect soil samples after harvest of annual crops and before 3 inches of rainfall accumulate. Analyze them for parameters listed in Table 9.

2. **How to collect and analyze soil samples**

   Samples must be representative of the land application field (composite sample), following the most recent guidance on soil sample handling, preservation, and shipment provided in either Extension Publication PNW 570[15] or EM 8832[16]. Copies of these documents are available on Ecology's CAFO permit webpage[17].

Table 8 Pre-Land Application Soil Monitoring

Parameter	Units & Speciation	Sampling Frequency	Depth Increments for Areas with Annual Precipitation of 25 inches or Less	Depth Increments for Areas with Annual Precipitation greater than 25 inches
Ammonia-N (NH_3-N)	lbs/acre or ppm as N	Every year	Increment 1: 0 - 12 inches Increment 2: 12-24 inches	Increment 1: 0 - 12 inches
Nitrate plus Nitrite-N (NO_3-N + NO_2-N)	lbs/acre or ppm as N	Every year	Increment 1: 0 - 12 inches Increment 2: 12-24 inches	Increment 1: 0 - 12 inches

[15] Staben, M. L., et al. (2003). *Monitoring Soil Nutrients Using a Management Unit Approach*. Pacific Northwest Extension.
[16] Sullivan, D., et al. (2021). *Post-Harvest Soil Nitrate Testing for Manured Cropping Systems West of the Cascades*. Pacific Northwest Extension, Oregon State University.
[17] https://ecology.wa.gov/cafo

Table 9 Post-Harvest Soil Monitoring

Parameter	Units & Speciation	Sampling Frequency	Depth Increments for Areas with Annual Precipitation of 25 inches or Less	Depth Increments for Areas with Annual Precipitation greater than 25 inches
Nitrate plus Nitrite-N (NO_3-N + NO_2-N)	lbs/acre or ppm as N	Every year	Increment 1: 0 -12 inches Increment 2: 12-24 inches	Increment 1: 0 -12 inches
Ammonia-N (NH_3-N)	lbs/acre or ppm as N	Every year	Increment 1: 0 -12 inches Increment 2: 12-24 inches	Increment 1: 0 -12 inches
Soil Organic Matter	%	Every 3 years	Increment 1: 0 -12 inches Increment 2: 12-24 inches	Increment 1: 0 -12 inches
Total Phosphorus[a]	ppm	Every 3 years	Increment 1: 0 -12 inches Increment 2: 12-24 inches	Increment 1: 0 -12 inches

[a] The Bray-1 extraction method must be used to determine soil phosphorus for soils below pH 7. The Olsen bicarbonate extraction method must be used for soils at or above pH 7.

S5.D. Groundwater Monitoring

1. Medium and Large CAFOs located within a nitrate priority area

Medium and large CAFOs located within a ***nitrate priority area*** categorized as moderate, moderately high, high, or very high priority must install groundwater monitoring network and conduct monitoring according to the procedures below. A map of the nitrate priority areas is provided in Appendix C.

All production areas and land application fields must be monitored. If the CAFO facility is not co-located, establish separate groundwater monitoring networks for each area. Land application fields with similar management practices and site conditions including but not limited to soil type and hydrogeology, may be grouped together, so long as representative samples can be obtained.

Each groundwater monitoring network must have a sufficient number of wells downgradient of the CAFO facility to ensure a high probability of detecting contamination when it is present. At least one well must be upgradient of the CAFO facility monitored by the network. Groundwater monitoring must be conducted in the uppermost saturated zone.

a. Develop the Work Plan

Within 6 months of receiving permit coverage, the Permittee must submit a work plan to Ecology for installing a groundwater quality monitoring network, in accordance with WAC 173-200-080. The work plan must conform to *Guidelines for Preparation of Engineering Reports for Industrial Wastewater Land Application Systems* (Ecology Publication #93-36) and the *Implementation Guidance for the Groundwater Quality Standards* (Ecology Publication #96-02). The work plan must include well siting, quality control protocols, a sampling plan, and sampling protocols.

b. Install Groundwater Monitoring Wells

The Permittee must complete construction of the groundwater monitoring network within ninety (90) days after approval of the work plan by Ecology. The Permittee must construct wells in accordance with Chapter 173-160 WAC. Report to Ecology the tag numbers, latitude and longitude (NAD83/WGS84 datum), and top-of-casing elevations (NAVD88 datum) of each monitoring well.

c. Conduct Routine Monitoring

After the groundwater monitoring network is in place, the Permittee must notify Ecology and monitor the parameters in Table 10 according to the approved work plan. Notify Ecology at least 30 days prior to monitoring.

The Permittee must use the analytical methods specified below unless a different method used is sufficiently sensitive and produces measurable results in the sample and EPA has listed it as an EPA-approved method in 40 CFR Part 136. If the Permittee uses an alternative method, not specified in the

permit and as allowed above, it must report the test method, detection level (DL), and quantification level (QL) in the required report. If the Permittee is unable to obtain the required DL and QL in its effluent due to matrix effects, the Permittee must submit a matrix-specific detection limit (MDL) and a QL to Ecology with appropriate laboratory documentation.

2. **Small CAFOs and Facilities outside of a Nitrate Priority Area**

If the results of the nitrate loading analysis (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, the permittee must evaluate the impacts of its activities on groundwater quality by completing the requirements below:

a. Develop the Work Plan

Within 6 months after receiving the determination from Ecology, the Permittee must submit a work plan to Ecology for a groundwater quality evaluation study at the site specified in the determination, in accordance with WAC 173-200-080. The work plan must conform to *Guidelines for Preparation of Engineering Reports for Industrial Wastewater Land Application Systems* (Ecology Publication #93-36) and the *Implementation Guidance for the Groundwater Quality Standards* (Ecology Publication #96-02). The work plan must include well siting, quality control protocols, a sampling plan, and sampling protocols.

b. Implement the Work Plan

Upon approval of the work plan by Ecology, the Permittee must conduct a groundwater evaluation study to determine site-specific hydrogeologic conditions.

c. Report the Study Results

After the first full year of monitoring, the Permittee must submit a report summarizing the results of the groundwater evaluation study, interpretations of the data, conclusions, and recommendations. Submit this report with the annual report required in S7.D.

d. Install Additional Groundwater Monitoring Wells

If the groundwater study recommends installation of additional wells, the Permittee must complete construction of the groundwater monitoring network within ninety (90) days after approval of the groundwater evaluation study by Ecology. The Permittee must construct wells in accordance with Chapter 173-160 WAC. Report to Ecology the tag numbers, latitude and longitude (NAD83/WGS84 datum), and top-of-casing elevations (NAVD88 datum) of each monitoring well.

e. Conduct Routine Monitoring

After the recommended groundwater monitoring network is in place, the Permittee must notify Ecology and monitor the parameters in Table 10 according to the approved groundwater evaluation study. Notify Ecology at least 30 days prior to monitoring.

The Permittee must use the analytical methods specified below unless a different method used is sufficiently sensitive and produces measurable results in the sample and EPA has listed it as an EPA-approved method in 40 CFR Part 136. If the Permittee uses an alternative method, not specified in the permit and as allowed above, it must report the test method, detection limit (DL), and quantification limit (QL) in the required report. If the Permittee is unable to obtain the required DL and QL in its effluent due to matrix effects, the Permittee must submit a matrix-specific detection limit (MDL) and a QL to Ecology with appropriate laboratory documentation.

3. **Submitting work plans and reporting results for all facilities**

   Work plans and groundwater evaluation study must be submitted to Ecology according to deadlines specified above. Routine monitoring results must be submitted to Ecology with the annual report required in S7.D. Each document must be submitted using WQWebPortal as described in special condition S7.D *Annual Report* and must include the certification statement and signature required by general condition G14.

Table 10 Groundwater monitoring

Parameter	Units & Speciation	Laboratory Method	Sampling Frequency[a]	Sample Type
Measured Depth to Groundwater	Feet (nearest 0.01 ft)	NA	At least quarterly	Field Measurement
pH	Standard Units	NA	At least quarterly	Field Measurement
Conductivity	Micromho/cm	NA	At least quarterly	Field Measurement
Temperature	Degrees C	NA	At least quarterly	Field Measurement
Dissolved Oxygen	mg/L	NA	At least quarterly	Field Measurement
Total Nitrogen (TN)	mg/L as N	NA	At least quarterly	Calculated
Nitrate plus Nitrite-N (NO_3-N + NO_2-N)	mg/L as N	SM4500-NO3-E/F/H	At least quarterly	Grab
Total Kjeldahl Nitrogen (TKN)	mg/L as N	SM4500-N_{org}B/C and SM4500NH_3-B/C/D/EF/G/H	At least quarterly	Grab

Parameter	Units & Speciation	Laboratory Method	Sampling Frequency[a]	Sample Type
Escherichia Coli (E. coli)	CFU or MPN per 100 mL	SM 9221B, 9221F, 9223B, EPA 1603	At least quarterly	Grab

[a] Unless groundwater evaluation study recommends more frequently monitoring

S5.E. Surface Water Monitoring

1. **Standard Protocol**

   If any discharge of pollutants occurs from the production area to surface water or a prohibited discharge occurs from land application areas to surface water, the permittee must:

   a. Record the date and time the discharge was identified, the date and time the discharge is halted, and an estimate of the volume of the discharge.

   b. Collect a minimum of one grab sample from the point of overflow or discharge within 30 minutes of detecting the discharge. The sample(s) collected must be representative of the discharge. Analyze the sample(s) for the parameters listed in Table 11.

   c. Notify the appropriate Ecology regional office in person or by phone, within 24 hours of detecting the discharge.

   d. Submit the results from the above actions to Ecology using the Water Quality Permitting Portal, unless granted a waiver from electronic reporting according to S7.A *How to Submit Documents to Ecology*.

   e. If the discharge is unauthorized, follow reporting requirements in special condition S7.E *Reporting Permit Violations*.

2. **Protocol when conditions are unsafe**

   If conditions are not safe for sampling, the permittee must provide documentation of why samples could not be collected and analyzed. For example, the permittee may be unable to collect samples during dangerous weather conditions (such as local flooding, high winds, hurricane, tornadoes, electrical storms, etc.).

   a. Record the date and time the discharge was identified, the date and time the discharge is halted, and an estimate of the volume of the discharge.

   b. Notify the appropriate Ecology regional office by phone, within 24 hours of detecting the discharge.

   c. Once dangerous conditions have passed, collect a minimum of one sample from the point of overflow or discharge.

   d. Submit the results from the above actions to Ecology using the Water Quality Permitting Portal, unless granted a waiver from electronic reporting according to S7.A *How to Submit Documents to Ecology*.

e. If the discharge is unauthorized, follow reporting requirements in special condition S7.E *Reporting Permit Violations*.

3. **Ecology Regional Office Contact Information**

Central Region at (509) 575-2490 for Benton, Chelan, Douglas, Kittitas, Klickitat, Okanogan, or Yakima County

Eastern Region at (509) 329-3400 for Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, or Whitman County

Northwest Region at (425) 649-7000 for Island, King, Kitsap, San Juan, Skagit, Snohomish, or Whatcom County

Southwest Region at (360) 407-6300 for Clallam, Clark, Cowlitz, Grays Harbor, Jefferson, Lewis, Mason, Pacific, Pierce, Skamania, Thurston, or Wahkiakum County

Table 11 Surface Water Monitoring

Parameter	Units & Speciation	Laboratory Method	Sampling Frequency	Sample Type
Escherichia Coli (E. coli), for discharges to freshwater	CFU or MPN per 100 mL	EPA 1603	1/event	Grab
Enterococci, for discharges to marine water	CFU or MPN per 100 mL	EPA 1600	1/event	Grab
Fecal Coliform Bacteria, for discharges to marine water	CFU or MPN per 100 mL	SM 9222D	1/event	Grab
Total Nitrogen (TN)	mg/L as N	NA	1/event	Calculated
Nitrate plus Nitrite-N (NO_3-N + NO_2-N)	mg/L as N	SM4500-NO3-E/F/H	1/event	Grab
Total Kjeldahl Nitrogen (TKN)	mg/L as N	SM4500-N_{org}B/C and SM4500NH_3-B/C/D/EF/G/H	1/evernt	Grab
Total Phosphorus	mg/L	EPA 365.1	1/event	Grab
Volume of discharged water	Gallons/day	NA	Daily, as needed	Measured

S5.F. Laboratory Accreditation

The Permittee must ensure that all monitoring data required by Ecology for permit specified parameters is prepared by a laboratory registered or accredited under the provisions of chapter 173-50 WAC, *Accreditation of Environmental Laboratories*.

Soils data are process control parameters, which do not require preparation by an accredited laboratory. However, the Permittee must obtain this data from a reputable agricultural test lab that is an active participant in a nationally recognized agricultural laboratory proficiency testing program, such as the North American Proficiency Testing Program (NAPT). You can find more information on the NAPT website[18] .

[18] http://www.naptprogram.org/

S6. RECORD KEEPING

S6.A. Operations and Maintenance Records

The Permittee must record the outcome of the visual inspections/monitoring required by special condition S5.A *Operations and Maintenance*. A template for this record keeping is available on Ecology's CAFO permit webpage[19].

S6.B. Land Application Records

The Permittee must keep the following records of land application for each field where manure, litter, process wastewater, or other organic by-products were applied:

1. Dates of all applications.
2. The field name consistent with the MPPP field map and field specific nutrient budget.
3. Method of land application.
4. Application rate, including commercial/chemical fertilizer, in pounds, gallons, tons, or ft3 per acre.
5. The total nitrogen applied (ammonia-N (NH3-N), ammonium-N (NH4-N), nitrate (NO3-N), and organic nitrogen) in pounds per acre.
6. Total phosphorus applied in pounds per acre.
7. Weather 24 hours before land application.
8. Weather during land application.
9. Weather 24 hours after land application.
10. Total amount of irrigation water applied to each field in acre-feet and fractions thereof.

A template for this record keeping is available on Ecology's CAFO permit webpage[20].

Upon determination that a high late summer or early fall soil nitrate test is due to crop failure or other unusual environmental conditions, the Permittee must keep records of how the determination was made, including any data, measurements, or best professional judgment by technical assistance providers.

S6.C. Export Records

The Permittee must record the information listed below each time it exports manure, litter, process wastewater, or other organic by-products. A template for this record keeping is available on Ecology's CAFO permit webpage[21].

[19] https://ecology.wa.gov/cafo
[20] https://ecology.wa.gov/cafo
[21] https://ecology.wa.gov/cafo

1. Amount of manure, litter, process wastewater, or other organic by-products exported in gallons for liquid/slurry and tons for solids
2. Name of entity manure was exported to
3. Date export took place

The permittee must provide the most recent manure, litter, process wastewater, or other organic by-product nutrient analysis to the recipient as required by special condition S4.O *Manure Export*.

S6.D. Monitoring Records

For each measurement or sample taken, the Permittee must record the following information:

1. The date, exact place, method, and time of sampling or measurement
2. The individual who performed the sampling or measurement
3. The dates the analyses were performed
4. The individual who performed the analyses
5. The analytical techniques or methods used
6. The results of all analyses

S6.E. Providing Records

The Permittee must provide a copy of their MPPP, records, or other documents required by this permit to Ecology or WSDA within 14 days of their request.

The Permittee must maintain a copy of their MPPP, records, or other documents required by this permit on-site and make these documents available to Ecology or WSDA during site visits.

Updated MPPP must be submitted to Ecology within the timeframe required in S4.A.5 *Update of the MPPP*.

S6.F. Records Retention

The Permittee must retain records for a minimum of five (5) years. Such information must include copies of all monitoring, reports, and records required by this permit, and records of all data used to complete the application for this permit.

The Permittee must keep records longer in the event of unresolved litigation regarding the discharge of pollutants by the Permittee or when requested by Ecology.

S7. REPORTS AND SUBMITTALS

S7.A How to Submit Documents to Ecology

The permittee must use Ecology's Water Quality Permitting Portal[22] to submit all documents, data, and submittals required in this permit.

If the Permittee is unable to submit electronically (for example, they do not have access to the internet), they must contact Ecology to request an Electronic Reporting Waiver form and submit the completed form to Ecology at:

Washington State Department of Ecology
Water Quality Program
Attn: CAFO Permit Manager
PO Box 47696
Olympia, WA 98504-7696

All submittals (documents, data, reports, etc.) must be approved and signed by a responsible person in accordance with General Condition G14 (Signatory Requirements).

S7.B. Submittal of MPPP

The Permittee must submit the CAFO's initial MPPP to Ecology with the permit application.

Updated MPPPs must be submitted to Ecology within the timeframe required in S4.A.5 *Update of the MPPP*.

S7.C. Waste Storage Structure Assessment

The permittee must conduct and submit an assessment of the condition of each storage structure used for manure, litter, process wastewater and other organic by-products according to the procedures below.

The Permittee shall continue to address any deficiencies identified in the assessment required in the previous Concentrated Animal Feeding Operation General Permit.

1. **Assessment for waste storage ponds with leak detection systems and permanent aboveground tanks**

   If the waste storage pond has a leak detection system, follow the leak detection plan as written in the MPPP. See special condition S4.C.3 *Maintain Storage Facilities* for plan requirements.

   If using a permanent aboveground tank, follow maintenance requirements in special condition S4.C.3 *Maintain Storage Facilities*. Conduct and document visual inspections and repairs as required in special condition S5.A *Operations and Maintenance*.

[22] https://secureaccess.wa.gov/ecy/wqwebportal

2. **Assessment for waste storage ponds without leak detection systems**

   If a waste storage pond does not have a leak detection system in place, a ***qualified expert*** must assess the pond for compliance with requirements in special condition S4.C or by completing the Washington NRCS Engineering Technical Note 23 - Assessment Procedure for Existing Waste Storage Ponds. The Technical Note is available on Ecology's CAFO permit webpage[23].

   The Permittee must submit the results of the assessment for each waste storage pond without a leak detection system to Ecology within 2 years of permit coverage. The assessment must include the certification statement and signature required by general condition G14.

   If the assessment identifies that repairs are needed, the permittee must discontinue use of the waste storage pond and develop a plan for repair. The repair plan must be submitted to Ecology with an updated MPPP within 6 months in accordance with procedures in S4.A.5.b *When Ecology, WSDA, or Permittee assessments require MPPP updates*. The repair plan must include:

   a. A description of how the Permittee will ensure compliance with special condition S4.C.

   b. Timelines of when repairs will be completed.

   c. A certification statement and signature as required by general condition G14.

   Ecology may require a work plan and groundwater evaluation study (special condition S5.D *Groundwater Monitoring*) if the assessment determines that:

   a. there is less than two feet of vertical separation between the bottom of the waste storage pond (inside the pond above the liner) and the seasonal high water table, or

   b. there is a reasonable potential to impact groundwater due to the condition of the structure.

   Work proposed in the repair plan must be completed within 18 months of the completion of the waste storage pond assessment.

   To request a time extension on work proposed in the repair plan, a Permittee shall submit a detailed explanation of why it is making the request (technical basis) to Ecology in accordance with special condition S4.A.5.b *When Ecology, WSDA, or Permittee assessments require MPPP updates* , 120 days prior to the deadline. Ecology will approve or deny the request within 60 days of receipt of a complete request.

[23] https://ecology.wa.gov/cafo

3. **Assessment for solids storage, dry stacks, and compost piles on impervious surfaces**

   If the storage area is located on an impervious surface, follow maintenance requirements in special condition S4.C.3 *Maintain Storage Facilities*. Conduct and document visual inspections and repairs as required in special condition S5.A *Operations and Maintenance*.

4. **Assessment for solids storage, dry stacks, and compost piles on soil pads**

   Each solids storage area located on soil pads must be assessed for compliance with requirements in special condition S4.C through a qualified expert or by completing the double-ring infiltrometer test (ASTM D3385-88). The infiltrometer test procedure is available on Ecology's CAFO Permit webpage[24].

   The Permittee must submit the results of the assessment for each soil pad to Ecology within 2 years of permit coverage.

   If the assessment identifies deficiencies, the permittee must collect soil samples at depth increments of 0-12 inch and 12-24 inches and analyze for parameters in Table 8. The permittee must develop a compliance plan to address the deficiencies. The plan must be submitted with an updated MPPP to Ecology within 6 months in accordance with procedures in S4.A.5.b *When Ecology, WSDA, or Permittee assessments require MPPP updates*. The compliance plan must include:

   a. A description of how the Permittee will ensure compliance with special condition S4.C.2 *Solid Material Storage Facilities*.
   b. Timelines of when work to address the deficiency will be completed.
   c. Results from analyzed soil samples.
   d. A certification statement and signature as required by general condition G14.

   Work proposed in the compliance plan must be completed within 18 months of the completion of the solids storage assessment. To request a time extension on work proposed in the compliance plan, a Permittee shall submit a detailed explanation of why it is making the request (technical basis) to Ecology in accordance with special condition S4.A.5.b *When Ecology, WSDA, or Permittee assessments require MPPP updates* , 120 days prior to the deadline. Ecology will approve or deny the request within 60 days of receipt of a complete request.

S7.D. Annual Report

By February 1 each year, the Permittee must submit an annual report using Ecology's Water Quality Permitting Portal – Permit Submittals application, unless Ecology grants the permittee a waiver from electronic reporting according to S7.A *How to Submit documents to Ecology*. Use the form in Appendix B if granted a waiver.

[24] https://ecology.wa.gov/cafo

The reporting period is the previous calendar year (January 1 to December 31). Permittees must include the following with each annual report:

1. Number of animals and manure, litter, wastewater generated.
2. Discharges from production area or land application fields, if they occurred.
3. Nutrient source content results, analyzed according to S5.B.
4. Field land application information for each field.
5. Soil nutrient results, analyzed according to S5.C.
6. Yearly field-specific nutrient budgets for each field, including double crop or winter crop if applicable, developed according to S4.K.1.
7. The certification statement and signature according to G14.

S7.E. Reporting Permit Violations

In the event the Permittee is unable to comply with any of the permit terms, conditions, or discharge limits, due to any cause, the Permittee must:

1. Immediately take action to minimize or otherwise stop the violation, and correct the problem.
2. Sample and analyzed all discharges to surface water according to procedures in special condition S5.E *Surface Water Monitoring*.
3. Notify the appropriate Ecology regional office in person or by phone, within 24 hours of when the Permittee becomes aware of the noncompliance:

   Central Region at (509) 575-2490 for Benton, Chelan, Douglas, Kittitas, Klickitat, Okanogan, or Yakima County

   Eastern Region at (509) 329-3400 for Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, or Whitman County

   Northwest Region at (425) 649-7000 for Island, King, Kitsap, San Juan, Skagit, Snohomish, or Whatcom County

   Southwest Region at (360) 407-6300 for Clallam, Clark, Cowlitz, Grays Harbor, Jefferson, Lewis, Mason, Pacific, Pierce, Skamania, Thurston, or Wahkiakum County

4. Submit a written report to Ecology within 5 days using Ecology's Water Quality Permitting Portal, unless granted a waiver from electronic reporting according to S7.A *How to Submit Documents to Ecology*. The report must include:
   a. A description of the noncompliance
   b. A descriptions of the cause of the noncompliance
   c. The period of noncompliance including exact dates and times

d. A statement about whether the noncompliance has been corrected, or if it has not been corrected how long the noncompliance is expected to last

e. A description of the steps taken, or being taken to correct the noncompliance corrective action taken and/or planned, steps to be taken to prevent a recurrence, results of the re-sampling, and any other pertinent information.

f. Sample results required by special condition S5.E *Surface Water Monitoring*.

g. The certification statement and signature required by general condition G14.

5. The Permittee must review their MPPP for compliance with the permit and make appropriate updates within 14 days of the noncompliance to address the noncompliance and reflect any necessary changes to the facility. If the MPPP is revised, submit the updated MPPP in accordance with procedures in S4.A.5.b *When Ecology, WSDA, or Permittee assessments require MPPP updates*. The Permittee must also immediately begin the process to fully implement and maintain appropriate source control and/or treatment infrastructure or practices, addressing the deficiencies no later than 45 days from the date of noncompliance. If installation of necessary infrastructure or practices is not feasible within 45 days Ecology may approve additional time when an extension is requested by a Permittee within the initial 45-day period.

Compliance with the requirements of this special condition (special condition S7.E) does not relieve the Permittee from responsibility to maintain continuous compliance with the terms and conditions of this permit or the resulting liability for failing to comply.

S7.F. Spills Reporting

The Permittee must report spills of oil or hazardous materials (e.g. pesticides) in accordance with the requirements of RCW 90.56.280 and 173-303-145 WAC by calling the National Response Center 1-800-424-8802, and the Washington Emergency Management Division 1-800-258-5990. Permittees can obtain additional instructions on Ecology's Report a Spill webpage[25].

S8. APPENDICES

The attached appendices are incorporated by reference into this permit.

APPENDIX A: DEFINITIONS

APPENDIX B: ANNUAL REPORT

APPENDIX C: NITRATE PRIORITY AREAS

[25] https://ecology.wa.gov/Footer/Report-an-environmental-issue/Report-a-spill

GENERAL CONDITIONS

G1. DISCHARGE VIOLATIONS

All discharges and activities authorized by this general permit shall be consistent with the terms and conditions of this general permit. The discharge of any pollutant more frequently than, or at a concentration in excess of that authorized by this general permit is a violation of the terms and conditions of this general permit.

G2. PROPER OPERATION AND MAINTENANCE

The Permittee shall, at all times, properly operate and maintain all facilities or systems of treatment and control (and related appurtenances) which are installed to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems, which are installed by a Permittee only when the operation is necessary to achieve compliance with the conditions of this permit.

G3. RIGHT OF ENTRY

The Permittee shall allow an authorized representative of Ecology, upon the presentation of credentials and such other documents as may be required by law:

1. To enter upon the premises where a discharge is located or where any records shall be kept under the terms and conditions of this permit;
2. To have access to and copy at reasonable times any records that shall be kept under the terms of this permit;
3. To inspect at reasonable times any monitoring equipment or method of monitoring required in this permit;
4. To inspect at reasonable times any collection, treatment, pollution management, or discharge facilities; and
5. To sample at reasonable times any discharge of pollutants.

G4. PERMIT COVERAGE REVOKED

Pursuant with chapter 43.21B RCW and chapter 173-226 WAC, the Director may require any discharger authorized by this permit to apply for and obtain coverage under an individual permit or another more specific and appropriate general permit. Cases where revocation of coverage may be required include, but are not limited to, the following:

1. Violation of any term or condition of this permit.
2. Obtaining coverage under this permit by misrepresentation or failure to disclose fully all relevant facts.

3. Failure or refusal of the Permittee to allow entry as required in RCW 90.48.090.
4. A determination that the permitted activity endangers human health or the environment, or contributes to water quality standards violations.
5. Nonpayment of permit fees or penalties assessed pursuant to RCW 90.48.465 and chapter 173-224 WAC.
6. Failure of the Permittee to satisfy the public notice requirements of WAC 173-226-130(5), when applicable; or Permittees who have their coverage revoked for cause according to WAC 173-226-240 may request temporary coverage under this permit during the time an individual permit is being developed, provided the request is made within ninety (90) days from the time of revocation and is submitted along with a complete individual permit application form.

G5. GENERAL PERMIT MODIFICATION AND REVOCATION

This permit may be modified, revoked and reissued, or terminated in accordance with the provisions of chapter 173-226 WAC. Grounds for modification or revocation and reissuance include, but are not limited to, the following:

1. When a change which occurs in the technology or practices for control or abatement of pollutants applicable to the category of dischargers covered under this permit;
2. When effluent limitation guidelines or standards are promulgated pursuant to the FWPCA or chapter 90.48 RCW, for the category of dischargers covered under this permit;
3. When a water quality management plan containing requirements applicable to the category of dischargers covered under this permit is approved; or
4. When information is obtained which indicates that cumulative effects on the environment from dischargers covered under this permit are unacceptable.

G6. REPORTING A CAUSE FOR MODIFICATION

A Permittee who knows or has reason to believe that any activity has occurred or will occur which would constitute cause for modification or revocation under Condition G5 above, or 40 CFR 122.62 shall report such plans, or such information, to Ecology so that a decision can be made on whether action to modify coverage or revoke coverage under this permit will be required. Ecology may then require submission of a new application for coverage under this, or another general permit, or an application for an individual permit. Submission of a new application does not relieve the Permittee of the duty to comply with all the terms and conditions of the existing permit until the new application for coverage has been approved and corresponding permit has been issued.

G7. TOXIC POLLUTANTS

The Permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the

regulations that establish those standards or prohibitions, even if this permit has not yet been modified to incorporate the requirement.

G8. OTHER REQUIREMENTS OF 40 CFR

All other requirements of 40 CFR 122.41 and 122.42 are incorporated in this general permit by reference.

G9. COMPLIANCE WITH OTHER LAWS AND STATUTES

Nothing in this permit shall be construed as excusing the Permittee from compliance with any applicable Federal, State, or local statutes, ordinances, or regulations.

G10. ADDITIONAL MONITORING

Ecology may establish specific monitoring requirements in addition to those contained in this permit by administrative orders or permit modification.

G11. PAYMENT OF FEES

The Permittee shall submit payment of fees associated with this permit as assessed by Ecology. Ecology may revoke this permit coverage or take enforcement, collection, or other actions, if the permit fees established under chapter 173-224 WAC are not paid.

G12. REQUESTS TO BE EXCLUDED FROM COVERAGE UNDER A GENERAL PERMIT

Any discharger authorized by this permit may request to be excluded from coverage under this general permit by applying for an individual permit. The discharger shall submit to the Director an application as described in WAC 173-220-040 or WAC 173-216-070, whichever is applicable, with reasons supporting the request. These reasons must fully document how an individual permit will apply to the applicant in a way that the general permit cannot. Ecology may make specific requests for information to support the request. The Director shall either issue an individual permit or deny the request with a statement explaining the reason for the denial. When an individual permit is issued to a discharger otherwise subject to this general permit, the applicability of this general permit to that Permittee is automatically terminated on the effective date of the individual permit.

G13. PENALTIES FOR VIOLATING PERMIT CONDITIONS

Any person who is found guilty of willfully violating the terms and conditions of this permit shall be deemed guilty of a crime, and upon conviction thereof shall be punished by a fine of up to ten thousand dollars and costs of prosecution, or by imprisonment in the discretion of the court. Each day upon which a willful violation occurs may be deemed a separate and additional violation. Any person who violates the terms and conditions of a waste discharge permit shall incur, in addition to any other penalty as provided by law, a civil penalty in the amount of up to ten thousand dollars for every such violation. Each and every such violation shall be a separate and distinct offense, and in case of a continuing violation, every day's continuance shall be deemed to be a separate and distinct violation.

G14. SIGNATORY REQUIREMENTS

All applications, reports, or information submitted to Ecology shall be signed and certified.

1. All permit applications shall be signed:
    a. In the case of corporations, by a responsible corporate officer.
    b. In the case of a partnership, by a general partner of a partnership.
    c. In the case of sole proprietorship, by the proprietor.
    d. In the case of a municipal, state, or other public facility, by either a principal executive officer or ranking elected official.
2. All reports required by this permit and other information requested by Ecology shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:
    a. The authorization is made in writing by a person described above and submitted to Ecology.
    b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.)
3. Changes to authorization. If an authorization under paragraph B.2 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph B.2 above must be submitted to Ecology prior to or together with any reports, information, or applications to be signed by an authorized representative.
4. Certification. Any person signing a document under this section shall make the following certification:

I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

G15. APPEALS

The terms and conditions of this general permit are subject to appeal. There are two different appeal categories.

1. The permit terms and conditions as they apply to the appropriate class of dischargers are subject to appeal within thirty (30) days of issuance of this general permit in accordance with chapter 43.21(B) RCW and chapter 173-226 WAC; and
2. The applicability of the permit terms and conditions to an individual discharger are subject to appeal in accordance with chapter 43.21(B) RCW within thirty (30) days of the effective date of coverage of that discharger.

An appeal of the coverage of this general permit to an individual discharger is limited to the applicability or non-applicability of this permit to that same discharger. Appeal of this permit coverage of an individual discharger will not affect any other individual dischargers. If the terms and conditions of this general permit are found to be inapplicable to any discharger(s), the matter shall be remanded to Ecology for consideration of issuance of an individual permit or permits.

G16. SEVERABILITY

The provisions of this permit are severable, and if any provision of this general permit or application of any provision of this general permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this general permit, shall not be affected thereby.

G17. DUTY TO REAPPLY

The Permittee shall reapply for coverage under this permit at least one hundred and eighty (180) days prior to the specified expiration date of this permit. An expired permit and coverage under the permit continues in force and effect until Ecology issues a new permit (coverage) or until Ecology cancels it. Only those facilities that have reapplied for coverage under this permit are covered under the continued permit.

G18. MONITORING BEYOND PERMIT REQUIREMENTS

If the Permittee performs monitoring to document compliance with this permit beyond that required by this permit, sampling and analysis must conform to the latest revision of the *Guidelines Establishing Test Procedures for the Analysis of Pollutants* contained in 40 CFR Part 136 (or as applicable in 40 CFR subchapters N [Parts 400–471] or O [Parts 501-503]).

Ecology may specify alternative methods for parameters without limits and for those parameters without an EPA approved test method in 40 CFR Part 136.

APPENDIX A: DEFINITIONS

25-year, 24-hour Storm Event:

The amount of precipitation from a 24-hour storm event that has the likelihood of occurring once in a 25-year period. The amount of precipitation from a storm event of this type varies by location.

Agricultural Stormwater:

Discharges to surface water from land application fields generated only by precipitation provided that the following are true:

1. The discharge was not from the production area,
2. The discharge was not caused by human activities even if the activity took place during precipitation, and
3. Permittee is in compliance with their CAFO permit (including use of best management practices), where the manure, litter, process wastewater, or other organic by-products have been applied in accordance with site specific yearly field nutrient budget and other relevant permit requirements.

Applicant:

The person or entity applying for permit coverage.

Application for Coverage:

The form developed by Ecology used by a discharger to apply for coverage under a general permit. It is specific to each general permit. Also referred to as a Notice or Intent or NOI.

Application Rate:

The rate in quantity per acre (e.g. gallons/acre, tons/acre) that manure, litter, process waste, process wastewater, other organic by-products, or other nutrients from all sources are applied to a land application field.

Beneficial Use:

All existing and future uses of waters of the state as defined in WAC 173-200-020(4), and the use designations specified in WAC 173-201A-602. All uses have the same priority.

Composite Sample:

A series of grab samples collected over several locations within a field or ***management unit*** and combined together.

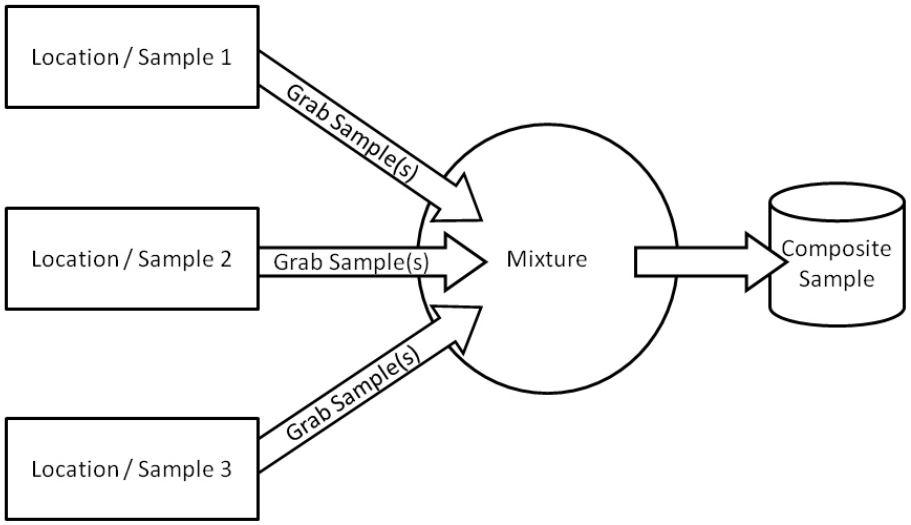


Figure 1 Composite Sample

Control:

Performing, directing, managing, overseeing, supervising, or giving instruction about any action or decision.

Crest:

The highest point of the structural (e.g. embankment) wall of a waste storage pond or other liquid storage structure.

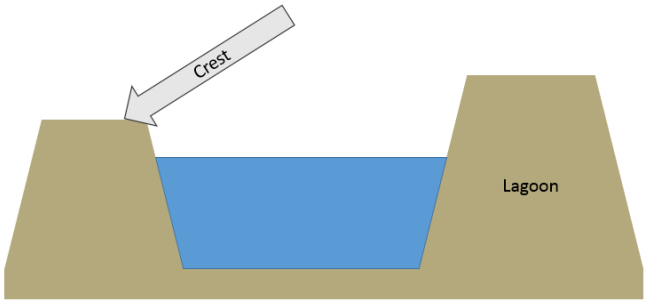


Figure 2 Crest of a waste storage structure

Discharge:

The addition of any pollutant or combination of pollutants to waters of the state.

Discharger:

The owner or operator of any commercial or industrial operation subject to regulation under chapter 90.48 RCW or the federal Clean Water Act due to a discharge.

Drier Climate:

A region in the State of Washington that receives, on average, 25 inches or less of precipitation annually.

Effluent Limitation:

Synonymous with discharge limits. Any restriction on timing, quantities, rates, and concentrations of pollutants discharged into waters of the state.

Export:

The removal of manure, litter, and process wastewater, or other organic by-products from the CAFO's production system to another party that is not under the control of the Permittee.

Feed:

Materials used for animal nutrition or that will be processed and used for animal nutrition that are stored by the CAFO such as hay, silage, grain, vegetable leavings, or other materials used for animal nutrition.

Filter Strip:
A strip of dense permanent vegetative cover such as grass and shrubs which slow land application field run-off and work to filter out nutrients and other contaminants (e.g. sediment, chemicals, bacteria, pathogens).

Freeboard:

The vertical distance from the maximum storage level (including normal storage plus storage volume for a 25-year, 24-hour storm event) of a waste storage pond to the lowest point on the waste storage pond ***crest***.

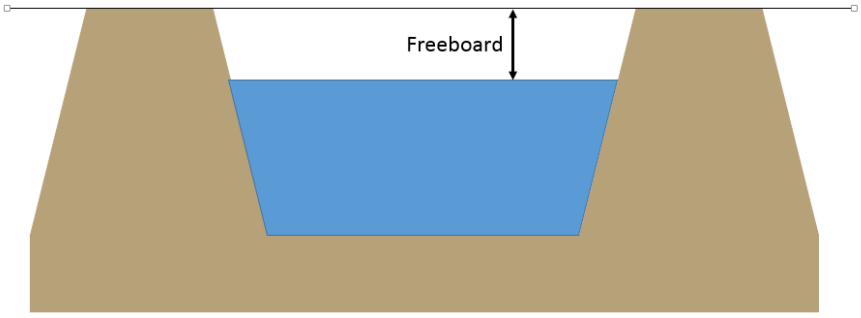


Figure 3 Freeboard

General Permit:

A permit that covers multiple dischargers of a source category within a designated geographical area in lieu of issuing individual site-specific permits to each discharger.

Geomembrane Liner:

A type of storage pond liner material that is a synthetic polymer such as reinforced polypropylene, high density polyethylene (HDPE), or polyvinyl chloride (PVC) and that is usually between 35 and 60 mil thick.

Groundwater:

Water in a saturated zone or stratum beneath the surface of land or below a surface water body. Surficially perched water is groundwater (Douma v. Ecology PCHB 00-019).

Indian Country:

As defined in 18 USC 1151: "Except as otherwise provided in sections 1154 and 1156 of this title, the term ''Indian country'', as used in this chapter, means (a) all land within the limits of any Indian reservation under the jurisdiction of the United States Government, notwithstanding the issuance of any patent, and, including rights-of-way running through the reservation, (b) all dependent Indian communities within the borders of the United States whether within the original or subsequently acquired territory thereof, and whether within or without the limits of a state, and (c) all Indian allotments, the Indian titles to which have not been extinguished, including rights-of-way running through the same."

Land Apply/Application:

The process of putting manure, litter, process wastewater, or other organic by-products on to a field to provide nutrients for crop growth.

Land Application Field:

An area of land, including ***management units***, under the control of the CAFO (excluding the production area) to which manure, litter, process wastewater, or other organic by-products are applied as a fertilizer or soil amendment.

Litter:

Animal bedding, materials used in animal housing such as straw, sand, or shavings on the floor, or spilled feed that has come into contact with manure, other organic by-products, or other contaminants.

Management Unit:

Portions of a field or portions of multiple closely located fields which have the same or very similar soil and crop growth characteristics which allow the areas to be managed as a single land application field.

Manure:

Liquid and solid livestock excrement.

Nitrate priority area:

Area prioritized by Ecology where conditions are vulnerable to nitrate transport to groundwater and wells sampled for nitrate exceed or approach the drinking water maximum contaminant limit of 10 mg/L. Areas are based on factors such as topography, nitrate risk studies, recharge,

land use, geology, soil properties, travel time through the soil profile, nitrate concentrations, and public health exposure. Priority areas are classified as Very High (bin 1), High (bin 2), Moderately High (bin 3), Moderate (bin 4), and Moderate- Urban (bin 5). Areas classified as Low (bin 6) and Insufficient Data (bin 7) have vulnerable conditions, but little to no nitrate results above 5 mg/L.

Notice of Intent (NOI):

A formal application or request for coverage under a general permit pursuant to WAC 173-226-200. See also Application for Coverage.

Notice of Termination (NOT):

A request by the ***Permittee*** to Ecology to end the Permittee's permit coverage because the facility no longer requires a permit.

Over-Top:

The addition of manure, litter, process wastewater, other organic by-products, or other material (e.g. precipitation) to a waste storage pond until the level of the liquid in the pond rises over the pond crest.

Other Organic By-Product:

Decomposable materials such as compost, biosolids, digestate, crop residues, or other organic sources of nutrients that may be land applied.

Permit:

An authorization, license, or equivalent control document issued by Ecology to implement chapter 90.48 RCW, the federal Clean Water Act, and associated statutes by allowing discharges of pollutants to waters of the state within constraints.

Permittee:

The person or entity that holds a permit coverage allowing specific discharge(s) to waters of the state (surface or ground).

Point Source:

Any discernible, confined, and discrete conveyance, including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged.

Pollutant:

Dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, dirt, sediment, industrial, municipal, and agricultural waste, or any other organic or inorganic matter that shall cause or tend to cause pollution when discharged into water.

Pollution:

Such contamination, or other alteration of the physical, chemical or biological properties, of any waters of the state, including change in temperature, taste, color, turbidity, or odor of the waters, or such discharge of any liquid, gaseous, solid, radioactive, or other substance into any waters of the state as will or is likely to create a nuisance or render such waters harmful, detrimental or injurious to the public health, safety or welfare, or to domestic, commercial, industrial, agricultural, recreational, or other legitimate ***beneficial uses***, or to livestock, wild animals, birds, fish or other aquatic life.

Process Wastewater:

Any water that is used as part of the operation of a CAFO that has come into contact with manure, litter, feed, ***other organic by-products***, or other contaminants on the facility.

Production Area:

The locations making up a CAFO facility that are used for animal confinement, manure, litter, feed, and process wastewater storage, product processing facilities (e.g. milking parlor, egg washing, feed mixing), and other areas used for the storage, handling, treatment, processing, or movement of raw materials, products, or wastes. This includes manure stockpiled on fields.

Qualified Expert:

Individuals who: (1) Have received professional training in waste storage facility design and construction and (2) Are capable of evaluating the conditions of the facility that could impact water quality at the site as required by this permit.

Saturated Soil:

Soil that has water filling 100% of its soil pore volume and that no longer has the capacity to retain additional water within is pore structure.

Storage Period:

The period of time (generally fall to early spring) during which manure, litter, process wastewater and other organic by-products must be stored because they may not be land applied and comply with permit requirements.

Synthetic Liner:

Synonymous with **geomembrane liner**.

T-SUM 200:

A sum of the daily heat units above zero for each day since January 1 until 200 heat units are reached. Heat units are the average of each day's low and high temperatures in degrees Celsius.

Top of the Bank:

The point on the edge of a field past which the land drops quickly down into a drainage ditch, surface water, or depression in the land.

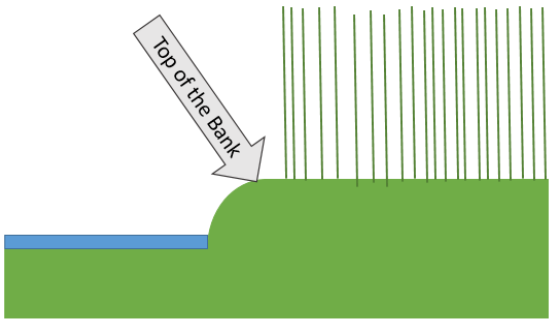


Figure 4 Top of the Bank

Total Maximum Daily Load (TMDL):

A calculation of the maximum amount of a pollutant that a water body can receive and still meet state water quality standards. Percentages of the total maximum daily load are allocated to the various pollutant sources. A TMDL is the sum of the allowable loads of a single pollutant from all contributing point and nonpoint sources. The TMDL calculations include a "margin of safety" to ensure that the water body can be protected in case there are unforeseen events or unknown sources of the pollutant. The calculation also accounts for seasonable variation in water quality.

Trust or Restricted Lands:

As defined in 25 USC § 2201(4): "(i) '*trust or restricted lands' means lands, title to which is held by the United States in trust for an Indian tribe or individual, or which is held by an Indian tribe or individual subject to a restriction by the United States against alienation; and (ii) 'trust or restricted interest in land' or 'trust or restricted interest in a parcel of land' means an interest in land, the title to which interest is held in trust by the United States for an Indian tribe or individual, or which is held by an Indian tribe or individual subject to a restriction by the United States against alienation*."

Vegetated Treatment Area:

An area of permanent vegetation used to treat contaminated runoff from areas such as feedlots, feed storage, compost areas, solid manure storage areas, barnyards and other livestock holding areas.

Waste Storage Pond:

A structure designed for storage of liquid manure, process wastewater, other organic by-products, or other liquids or slurries. May also be referred to as a temporary storage pond or lagoon.

Water Table:

The level at, and below, which the ground is completely saturated with water.

Waters of the State:

Includes lakes, rivers, ponds, streams, inland waters, underground waters (***groundwater***), salt waters and all other surface waters and watercourses within the jurisdiction of the state of Washington (RCW 90.48.020).

Water Quality Standards:

The current state and federal standards for water quality including, but not limited to:

- Surface Waters of the State of Washington (chapter 173-201A WAC).
- Ground Water Quality Standards (chapter 173-200 WAC).
- Sediment Management Standards (chapter 173-204 WAC).
- Human health based criteria in the National Toxics Rule (40 CFR § 131.36).

Wetter Climate:

A region in the State of Washington that receives, on average, more 25 inches of precipitation annually.

DEPARTMENT OF ECOLOGY
State of Washington

APPENDIX B: CAFO GENERAL PERMIT ANNUAL REPORT FORM

Permit No. WAG-_____

Facility Name: _____

Facility County: _____

Use this form to submit your annual report to Ecology. All facilities must submit a signed annual report each year on or before December 31st.

This report is for the activities conducted during calendar year 20_____

Permittee Information

Facility Name

Responsible Person

Email

Phone Number

Operator Information

Operator Name

Email

Phone Number:

Facility Information

Provide the maximum number of each type of animal confined at the facility during the calendar year.

Milking Cow:

Dry Cow:

Calf:

Feedlot Beef:

Chicken - Broiler:

Chicken - Layer:

Swine at least 55 pounds:

Swine smaller than 55 pounds:

Sheep and lambs:

Turkeys:

Ducks:

Other:

How much manure, litter, process waste, process wastewaster, and other organic by-products did your facility generate during the past year?

Liquid Manure:	Units:
Solid Manure	Units:
Poultry Litter:	Units:
Process Wastewater:	Units:
Digestate:	Units:
Other Organic By-products:	Units:

How much manure, litter, process waste, process wastewaster, and other organic by-products did your facility export during the past year?

Liquid Manure:	Units:
Solid Manure	Units:
Poultry Litter:	Units:
Process Wastewater:	Units:
Digestate:	Units:
Other Organic By-products:	Units:

What is the total number of acres covered in your Manure Pollution Prevention Plan?

What is the total number of acres you applied nutrients to or are in control of for this reporting period?

Discharge Information

During the year, has manure, litter, process waste, or process wastewater discharged from your production area or land application fields? If you are covered by the Combined Permit, do not include discharges of agricultural stormwater here.

☐ NO

☐ YES.

If YES, provide a summary of the approximate date, time, volume and duration of the discharge(s). Summarize your response to the discharge(s) on a separate sheet of paper and attach it with your annual report.

Nutrient Source Content Analysis

Report the results of your manure, litter, and process wastewater analyses as required in special conditions S4.I and S5.B. Results must be reported "as received" or "wet weight basis". Print additional copies of this page if you have more nutrient sources than space provided.

Nutrient Source Name[26]	Sample Collection Date	Nitrate plus Nitrite-N (NO3-N + NO2-N) concentration	Ammonia-N (NH3-N) concentration	Units for Nitrogen	Total Phosphorus concentration	Units for Phosphorus

[26] As documented in your Manure Pollution Prevention Plan

Field Application Information

Fill out this page for each of the fields you applied manure nutrients to fields you control.

Field ID: Field size, acres:

1st Crop Grown: 1st Crop Yield, include units:

2nd Crop Grown: 2nd Crop Yield, include units:

Field Soil Sample Analysis

Sample Depth	Date sample collected	Nitrate plus Nitrite-N (NO3-N + NO2-N) concentration	Ammonia-N (NH3-N) concentration	Units for nitrogen concentrations	Unit conversion factor for nitrogen[27]	Phosphorus (P2O5) as P concentration[28]	Units for Phosphorus	Unit conversion factor for phosphorus[29]	Organic matter content, as percent[30]
0-12 inches									
13-24 inches									
25-36 inches									
0-12 inches									
13-24 inches									
25-36 inches									

[27] When reporting pounds per acre confirm the conversion factor used by the laboratory. Typically between 3.2 to 4.0 pounds per acre per 1 ppm nitrate-N.

[28] Soil Phosphorus analysis required every three years.

[29] When reporting pounds per acre confirm the conversion factor used by the laboratory.

[30] Organic Matter analysis required every three years.

Nutrient Sources Applied to Field

Fill out this page for each of the fields you applied manure nutrients to fields you control. List all sources of nutrients including commercial fertilizer that were applies to this field.

Field ID: Field Size:

Date of Application	Nutrient source name[31]	Total amount of nutrients applied	Units of nutrients applied	Total amount of nitrogen applied	Units of nitrogen applied
Annual Total					

Adaptive Management Risk Level

If the post-harvest soil nitrate test results in a field risk level of high or very high, document the reasons for the result. High risk is soil nitrate concentrations above 31 ppm or 111 pounds per acre. Very high risk is soil nitrate concentrations above 45 ppm or 165 pounds per acre.

[31] Nutrient Source Name must match the source reported in the Nutrient Source Content Analysis section.

Field Nutrient Budgets

Attach the final field-specific nutrient budgets prepared for each field that received manure nutrients. I have included my field-specific nutrient budgets for the year 20_____.

Certification

A person who has signature authority must sign the Application. Signature authority is defined in General Condition 14 as:

a. In the case of corporations, by a responsible corporate officer.

b. In the case of a partnership, by a general partner of a partnership.

c. In the case of sole proprietorship, by the proprietor.

In the case of a municipal, state, or other public facility, by either a principal executive officer or ranking elected official.

"I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Printed Name: Date:

Signature:

Paper Submittal Instructions

Once the information in above sections is complete and the form is signed by the Legally Responsible Party, mail the form and attachments to:

Washington Department of Ecology

Water Quality Program

Attn: CAFO Permit Administrator

PO Box 47600

Olympia, WA 98504-7600

Keep a copy of the completed form and attached documents for your records.

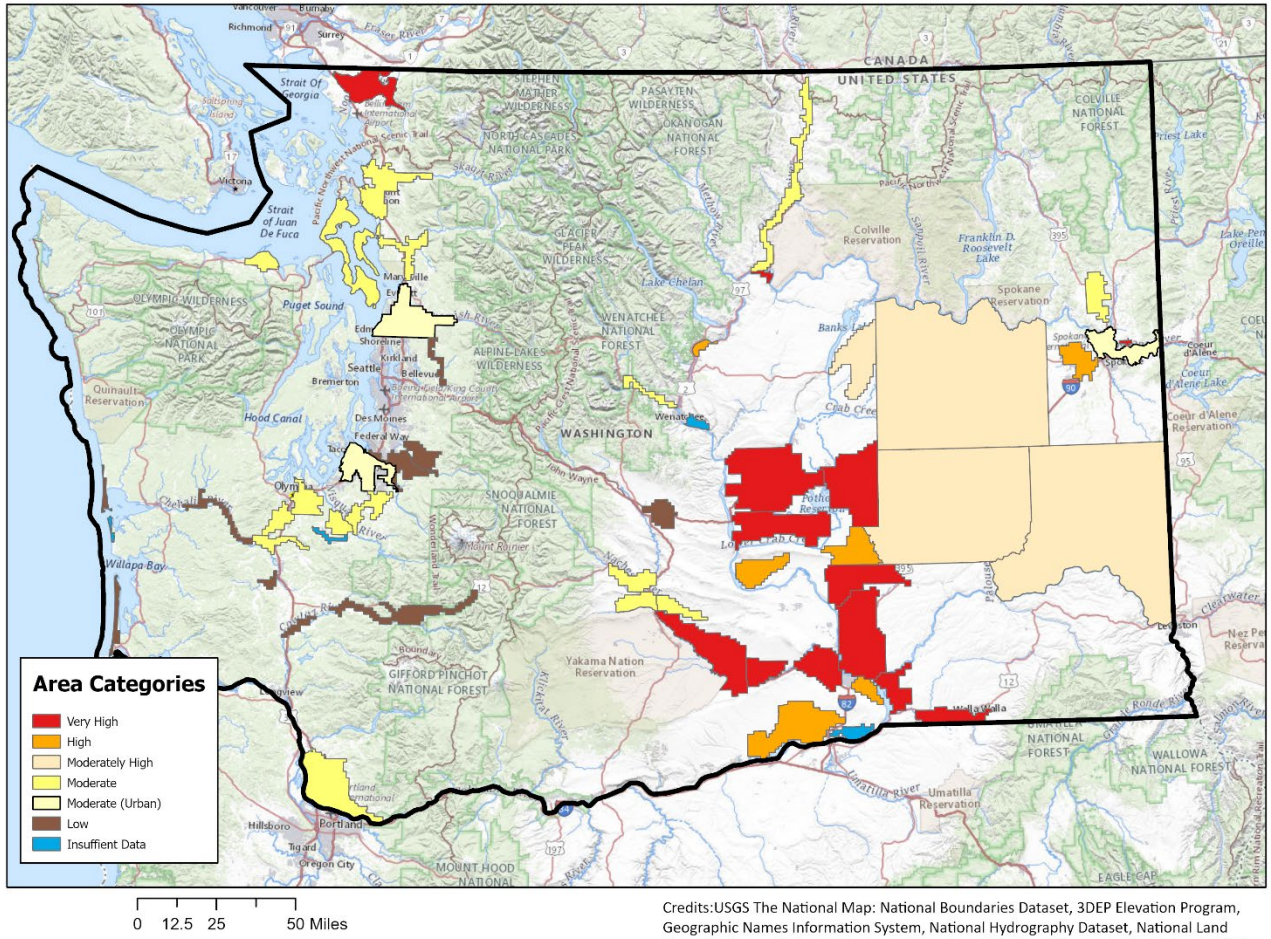
Questions

If you need assistance when filling out this report, please contact your CAFO permit inspector at the Washington Department of Agriculture.

If you're unable to reach your permit inspector, contact the CAFO permit administrator at (360) 407-6600 or cafopermit@ecy.wa.gov**.**

APPENDIX C: NITRATE PRIORITY AREAS

View this map online[32]



[32] https://arcg.is/qLKqz

Issuance Date: December 7, 2022
Effective Date: January 6, 2023
Expiration Date: January 5, 2028

CONCENTRATED ANIMAL FEEDING OPERATION GENERAL PERMIT

A STATE WASTE DISCHARGE GENERAL PERMIT

State of Washington
Department of Ecology
Olympia, Washington

In compliance with the provisions of
The State of Washington Water Pollution Control Law
Chapter 90.48 Revised Code of Washington

Until this permit expires, is modified or revoked, Permittees that have properly obtained coverage under this general permit are authorized to discharge in accordance with the special and general conditions, which follow.

DEPARTMENT OF ECOLOGY
State of Washington

Vincent McGowan, P.E.
Water Quality Program Manager
Washington State Department of Ecology

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ADA ACCESSIBILITY

To request ADA Accommodation, contact Water Quality Reception at 360-407-6600 or visit Ecology's ADA Accessibility web page[1]. For Relay Services or TTY call 711 or 877-833-6341.

For document translation services, call Water Quality Reception at 360-407-6600. Por publicaciones en espanol, por favor llame Water Quality Reception al 360-407-6600.

[1] https://ecology.wa.gov/accessibility

SUMMARY OF PERMIT SUBMITTALS

Refer to the Special and General Conditions for details on permit report and submittal requirements. The text of this permit contains words and phrases in ***bold and italics***. These words and phrases are the first usage in the permit and are defined in Appendix A.

Table 1 Summary of Permit Reports and Submittals

Permit Section	Forms & Reports	Description	Frequency	First Due Date
S2.A	Permit Application (i.e. Notice of Intent, NOI)	Applying for permit coverage and submitting initial MPPP	One-time	As necessary
S2.D	Transfer form	Transfer Permit Coverage To a New Owner or Operator	As necessary	Prior to transfer
S2.E	Termination request form	Applying for cancellation of permit coverage	As necessary	As necessary
S4.A.5	Update the MPPP	Update the MPPP	As necessary	30 days from a change or 14 days from a notification of deficiency
S4.K.5.a	Email to Ecology	Prior to making any emergency land applications	As necessary	As necessary
S4.K.5.d	Email to Ecology	After making any emergency land applications	As necessary	Within 24 hours of the emergency land application
S4.K.5.e	Compliance Plan	Compliance Plan following emergency land applications	As necessary	Within 6 months of the emergency land application
S4.K.5.f	Time extension request	Extend deadline for compliance plans for emergency land applications	As necessary	As necessary
S4.L	Nutrient Budgets for Very High Risk Fields	Proposing a nutrient budget for the upcoming growing season	As necessary	Ecology must provide written approval prior to application
S5.D.1.a;	Groundwater Monitoring Work Plan	Monitoring Plan for Medium and Large CAFOs	One-time; As necessary	Within 6 months of receiving permit coverage

Permit Section	Forms & Reports	Description	Frequency	First Due Date
		located in Nitrate Priority Areas		
S5.D.2.a	Groundwater Monitoring Work Plan	Groundwater evaluation study plan for Small CAFOs and all CAFOs located outside of Nitrate Priority Areas meeting certain conditions	As necessary	Within 6 months of receiving Ecology's determination
S5.D.2.c	Groundwater Evaluation Study Results	Results of groundwater evaluation study for CAFOs meeting certain conditions	As necessary	As necessary
S5.D.1.c; S5.D.2.e	Begin Groundwater Monitoring Notification	CAFOs required to monitor groundwater water	One-time; As necessary	30 days before first monitoring report
S5.E	Phone Call to Ecology	Reporting surface water discharge	As necessary	As necessary
S5.E	Reporting Results from a Surface Water Discharge	Laboratory results of water quality samples collected after a discharge	As necessary	As necessary
S6	Ecology Request for Permit Records	Providing items such as updated MPPP or land application records	As necessary	Within 14 days of Ecology's written request
S7.C	Storage Structure Assessment	Compliance reports for each solid and liquid storage structure	One-time	Within 2 years of permit coverage
S7.C	Storage Structure Repair and Improvement Plan	Plan for repairs and improvements to waste storage structures	One-time; As necessary	6 months after initial storage assessment
S7.D	Annual Report	Report of production numbers, monitoring	Annually	February 1, 2024

Permit Section	Forms & Reports	Description	Frequency	First Due Date
		results, and land applications		
S7.E	Reporting Permit Violations	Verbal and written notifications of permit violations	Each noncompliance	Within 24 hours and in 5 days
S7.F	Spills Reporting	Verbal report of spills oil or hazardous materials	Each noncompliance	Within 24 hours
G6	Permit Modification	Significant change in production or process	As necessary	Prior to change
G17	Permit Application	Renewal of permit coverage	One-time	180 days before expiration date of this general permit

SPECIAL CONDITIONS

S1. PERMIT COVERAGE

S1.A. Facilities Required to Seek Coverage under This General Permit

This ***permit*** applies to lots or facilities (other than aquatic animal production facilities) defined as concentrated animal feeding operations (CAFOs) in 40 CFR 122.23. The permit requires the owner or operator of a CAFO to apply for coverage under this permit or the combined CAFO NPDES and State Waste Discharge General Permit if all of the following conditions are met:

- The facility has a ***discharge*** to ***groundwater***.[2]
- Animals are or will be stabled or confined and fed or maintained for a total of 45 days or more in any 12-month period.[3]
- Crops, vegetation, forage growth, or post-harvest residues are not sustained in the normal growing season over any portion of the lot or facility where the animals are confined.
- The facility is either a medium or large CAFO as defined in Table 2, or Ecology has designated the facility a significant contributor of ***pollutants*** to ***waters of the state*** in accordance with the procedures in S1.A.1 below.

1. **How Ecology Determines Significant Contributors of Pollutants**

   Facilities that meet all of the above conditions, but do not meet the definition of a medium or large CAFO may be designated a small CAFO if Ecology determines the facility is a significant contributor of pollutants under 40 CFR 122.23(c).

   If Ecology has designated the CAFO to be a significant contributor of pollutants to groundwater, the owner or operator of a small CAFO must apply for coverage under this permit or the combined CAFO NPDES and State Waste Discharge General Permit.

2. **Multiple Facilities with common ownership**

   Two or more CAFOs under common ownership are considered a single CAFO for the purposes of permitting if they adjoin each other or if they use a common area or system for handling ***manure***, ***litter***, ***process wastewater***, and ***other organic by-products***.

[2] CAFOs discharging to surface water must apply for coverage under the combined CAFO NPDES and State Waste Discharge General Permit.
[3] The same animal individuals need not be confined for the entire 45 day period.

Table 2 Size of CAFO by Animal Type

Animal Type	Number of Animals in Medium CAFO[c]	Number of Animals in Large CAFO[d]
Mature Dairy Cows[a]	200-699	700 or more
Veal Calves	300-999	1,000 or more
Other Cattle[b]	300-999	1,000 or more
Swine (55 lbs. or more)	750-2,499	2,500 or more
Swine (less than 55 lbs.)	3,000-10,000	10,000 or more
Horses	150-499	500 or more
Sheep and Lambs	3,000-9,999	10,000 or more
Turkeys	16,500-54,999	55,000 or more
Laying Hens or Broilers, with liquid waste system	9,000-29,999	30,000 or more
Chickens, other than layers, with dry waste system	37,500-124,999	125,000 or more
Laying Hens, with dry waste system	25,000-81,999	82,000 or more
Ducks, with liquid waste system	10,000-29,999	30,000 or more
Ducks, with dry waste system	1,500-4,999	5,000 or more

[a] Milked or Dry

[b] Including, but not limited to Heifers, Steers, Bulls, Cow/Calf Pairs

[c] 40 CFR 122.23(b)(6)

[d] 40 CFR 122.23(b)(4)

S1.B. Activities Covered Under This Permit

This statewide ***general permit*** conditionally authorizes the discharge of pollutants to groundwater from the ***production area*** and ***land application fields*** that result from operating a CAFO.

This permit does not authorize any discharge to surface water from the CAFO.

S1.C. Geographic Area Covered

This permit covers the activities listed in special condition S1.A within the State of Washington. This permit does not apply to ***Indian Country*** and ***trust or restricted lands*** except portions of the Puyallup Reservation as noted. Puyallup Exception: Following the Puyallup Tribe of Indians Land Claims Settlement Act of 1989, 25 U.S.C. §1773; this permit does apply to land within the Puyallup Reservation except for discharges to surface water on land held in trust by the federal government.

Some conditions in this permit 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.

S2. PERMIT ADMINISTRATION

S2.A. How to Apply for Permit Coverage

Unpermitted CAFOs seeking coverage under this permit must do the following:

1. **Submit an application**

   Submit a complete and signed ***Notice of Intent*** form (NOI) and a Manure Pollution Prevention Plan (MPPP) that meets the requirements of special conditions S4 *Manure Pollution Prevention* in this permit. A Responsible Person, in accordance with General Condition G11 *Signatory Requirements*, must sign the signature page of the NOI and submit it to Ecology.

   Submit the NOI and MPPP using Ecology's Water Quality Permitting Portal. If the ***applicant*** is unable to submit electronically (for example, they do not have access to the internet), contact Ecology to request an Electronic Reporting Waiver form and submit the completed form to Ecology at:

   Department of Ecology
   Water Quality Program
   Attn: CAFO Permit Administrator
   PO Box 47600
   Olympia, WA 98504

2. **Revise application, if needed**

   Ecology will review the NOI and MPPP for completeness and may request additional information from the applicant if it is necessary to complete the NOI and MPPP or to clarify, modify, or supplement previously submitted material. Ecology will notify the applicant of the application's status within 30 days.

3. **Publish public notice**

   a. Existing Operations

   Facilities that began operating prior to the issuance date of this general permit are considered existing operations and are not required to publish a public notice.

   b. New Operations

   Facilities that begin operating after issuance of this general permit are considered new operations. When Ecology determines that the NOI and MPPP are complete, the applicant must publish a public notice using the template on the NOI.

   The public notice must be published once a week for two (2) weeks with at least seven (7) days between publications in a single newspaper of general circulation in the county where the operation is located.

The public notice must be published once a week for two (2) weeks with at least seven (7) days between publications in a single newspaper of general circulation in the county where the operation is located.

Publish the public notice only after Ecology has made a preliminary determination and notified the applicant in writing that the ***application for coverage*** is complete.

The second publication date of the public notice starts a thirty (30)-day public comment period. At the end of the thirty (30)-day public comment period, Ecology will consider any comments received about the applicability of this permit to the operation before issuing a decision on permit coverage pursuant to special condition S2.B *When Permit Coverage is Effective*.

Ecology may, at its option, publish public notice of multiple applications for coverage under this permit at one time in the Washington State Register (WSR) which is published the first and third Wednesday of the month. If Ecology publishes public notice in the WSR, the permit coverage timeline will be longer than the timeline listed in special condition S2.B *When Permit Coverage is Effective*.

S2.B. When Permit Coverage is Effective

If the applicant does not receive notification from Ecology, permit coverage automatically commences on whichever of the following dates occurs last:

1. The 31st day following receipt by Ecology of a completed application for coverage.
2. The 31st day following the end of a 30-day public comment period.
3. The effective date of the general permit.

When Ecology needs additional time to reach a decision, we will notify the applicant in writing within 30 days of receiving the application for coverage and identify the issues that the applicant must resolve before Ecology can reach a decision. Ecology may need additional time to review the application:

1. If the application is incomplete.
2. If the application requires additional site-specific information.
3. If the public requests a public hearing about the applicability or non-applicability of this permit to the operation proposed for coverage.
4. If members of the public submit comments.
5. When more information is necessary to determine whether coverage under the general permit is appropriate.

Ecology will notify the applicant in writing of the final decision. Once Ecology issues permit coverage, the CAFO owner or operator who applied for coverage becomes a ***Permittee***.

S2.C. How to Transfer Permit Coverage

Coverage under this general permit shall automatically transfer to a new ***discharger***, if all of the following conditions are met:

1. The original Permittee and the new Permittee submit to Ecology a complete, written, signed agreement (Transfer of Coverage Form) containing a specific date for transfer of permit responsibility, coverage and liability. The Transfer of Coverage form is available on the CAFO permit webpage[4].
2. The volume and characteristics of the wastewater and management practices remain substantially unchanged.
3. Ecology does not notify the Permittee of the need to submit a new application for coverage under the general permit or for an individual permit pursuant to Chapters 173-216, 173-220, and 173-226 WAC.

The original Permittee remains responsible for, and subject to, all permit conditions and permit fees until the transfer of permit coverage is effective.

As part of the transfer, the original Permittee must supply the new Permittee with copies of all permit documents, based on current facility conditions, used to comply with this permit.

Once the permit has been transferred, the new Permittee is required to use the existing permit documents (e.g. MPPP) provided by the original Permittee until the new Permittee updates the documents to reflect any changes to facility operation the new Permittee makes.

S2.D. How to Terminate Permit Coverage

1. **Eligibility for Terminating Permit Coverage**

   A Permittee may request termination of their permit coverage when one of the following conditions is met:

   a. The Permittee can document that they no longer have a discharge to groundwater from their production area or land application fields.

   b. The Permittee did not have a discharge but voluntarily obtained permit coverage, no longer wishes to be covered by this permit, and the Permittee has or had no discharge to groundwater from their production area or land application fields.

   c. The Permittee operates a CAFO and reduces the CAFO size to a small CAFO pursuant to special condition S1.A *Facilities Required to Seek Coverage under This General Permit*. When Ecology receives a request to terminate permit coverage because of a reduction in facility size to a small CAFO, Ecology will make a significant contributor determination pursuant to special condition

[4] https://ecology.wa.gov/cafo

S1.A.1. *How Ecology Determines Significant Contributors of Pollutants* to determine if the CAFO must remain covered by the permit.

d. The Permittee no longer meets the definition of a CAFO pursuant to special condition S1.A *Facilities Required to Seek Coverage under This General Permit*.

2. **Facility Cleaning Requirements**

If the Permittee no longer meets the definition of a CAFO pursuant to special condition S1.A *Facilities Required to Seek Coverage under This General Permit*, the permittee must clean, re-purpose, or decommission facility infrastructure that will no longer be used. The following facility cleaning and re-purposing requirements must be completed before the termination of permit coverage:

a. All manure, litter, ***feed***, process wastewater, and other organic by-products must be removed from storage, management, and other facility infrastructure and land applied in accordance with the Permittee's yearly nutrient budgets, or ***exported*** in accordance special condition S4.O *Manure Export* as appropriate.

b. All manure, litter, feed, process wastewater, and other organic by-product management systems and facilities that could fill with water from precipitation must be flushed with clean water. The water from flushing must be land applied in accordance with the Permittee's yearly nutrient budgets or exported in accordance with special condition S4.O *Manure Export*.

c. After flushing/cleaning, if the manure, litter, feed, process wastewater, and other organic by-product storage, management, and other facility infrastructure will no longer be used, the infrastructure must be modified, if necessary, so it is not a conduit for any pollutants to enter surface or groundwater.

d. Temporary closures, permanent decommissioning, or other changes to ***waste storage ponds*** must follow the relevant requirements in special condition S4.C.4 *Waste Storage Pond Closure Procedures*.

3. **Requesting Termination of Permit Coverage**

The Permittee may request termination of permit coverage using the ***Notice of Termination form*** available on the CAFO permit webpage[5] . The Permittee must submit the signed form through Ecology's Water Quality Permitting Portal[6].

If the Permittee is unable to submit electronically (for example, they do not have access to the internet), they must contact Ecology to request an Electronic Reporting Waiver form and submit the completed form to Ecology at:

Department of Ecology
Water Quality Program

[5] https://ecology.wa.gov/cafo
[6] https://secureaccess.wa.gov/ecy/wqwebportal

Attn: CAFO Permit Administrator
PO Box 47600
Olympia, WA 98504

The termination of permit coverage is effective on the date 61 days after Ecology receives the complete Notice of Termination form, unless Ecology notifies the Permittee in writing that their request is denied because either the Permittee has not met the eligibility requirements or information is insufficient to make a determination.

The Permittee will continue to incur an annual permit fee (chapter 173-224 WAC) until they submit a completed Notice of Termination form signed in accordance with general condition G14 and Ecology terminates the permit coverage. The Permittee will receive a letter from Ecology notifying them that their permit coverage is terminated.

S3. DISCHARGE LIMITS

Discharges conditionally authorized by this permit must not cause or contribute to a violation of ***water quality standards***. Discharges not in compliance with these standards are not authorized. The Permittee must also be in compliance with other discharge limits (e.g. special condition S4 *Manure Pollution Prevention*) in order for discharges to be conditionally authorized.

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 by-products, 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 Prevention*).

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 by-products 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.

5. **Update of the MPPP**

a. When the Permittee proposes changes to the facility

Whenever the permittee proposes a change in design, construction, operation, or maintenance of the Permittee's facility infrastructure that will increase the risk of manure, litter, feed, process wastewater, or other organic by-products entering surface or groundwaters, the Permittee must update their MPPP and submit the updated MPPP at least 60 days prior to implementing any proposed changes.

Ecology will review the modified MPPP and may request additional information to clarify, modify, or supplement previously submitted material. If Ecology determines the changes to the modified MPPP are substantial, we will notify the Permittee of the need to publish public notice.

When Ecology determines that the modified MPPP is complete, the Permittee must publish a public notice using the template on the Coverage Modification form. The public notice must be published once a week for two (2) weeks with at least seven (7) days between publications in a single newspaper of general circulation in the county where the operation is located.

The second publication date of the public notice starts a thirty (30)-day public comment period. At the end of the thirty (30)-day public comment period, Ecology will consider any comments received on the proposed changes before issuing a decision on the coverage modification.

b. When Ecology, WSDA, or Permittee assessments require MPPP updates

If Ecology or WSDA staff determine that the MPPP is, or would be, ineffective in eliminating discharges not authorized by this permit, the Permittee must submit an updated MPPP within 14 days of a notification of the deficiency by Ecology or WSDA. The Permittee must also immediately begin the process to fully implement and maintain appropriate source control and/or treatment practices, addressing the deficiencies no later than 45 days from date of notification.

If Permittee assessments per S4.K.5, S7.C, or S7.E identify deficiencies, the Permittee must update the MPPP and submit it to Ecology along with the associated repair or compliance plans according to the timelines set in the applicable special condition.

If installation of necessary infrastructure or practices is not feasible within 45 days, Ecology may approve additional time when an extension is requested by a Permittee within the initial 45-day period.

Ecology will review the modified MPPP and may request additional information to clarify, modify, or supplement previously submitted material. If Ecology determines the changes to the modified MPPP are substantial, we will notify the Permittee of the need to publish public notice. If the permittee requests a time extension for facility improvement, public noticing is required. To publish a public notice, the Permittee must use the template on the Coverage Modification form. The public notice must be published once a week for two (2) weeks with at least seven (7) days between publications in a single newspaper of general circulation in the county where the operation is located.

The second publication date of the public notice starts a thirty (30)-day public comment period. At the end of the thirty (30)-day public comment period, Ecology will consider any comments received on the proposed changes before issuing a decision on the coverage modification.

c. When the Permittee proposes alternatives

Permittees proposing alternative procedures or practices under S4.J.3 *Application Restrictions* or S4.N *Field Discharge Management Practices* must submit a modified MPPP with supporting information. Ecology will review the proposal and may request additional information to clarify, modify, or supplement previously submitted material.

When Ecology determines that the modified MPPP is complete, the Permittee must publish a public notice using the template on the Coverage Modification form. The public notice must be published once a week for two (2) weeks with at least seven (7) days between publications in a single newspaper of general circulation in the county where the operation is located.

The second publication date of the public notice starts a thirty (30)-day public comment period. At the end of the thirty (30)-day public comment period, Ecology will consider any comments received on the proposed changes before issuing a decision on the coverage modification.

S4.B Production Area Run-off Controls

The Permittee must prevent discharges to surface water from its production area.

The Permittee must keep manure, litter, and process wastewater from being tracked out onto public roadways. If manure, litter, process wastewater, or other sources of pollutants are tracked out onto public roadways, the Permittee must clean-up the material tracked onto the roadway. Materials cleaned-up on from the roadway must be disposed of appropriately and may not be placed in ditches, other conduits to surface or groundwater, or left along right-of-ways.

Vegetated treatment areas may be used to treat and infiltrate run-off into the ground, provided the treatment area's hydraulic capacity is greater than design flows and the vegetation cover is suitable to the site and run-off treatment performance needs. A site is not suitable if the vegetated treatment area will cause a violation of groundwater standards. The Permittee must document the treatment design, including nutrient uptake and hydraulic capacity, and the operation and maintenance plan in the MPPP.

If a discharge to surface waters occurs from the production area, including a vegetated treatment area, the discharge must be monitored according to S5.E *Surface Water Monitoring*.

S4.C Storage of Manure, Litter, Process Wastewater, Other Organic By-Product, and Feed

The Permittee must have adequate storage space for the manure, litter, process wastewater, feed, and any other sources of pollutants on-site during the ***storage period*** for the area where the CAFO is located in order to comply with special condition S3 *Discharge Limits*. The following are performance objectives for storage of liquid and solid materials:

1. **Liquid Waste Storage Structures**

   Liquid waste storage structures must be designed, constructed, operated and maintained to contain all manure, litter, feed, process wastewater, and other organic by-products including the contaminated runoff and direct precipitation from a 25-year, 24-hour rainfall event.

   Liquid waste storage structures must be designed, constructed, and maintained to have a maximum water specific discharge of $1x10^{-6}cm^3/cm^2/s$ without consideration for manure sealing and there must be a minimum of two feet of vertical separation between the bottom of the waste storage pond (inside the pond above the liner) and the seasonal high ***water table***.

   Design and installation of waste storage ponds and other liquid storage structures being built, expanded, or having major refurbishment must be overseen by a licensed professional engineer.

   Permittees must have a depth gauge in each liquid storage structure that clearly indicates the minimum capacity necessary to contain the contaminated runoff and direct precipitation from a 25-year, 24 hour precipitation event and still have design ***freeboard***.

2. **Solid Materials Storage Facilities**

   Permittees must design, install, implement and maintain effective pollution prevention measures to minimize the discharge of pollutants from solid manure, litter, compost, and feed storage areas. At a minimum:

   a. Locate structures on impervious surfaces (such as concrete) or soil pads with low permeability.

b. Direct contaminated runoff to structures designed to store liquid manure and process wastewater or through a vegetated treatment area designed and operated in accordance with S4.B *Production Area Run-off Controls*.

c. If the storage area is covered (e.g. tarp, roof), divert clean water in accordance with special condition S4.E *Diversion of Clean Water*.

3. **Maintain Storage Facilities**

The permittee must conduct weekly visual inspections of manure, litter, process wastewater, other organic by-product, and feed storage facilities according to provisions in special condition S5.A *Operations and Maintenance*. If a storage facility is equipped with a leak detection system, the permittee must monitor for leaks according to the leak detection plan included in the MPPP.

The Permittee must prevent damage and maintain the integrity of their storage facilities by controlling vegetation and animals on the structure and by repairing structures as necessary to bring it back up to design specifications.

If necessary, the Permittee must periodically remove accumulated solids from liquid storage structures in order to maintain design volume. Ensure that any liner in the liquid storage structure is not damaged during maintenance. The MPPP must specify how leaks, if using a **synthetic liner** (e.g. punctures in the plastic), will be detected and repaired.

4. **Waste Storage Pond Closure Procedures**

d. Temporary Closures

If the Permittee has a waste storage pond or other liquid storage structure that is temporarily not in use, but will be used again, the pond must be maintained as though it were in use so that it remains in good working order.

e. Permanent Decommissioning

If a waste storage pond or other liquid storage structure is being decommissioned, the permittee must render the pond unusable and minimize the risk of leftover nutrients converting to mobile forms (e.g. ammonia to nitrate) which pose a risk to groundwater by implementing the following requirements:

i. Any manure, litter, feed, process wastewater, or other organic by-products contained in the structure must be removed and land applied in accordance with the Permittees yearly nutrient budgets or exported in accordance with special condition S4.O *Manure Export*.

ii. If converting the site to another use requires complete removal of the structure, high nutrient soils above grade must be land applied according to the Permittee's yearly nutrient budgets (special condition S4.K.1 *Annual Field-Specific Crop Nutrient Budget*) or exported in accordance with special condition S4.O *Manure Export*.

iii. If the pond has a synthetic liner, the liner must be removed and disposed of or recycled in a lawful manner. If the liner prevented nutrients from building up in the soils of the structure, special condition S4.C.4.b.ii above does not apply.

iv. After completion of special condition S4.C.4.b.i through S4.C.4.b.iii, any earthen structure must be filled with soil, made unable to contain liquid, or returned to grade matching the surrounding area. All exposed soil must be seeded with site appropriate plant species or site appropriate land management implemented to prevent erosion unless the Permittee is planning to build a structure on the site where the waste storage pond existed within 3 months of pond decommissioning.

f. Use as Irrigation Pond

If a waste storage pond or other liquid storage structure will no longer be used to store manure, litter, process wastewater, or other organic by-products, and will be used as an irrigation pond the Permittee must remove all manure, litter, feed, process wastewater, or other organic by-products, and ***land apply*** the removed materials in accordance with their yearly field nutrient budgets or exported in accordance with special condition S4.O *Manure Export*.

S4.D. Other Above and Below Ground Infrastructure

The Permittee must operate and maintain infrastructure used on-site to prevent discharges due to physical failure of the infrastructure.

Other infrastructure (such as pipes, valves, tile lines, etc.) used to manage manure, litter, feed, process wastewater, and other organic by-products must be regularly inspected according to special condition S5.A *Operations and Maintenance* and tested (if applicable) to ensure it is in proper working order. Results from inspections must be used to make repairs or replacements to infrastructure in a timely manner. Document the reasons that repairs were not completed in a timely manner in the Manure Pollution Prevention Plan (MPPP) and include a schedule of when the work will be completed.

Discharge to groundwater from backflow through wells is prohibited and must be prevented.

S4.E Diversion of Clean Water

Clean water that has not come into contact with manure, litter, feed, process wastewater, other organic by-products, or other contaminants generated by the CAFO may be diverted from the CAFO production area instead of being stored. Clean water must be diverted to a location that is able to handle the volume of clean water generated and not cause other water quality problems (e.g. erosion, sediment build-up, flooding).

If the Permittee chooses to divert clean water from storage, they must describe how the diversion will prevent contact with contaminants, the location where the diverted clean water will go, and how that location is able to handle the volume of clean water generated without causing water quality problems.

S4.F Prevent Direct Animal Contact with Water

Livestock must not be allowed to come into contact with surface waters or cause pollutants to enter surface waters. This prohibition does not apply to small amounts of standing water (e.g. puddles, saturated areas) on pastures, land application fields where livestock are temporarily housed, or in the production area as long as they are not draining to other surface waters or conduits to surface waters.

Livestock must be excluded from the field discharge management areas established according to S4.N *Field Discharge Prevention*.

S4.G Chemical Handling

All chemicals (e.g. pesticides, cleaning agents) must be disposed of in accordance with the disposal requirements of the chemical's Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) product label or Safety Data Sheet (SDS) if it is not a FIFRA labeled product.

Excess or unused chemicals and empty chemical container wash water may not be disposed of in manure, litter, feed, process wastewater, or other organic by-product management systems, or any surface waters or conduits to surface or groundwater.

The Permittee must have and implement emergency procedures for containment and clean-up in the event of a chemical spill that could impact surface or groundwater.

S4.H Livestock Mortality Management

Mortalities must be handled such that they do not pose a threat to surface or groundwater quality. Until properly disposed of, mortalities must be stored in a location that does not allow run-off to surface waters or leaching to groundwater. All runoff from stored mortalities must be directed to liquid storage facilities. Mortalities must not be disposed of in a waste storage pond or other liquid storage structure unless it is specifically designed to handle mortalities.

Unless prohibited by local ordinances, the Permittee must follow state requirements for mortality handling including WAC 16-25-025. Examples of mortality management include composting, rendering, burial and natural decomposition. If on-site composting is used, it must be conducted compliance with chapter 70A.205 RCW and chapter 173-350 WAC.

S4.I Manure, Litter, Process Wastewater, and Other Organic By-Products Sampling and Nutrient Analysis

The Permittee must sample all sources of manure, litter, process wastewater, and other organic by-products that will be land applied and analyze the samples for nutrient content prior to ***land application***. Sampling and analysis must follow the

requirements of special condition S5.B *Manure, Litter, and Process Wastewater Monitoring* and should be representative of the nutrient source as applied.

During the application season, if the permittee begins to use a new source of manure, litter, process wastewater or other organic by-product, the Permittee must sample and analyze the new source for nutrient content prior to land applying the new source.

The Permittee must sample and analyze all sources of manure, litter, process wastewater, and other organic by-products at least three times, spaced evenly throughout the land application season.

The Permittee is not required to sample and analyze the commercial chemical fertilizers for nutrient content, but is required to record the amount of nutrients applied according to special condition S6.B *Land Application Records*.

S4.J Soil Sampling and Nutrient Analysis

The Permittee must sample and analyze all land application fields to which they apply manure, litter, process wastewater, or other organic by-products for nutrient content at least twice each year—before land application and in the late summer or early fall.

1. **Soil Sampling Depth**

   Soil samples must be taken at the depths specified according to annual precipitation:

   - Drier climates must collect separate composite soil samples for the 0-12 inch depth and the 12-24 inch depth.
   - Wetter climates must collect one composite soil sample for the 0-12 inch depth.

   If the field does not have the required soil depth before refusal or groundwater is reached, the Permittee must take samples in 12-inch increments until reaching refusal or groundwater. The Permittee must indicate in its records and annual report (special conditions S6.B and S7.D) at what depth refusal or groundwater was reached.

2. **Spring Soil Sampling and Analysis**

   Soil samples collected and analyzed early in the growing season must be considered when developing or updating the field nutrient budget in that same season. Samples must be collected and analyzed before land application begins, unless applied in accordance with special condition S4.K.4 *Double Cropping, Winter Cover Crops, Perennial Crops*.

3. **Late Summer-Early Fall Soil Sampling and Analysis**

   Post-harvest soil samples are primarily used to assess nitrogen management, but may also be used in nutrient budgeting of double or winter crops.

Post-harvest soil samples must be taken after harvest of annual crops and before 3 inches of rainfall accumulates. Use September 1 as start date for tallying the accumulation of rainfall.

If the soil sample is taken after 3 inches of rainfall accumulates or if the field was categorized as high or very high risk level the previous year (special condition S4.L *Adaptive Management of Land Application Fields*), the Permittee must take an additional composite soil sample at the next vertical foot to account for nutrient leaching:

- Drier climates must collect an additional composite soil samples for the 24-36 inch depth.
- Wetter climates must collect an additional composite soil sample for the 12-24 inch depth.

4. **Sampling and Analysis Methods**

   Soil sampling and analysis must follow the monitoring requirements of special condition S5.C *Soil Monitoring*.

S4.K Land Application

The Permittee must land apply manure, litter, process wastewater, or other organic by-products in accordance with their yearly field nutrient budgets and at the appropriate rates and times to comply with permit conditions. If the Permittee generates more manure, litter, process wastewater, or other organic by-products than the land application fields available to the Permittee can appropriately utilize according to their yearly field nutrient budgets, the Permittee must find other avenues of appropriately utilizing the excess manure, litter, process wastewater, or other organic by-products (e.g. export, composting).

The Permittee's staff must have sufficient training to be able to land apply in accordance with the yearly field nutrient budgets and at appropriate rates and times to comply with permit conditions.

1. **Annual Field-Specific Crop Nutrient Budget**

   The Permittee must develop a field-specific nutrient budget for each land application field they will ***control*** and plan to apply manure, litter, process wastewater, or other organic by-products. The permittee shall ensure that plant-available nutrients do not exceed nutrients required to reach crop's estimated yield. The yearly nutrient budget determines the maximum amount of nitrogen and phosphorus that may be land applied to the field.

   Annual nutrient budgets must be developed before the first land application of the growing season, and should be developed to cover the entire growing season (annual and double crop until final harvest). If the Permittee makes changes to their annual nutrient budget for a land application field they must update the nutrient budget to reflect the changes. The yearly nutrient budget must include:

a. Current calendar year.

b. Field ID identical to the field ID on maps in the MPPP.

c. Field acreage.

d. Field risk level as determined by end of season soil sample nitrate-N analysis values in special condition S4.L *Adaptive Management of Land Application Fields*.

e. Adaptive management actions required by special condition S4.L *Adaptive Management of Land Application Fields*.

f. Crop(s).

g. Estimated planting date (or note as perennial).

h. Estimated harvest date.

i. Crop yield estimate for the field based upon prior years or expert guidance. Examples of sources for yield estimates include the field's 3-year average yield, a nearby similar field's 3-year average yield, land grant university guidance, commercial chemical fertilizer guides, or other national data sources.

j. Total amount of nitrogen and phosphorus required by the crop to reach the yield estimate.

k. Soil nitrogen and phosphorus content measured from the most recent soil sample required by special condition S4.J *Soil Sampling and Nutrient Analysis*. Nutrient budgets developed prior to a spring soil test must be updated after sample is analyzed.

l. Estimate of nitrogen from mineralization of:

- Soil organic matter
- Crop residues, including grass
- Past applications of manure, process wastewater, or other organic by-products.

m. Estimate of nitrogen and phosphorus from other sources (e.g. precipitation, irrigation, atmospheric deposition).

n. Estimated loss of nitrogen due to volatilization during land application.

A nutrient budget worksheet that incorporates requirements of special condition S4.K.1 is available on Ecology's CAFO permit webpage[7].

[7] https://ecology.wa.gov/cafo

If the Permittee chooses to use their own form, it must account for the same parameters as the Ecology form and show the calculations used to reach the final maximum amount of nutrients that may be land applied to each field for the year.

2. **Application Rates**

   Land application of manure, litter, process wastewater, and other organic by-products must be at times and at rates which can be utilized by the crop.

   The Permittee must base their ***application rates*** on the most current manure, litter, process wastewater, and other organic by-product nutrient analysis required by special condition S4.I and crop needs.

   Equipment used for land application of manure and other material that can have a variable application rate (e.g. pumps, injectors, sprinklers, splash plate applicators) must be calibrated so that the Permittee has an accurate measure of how much manure is applied per unit of time or area (e.g. x gallons per hour, y gallons per acre).

   The Permittee must use the applicable adaptive management actions specified in special condition S4.L *Adaptive Management of Land Application Fields* to modify their land application of nutrients.

   During land application, the Permittee must not cause direct, indirect, or precipitation related discharge to surface waters and must follow the minimum field discharge management practices required by special condition S4.N *Field Discharge Prevention*. The permittee must visually monitor land application fields for surface and tile drainage discharges when land applying manure, litter, process wastewater, or other organic by-products. If a discharge occurs, the permittee shall follow sampling procedures in special condition S5.E *Surface Water Monitoring* and reporting requirements in special condition S7.E *Reporting Permit Violations*.

3. **Application Restrictions**

   The Permittee must not land apply more nitrogen and phosphorus to a field than calculated in their yearly nutrient budget (special condition S4.K.1) for that field.

   No land application of manure, litter, process wastewater, or other organic by-products may occur:

   a. To fields with a frozen surface crust (2 inches) or deeper, or if the soil is at or below zero degrees Celsius (32 degrees Fahrenheit).

   b. To fields that are snow covered.

   c. To fields with soils that are or will become ***saturated*** with forecasted precipitation prior to infiltration or incorporation.

   d. If the water table is within 12 inches or less of the surface.

e. If precipitation is forecast in the next 24 hours for the facility location that will cause a discharge from the Permittee's land application fields.

f. After October 1 and prior to ***T-SUM 200*** unless applied in accordance with special condition S4.K.4 *Double Cropping, Winter Cover Crops, Perennial Crops.*

g. To fields that are bare (no perennial crop) unless the Permittee is preparing the bare field for the current year's annual crop (planting within 30 days of land application).

The Permittee may use an alternative to T-SUM 200 restriction above if the alternative demonstrates that crop growth and nutrient uptake begins before TSUM200. The alternative method must be approved by Ecology prior to utilizing the alternative to TSUM200. Submit an updated MPPP to Ecology per S4.A.5.c *When the Permittee proposes alternatives*. The alternative starting application dates must be site and crop specific. The updated MPPP must include supporting information demonstrating that the alternative method will be as effective as the T-SUM200 method in determining that crop growth and nutrient uptake is adequate to prevent discharges of excess nutrients to surface and groundwaters.

4. **Double Cropping, Winter Cover Crops, Perennial Crops**

After late summer or early fall soil sampling, any land application taking place must be demonstrated to be necessary because current soil nitrogen plus estimated nitrogen mineralization will not provide the nutrients necessary for the double crop, winter cover crop, or perennial crop.

Before land application may take place for a double crop, winter cover crop, or perennial crop the Permittee must have taken fall soil samples, had the soil samples analyzed as required by special condition S4.J *Soil Sampling and Nutrient Analysis*, and shown how a land application of nitrogen is necessary to support estimated crop yield according to special condition S4.K.1 *Annual Field-Specific Crop Nutrient Budget*.

If the nutrient budget shows that soil nitrogen plus estimated nitrogen mineralization will not provide the nutrients necessary during the winter for a double crop, cover crop, or perennial crop, the Permittee may land apply manure, litter, process wastewater, or other organic by-products in compliance with the land application restrictions in special condition S4.K.1 through S4.K.3 above.

5. **Emergency Winter Land Application**

Land application of manure, litter, process wastewater, or other organic by-products outside of the limits set by special condition S4.K.1 through S4.K.4 or in amounts greater than the Permittee's yearly field nutrient budgets is a violation of this permit. Any land application outside of the permit requirements must be due to the need to protect public health and safety (e.g. to prevent waste storage pond ***over-topping***).

In the event that a Permittee makes an emergency land application outside of permit requirements, the Permittee must follow the noncompliance procedure:

a. Prior to making any emergency land applications, notify Ecology by phone or email at cafopermit@ecy.wa.gov.

b. Document the reason for emergency application and keep records of:

   i. Dates and times of land application

   ii. Field IDs for the fields where land application took place

   iii. Nutrient content of applied material

   iv. Amount of material (e.g. gallons) land applied

c. Monitor fields and tile drain outlets for discharges to surface waters or conduits to surface waters. If a discharge occurs, collect and analyze a sample or samples representative of the discharge. Follow sample collection and analysis procedures in S5.E *Surface Water Monitoring*. Report the results to Ecology within 15 days of collecting the sample(s) using the Water Quality Permitting Portal, unless granted a waiver from electronic reporting according to S7.A *How to Submit Documents to Ecology*.

d. Within 24 hours of the application, report the information recorded in b. to Ecology via email at cafopermit@ecy.wa.gov.

e. Develop a plan to remain in compliance with the permit within 6 months of the emergency winter land application and submit that plan and an updated MPPP if necessary, to Ecology according to the procedure in special condition S4.A.5.b *When Ecology, WSDA, or Permittee assessments require MPPP updates*.

f. Work proposed in the plan must be completed within 18 months of the emergency land application.

To request a time extension, a Permittee shall submit a detailed explanation of why it is making the request (technical basis) to Ecology in accordance with special condition S4.A.5.b *When Ecology, WSDA, or Permittee assessments require MPPP updates*, 120 days prior to the deadline. The permittee must publicly notice this request for modification of coverage following the procedures in S4.A.5.b *When Ecology, WSDA, or Permittee assessments require MPPP updates*. Ecology will approve or deny the request within 60 days of receipt of a complete request.

S4.L Adaptive Management of Land Application Fields

The Permittee must use adaptive management to prevent the build-up of excess nutrients in the soil. The goal is to reduce fall soil nitrate concentrations in land application fields to a Risk Level of Medium or less.

1. **Step 1: Determine Field Risk Level**

   Use Table 3 below to determine land application field risk level.

- For each field in drier climates, use the fall soil test nitrate results (special condition S4.J *Soil Sampling and Nutrient Analysis*) from the second foot (12-24 inches) to determine the field risk level.
- For each field in wetter climates, use the fall soil test nitrate results (special condition S4.J *Soil Sampling and Nutrient Analysis*) from first foot (1-12 inches) to determine the field risk level.

Table 3 Field Risk Level

Field Risk Level	Fall Soil Test Nitrate Range in ppm	Fall Soil Test Nitrate Range in pounds per acre
Low	Less than 15	Less than 55
Medium	15 - 30	55 - 110
High	31 - 45	111 - 165
Very High	More than 45	More than 165

2. **Step 2: Take Required Adaptive Management Actions**

   Take the required adaptive management actions specified in the *Required Actions* column corresponding to the field risk level.

   - Use Table 4 Adaptive Management Actions for areas in drier climates.
   - Use Table 5 Adaptive Management Actions for areas in wetter climates.

   Where the field risk level remains High or Very High for two consecutive years, in addition to taking the actions in the *Required Actions* column, take the actions in the *Required Actions Based upon Trends* column. Continue these actions until the field risk level is reduced to Medium or Low risk.

   - Use Table 4 Adaptive Management Actions for areas in drier climates.
   - Use Table 5 Adaptive Management Actions for areas in wetter climates.

3. **Step 3: Submit Deeper Soil Test Results**

   For fields in the Very High risk category for two consecutive years, the Permittee must sample and analyze soil at the depths specified in the *Required Actions Based upon Trends* column of Table 4 or Table 5.

   Collect and analyze these soil samples in the fall according to timings in special condition S4.J *Soil Sampling and Nutrient Analysis*. Collect the samples according to procedures in special condition S5.C *Soil Monitoring*. Analyze the samples for parameters in Table 9 of special condition S5.C *Soil Monitoring*.

   Submit these results to Ecology using WQWebPortal as described in special condition S7.A *How to Submit Documents to Ecology*. If results of a nitrate loading analysis demonstrate a potential to impact groundwater, Ecology will notify the

Permittee of the need to develop a groundwater monitoring plan according to procedures in S5.D *Groundwater Monitoring*.

Table 4 Adaptive Management Actions for areas in drier climates

Field Risk Level	Required Actions After 1 Year	Required Actions After 2 Consecutive Years
Low	• No changes to current practices required.	• N/A
Medium	• Reevaluate nutrient budget assumptions for estimated crop yield, nitrogen volatilization, mineralization (special condition S4.K), and other sources of nutrients (e.g. irrigation water and atmospheric/precipitation deposition). • Verify actual land application rates and recalibrate land application equipment if necessary.	• N/A
High	**Continue the actions required by Medium risk level and:** ○ Document reason(s) for fall soil sample analysis result and associated risk level in Annual Report (special condition S7.D). ○ Adjust land application timing so nutrient availability aligns with peak crop uptake. ○ Stop land application after peak crop uptake. ○ Collect and analyze an additional late-summer/early fall soil sample at the third foot depth (25-36 inches) according to special condition S4.L.3.	**Continue the actions in the Required Action column for Medium and High risk levels and:** ○ Reduce nutrient application to the field. ○ Hire a professional/consultant to develop yearly nutrient budgets and application rates.
Very High	**Continue the actions required by High risk level and:** ○ Assume no nitrogen losses from denitrification and volatilization on the yearly nutrient budget for this field. ○ Submit the yearly nutrient budget for this field prior to land application for approval by Ecology. ○ Enhance nutrient removal via cropping. ○ Reduce nutrient application amount to field.	**Continue the actions required by Very High, High, and Medium risk levels and:** ○ Stop land application of nutrients to the field. ○ Hire a professional/consultant to develop yearly nutrient budgets and application rates. ○ Collect additional fall soil samples at the third, fourth, and fifth foot depth or until refusal or groundwater is reached and analyze for nitrate. Follow procedures in Step 3.

Table 5 Adaptive Management Actions for areas in wetter climates

Field Risk Level	Required Actions	Required Actions After 2 Consecutive Years
Low	• No changes to current practices required.	• N/A
Medium	• Reevaluate nutrient budget assumptions for estimated crop yield, nitrogen volatilization, mineralization (special condition S4.K), and other sources of nutrients (e.g. irrigation water and atmospheric/precipitation deposition). • Verify actual land application rates and recalibrate land application equipment if necessary.	• N/A
High	**Continue the actions required by Medium risk level and:** ○ Document reason(s) for fall soil sample analysis result and associated risk level in Annual Report (special condition S7.D). ○ Adjust land application timing so nutrient availability aligns with peak crop uptake. ○ Stop land application after peak crop uptake. ○ Collect and analyze an additional fall soil sample at the second foot depth (12-24 inches) according to special condition S4.L.3.	**Continue the actions in the Required Action column for Medium and High risk levels and:** ○ Reduce nutrient application to the field. ○ Hire a professional/consultant to develop yearly nutrient budgets and application rates.
Very High	**Continue the actions required by High risk level and:** ○ Assume no nitrogen losses from denitrification and volatilization on the yearly nutrient budget for this field. ○ Submit the yearly nutrient budget for this field prior to land application for approval by Ecology. ○ Enhance nutrient removal via cropping. ○ Reduce nutrient application amount to field.	**Continue the actions in the Required Action column for Very High, High, and Medium risk levels and:** • Stop land application of nutrients to the field. • Hire a professional/consultant to develop yearly nutrient budgets and application rates. • Collect additional fall soil samples at the second, third, and fourth foot depth or until refusal or groundwater is reached and analyze for nitrate. Follow procedures in Step 3.

S4.M Irrigation Water Management

The Permittee must prevent the downward movement of nitrate by managing their irrigation water so that the amount of water applied from precipitation and irrigation does not exceed the water holding capacity of the soil beyond the crop rooting depth.

S4.N Field Discharge Prevention

The Permittee must use technologies, infrastructure, and activities on their land application fields to prevent all discharges 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 from each land application field. This includes best management practices that prevent the contamination of stormwater runoff by manure, litter, or process wastewater by:

1. controlling or reducing the flow and duration of stormwater runoff
2. treating stormwater to remove pollutants, and
3. preventing sources of pollutants from entering stormwater runoff.

The practices used must comply with the requirements in this permit and criteria in applicable NRCS Conservation Practice Standards for Washington[8] or Ecology's Stormwater Management Manuals[9].

If the Permittee wishes to use a practice that is not an NRCS or Ecology recommended practice, then the Permittee must submit a request to Ecology for approval of the alternative practice. 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 proposed location of the alternative practice, the environmental performance expected, and the technical basis which supports the performance claims.

S4.O Manure Export

Manure is exported from the Permittee's CAFO to an unaffiliated party when the Permittee no longer has control of how the manure is used.

The Permittee must provide the most recent manure, litter, process wastewater, or other organic by-product nutrient analysis to the recipient as part of export. If the Permittee is exporting digestate, the nutrient analysis must be from within the last 5000 cubic yards (approximately 1,010,000 gallons) of digestate generated.

The Permittee must keep records of its manure exports as required by special condition S6.C *Export Records*.

If the Permittee has an agreement with another party (contracted composter) for the contracted composter to process (manure "composting" or drying) manure solids from the Permittee on-site, the solids which go to the contracted composter must be

[8]https://www.nrcs.usda.gov/resources/guides-and-instructions/field-office-technical-guides
[9] https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Stormwater-permittee-guidance-resources/Stormwater-manuals

tracked as export by the Permittee. After the solids are under the control of the contracted composter, the Permittee is not responsible for tracking sales and movement off-site of the processed manure solids as part of export unless the solids come under the Permittee's control again.

S4.P Emergency Procedures

The Permittee must develop emergency procedures in the event of a failure in their infrastructure (e.g. burst pipe, waste storage pond embankment failure) that will direct the Permittee's actions to prevent, control, or reduce discharges to ground and surface waters. Emergency procedures must include discharge sampling as required by this permit. The emergency procedures must include the noncompliance notification requirements required by special condition S7.E *Reporting Permit Violations* and special condition S7.F *Spills Reporting*.

S4.Q Training

Either the Permittee or at least one of the Permittee's employees must be familiar with the monitoring and inspections required by special condition S5.A *Operations and Maintenance*.

If the Permittee chooses to train their employee(s) to look for and notice problems with facility infrastructure during their daily work to meet the visual inspection/monitoring requirements of special condition S5.A *Operations and Maintenance* so that these requirements do not become a separate activity, the employee training must incorporate what to look for, who to notify (if there is a designee other than the Permittee) about problems or potential problems, and where and how to record the information at the end of shift as required by special condition S6.A *Operations and Maintenance*.

S5. MONITORING

S5.A. Operations and Maintenance

The Permittee must perform the visual inspections of the facility indicated in Table 6 below, to ensure that equipment, infrastructure, and field discharge management practices are in proper working order.

Table 6 Routine Visual Inspections

Inspection	Frequency
Clean and wastewater lines	Daily
Clean water diversion (e.g. roof gutters)	Weekly
Storage ponds and waste handling infrastructure	Weekly
Field run-off management	Monthly

The Permittee must record the outcome of the visual inspections according to special condition S6.A *Operations and Maintenance Records*. A template for this record keeping is available on Ecology's CAFO Permit webpage[10].

Other templates which document the required information may be used. For example, the most recent Oregon Department of Agriculture Large CAFO Record Keeping Calendar, which is available (at the time this permit was issued) under the Resources section of the Oregon CAFO web page[11].

S5.B. Manure, Litter, and Process Wastewater Monitoring

1. **When to collect and analyze samples**

   The Permittee must sample the manure, litter, process wastewater, and other organic by-products prior to its application to land, up to three times annually as laid out in the schedule in Table 7.

   During the land application season, if the Permittee begins to use a new source of nutrients for crops, the Permittee must have the new source sampled and analyzed for nutrient content prior to land applying the new source.

   The Permittee is not required to have commercial chemical fertilizers sampled and analyzed for nutrient content, but is required to record the amount of nutrients applied in special condition S6.B *Land Application Records*.

2. **How to collect and analyze samples**

   Manure, litter, process wastewater, and other organic by-product samples must be representative of the source (***composite sample***), and taken following the most recent guidance provided in either Extension Publication PNW 533[12] or PNW 673[13]. Copies of these documents are available on Ecology's CAFO permit webpage[14].

   The permittee must use the analytical methods specified in Table 7 unless a different method used is sufficiently sensitive and produces measurable results in the sample and EPA has listed it as an EPA-approved method in 40 CFR Part 136. If the Permittee uses an alternative method, not specified in the permit and as allowed above, it must report the test method, detection level (DL), and quantification level (QL) on the discharge monitoring report or in the required report. If the Permittee is unable to obtain the required DL and QL in its effluent due to matrix effects, the Permittee must submit a matrix-specific detection limit (MDL) and a QL to Ecology with appropriate laboratory documentation.

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[10] https://ecology.wa.gov/cafo
[11] http://www.oregon.gov/ODA/programs/NaturalResources/Pages/CAFO.aspx
[12] Bary, A., Cogger, C., Sullivan, D. (2016). *Fertilizing with Manure and Other Organic Amendments*. Pacific Northwest Extension, Washington State University.
[13] Moore, A., de Haro-Marti, M., Chen, L. (2015). *Sampling Dairy Manure and Compost for Nutrient Analysis*. Pacific Northwest Extension, University of Idaho.
[14] https://ecology.wa.gov/cafo

If a waste storage structure is equipped with a leak detection system, monitor for leaks according to the leak detection plan included in the MPPP.

Table 7 Manure, Litter, and Process Wastewater Sampling

Parameter	Units & Speciation (Liquid Materials)	Units & Speciation (Solid Materials)	Laboratory Method	Sampling Frequency	Sample Type
Ammonia-N (NH_3-N)	Lbs/1000 gal as N, as received	Lbs/ton as N, as received	SM 4500-NH_3 G/H-2011	Up to 3 times per year, per source	Composite
Nitrate plus Nitrite-N (NO_3-N + NO_2-N)	Lbs/1000 gal as N, as received	Lbs/ton as N, as received	SM 4500-NO_3 E/F/H-2011	Up to 3 times per year, per source	Composite
Total Phosphorus[a]	Lbs/1000 gal as P_2O_5, as received	Lbs/ton as P_2O_5, as received	SM 4500-P E-2011	Up to 3 times per year, per source	Composite
Liner Leak[b]	Yes/No	NA	NA	Weekly	Visual Observation
Volume of Leaked Water	gallons/day	NA	NA	Daily, if leak detected	Measurement

[a] If laboratory reports results as elemental phosphorus, multiply the result by 2.29 to convert to the fertilizer form P_2O_5.

[b] If leaked water is observed report yes, if not report no.

S5.C. Soil Monitoring

1. **When to collect and analyze soil samples**

   The permittee must monitor soil on land application fields. Soil samples must be taken at least twice a year according to requirements in S4.J *Soil Sampling and Nutrient Analysis*.

   - Collect soil samples prior to land application and analyze them for the parameters listed in Table 8.
   - Collect soil samples after harvest of annual crops and before 3 inches of rainfall accumulate. Analyze them for parameters listed in Table 9.

2. **How to collect and analyze soil samples**

   Samples must be representative of the land application field (composite sample), following the most recent guidance on soil sample handling, preservation, and

shipment provided in either Extension Publication PNW 570[15] or EM 8832[16]. Copies of these documents are available on Ecology's CAFO permit webpage[17].

Table 8 Pre-Land Application Soil Monitoring

Parameter	Units & Speciation	Sampling Frequency	Depth Increments for Areas with Annual Precipitation of 25 inches or Less	Depth Increments for Areas with Annual Precipitation greater than 25 inches
Ammonia-N (NH_3-N)	lbs/acre or ppm as N	Every year	Increment 1: 0 -12 inches Increment 2: 12-24 inches	Increment 1: 0 -12 inches
Nitrate plus Nitrite-N (NO_3-N + NO_2-N)	lbs/acre or ppm as N	Every year	Increment 1: 0 -12 inches Increment 2: 12-24 inches	Increment 1: 0 -12 inches

Table 9 Post-Harvest Soil Monitoring

Parameter	Units & Speciation	Sampling Frequency	Depth Increments for Areas with Annual Precipitation of 25 inches or Less	Depth Increments for Areas with Annual Precipitation greater than 25 inches
Nitrate plus Nitrite-N (NO_3-N + NO_2-N)	lbs/acre or ppm as N	Every year	Increment 1: 0 -12 inches Increment 2: 12-24 inches	Increment 1: 0 -12 inches
Ammonia-N (NH_3-N)	lbs/acre or ppm as N	Every year	Increment 1: 0 -12 inches Increment 2: 12-24 inches	Increment 1: 0 -12 inches
Soil Organic Matter	%	Every 3 years	Increment 1: 0 -12 inches Increment 2: 12-24 inches	Increment 1: 0 -12 inches
Total Phosphorus[a]	ppm	Every 3 years	Increment 1: 0 -12 inches Increment 2: 12-24 inches	Increment 1: 0 -12 inches

[a] The Bray-1 extraction method must be used to determine soil phosphorus for soils below pH 7. The Olsen bicarbonate extraction method must be used for soils at or above pH 7.

[15] Staben, M. L., et al. (2003). *Monitoring Soil Nutrients Using a Management Unit Approach*. Pacific Northwest Extension.

[16] Sullivan, D., et al. (2021). *Post-Harvest Soil Nitrate Testing for Manured Cropping Systems West of the Cascades*. Pacific Northwest Extension, Oregon State University.

[17] https://ecology.wa.gov/cafo

S5.D. Groundwater Monitoring

1. Medium and Large CAFOs located within a nitrate priority area

Medium and large CAFOs located within a ***nitrate priority area*** categorized as moderate, moderately high, high, or very high priority must install groundwater monitoring network and conduct monitoring according to the procedures below. A map of the nitrate priority areas is provided in Appendix C.

All production areas and land application fields must be monitored. If the CAFO facility is not co-located, establish separate groundwater monitoring networks for each area. Land application fields with similar management practices and site conditions including but not limited to soil type and hydrogeology, may be grouped together, so long as representative samples can be obtained.

Each groundwater monitoring network must have a sufficient number of wells downgradient of the CAFO facility to ensure a high probability of detecting contamination when it is present. At least one well must be upgradient of the CAFO facility monitored by the network. Groundwater monitoring must be conducted in the uppermost saturated zone.

a. Develop the Work Plan

Within 6 months of receiving permit coverage, the Permittee must submit a work plan to Ecology for installing a groundwater quality monitoring network, in accordance with WAC 173-200-080. The work plan must conform to *Guidelines for Preparation of Engineering Reports for Industrial Wastewater Land Application Systems* (Ecology Publication #93-36) and the *Implementation Guidance for the Groundwater Quality Standards* (Ecology Publication #96-02). The work plan must include well siting, quality control protocols, a sampling plan, and sampling protocols.

b. Install Groundwater Monitoring Wells

The Permittee must complete construction of the groundwater monitoring network within ninety (90) days after approval of the work plan by Ecology. The Permittee must construct wells in accordance with Chapter 173-160 WAC. Report to Ecology the tag numbers, latitude and longitude (NAD83/WGS84 datum), and top-of-casing elevations (NAVD88 datum) of each monitoring well.

c. Conduct Routine Monitoring

After the groundwater monitoring network is in place, the Permittee must notify Ecology and monitor the parameters in Table 10 according to the approved work plan. Notify Ecology at least 30 days prior to monitoring.

The Permittee must use the analytical methods specified below unless a different method used is sufficiently sensitive and produces measurable results in the sample and EPA has listed it as an EPA-approved method in 40 CFR Part 136. If the Permittee uses an alternative method, not specified in the

permit and as allowed above, it must report the test method, detection level (DL), and quantification level (QL) in the required report. If the Permittee is unable to obtain the required DL and QL in its effluent due to matrix effects, the Permittee must submit a matrix-specific detection limit (MDL) and a QL to Ecology with appropriate laboratory documentation.

2. **Small CAFOs and Facilities outside of a Nitrate Priority Area**

If the results of the nitrate loading analysis (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, the permittee must evaluate the impacts of its activities on groundwater quality by completing the requirements below:

a. Develop the Work Plan

Within 6 months after receiving the determination from Ecology, the Permittee must submit a work plan to Ecology for a groundwater quality evaluation study at the site specified in the determination, in accordance with WAC 173-200-080. The work plan must conform to *Guidelines for Preparation of Engineering Reports for Industrial Wastewater Land Application Systems* (Ecology Publication #93-36) and the *Implementation Guidance for the Groundwater Quality Standards* (Ecology Publication #96-02). The work plan must include well siting, quality control protocols, a sampling plan, and sampling protocols.

b. Implement the Work Plan

Upon approval of the work plan by Ecology, the Permittee must conduct a groundwater evaluation study to determine site-specific hydrogeologic conditions.

c. Report the Study Results

After the first full year of monitoring, the Permittee must submit a report summarizing the results of the groundwater evaluation study, interpretations of the data, conclusions, and recommendations. Submit this report with the annual report required in S7.D.

d. Install Additional Groundwater Monitoring Wells

If the groundwater study recommends installation of additional wells, the Permittee must complete construction of the groundwater monitoring network within ninety (90) days after approval of the groundwater evaluation study by Ecology. The Permittee must construct wells in accordance with Chapter 173-160 WAC. Report to Ecology the tag numbers, latitude and longitude (NAD83/WGS84 datum), and top-of-casing elevations (NAVD88 datum) of each monitoring well.

e. Conduct Routine Monitoring

After the recommended groundwater monitoring network is in place, the Permittee must notify Ecology and monitor the parameters in Table 10 according to the approved groundwater evaluation study. Notify Ecology at least 30 days prior to monitoring.

The Permittee must use the analytical methods specified below unless a different method used is sufficiently sensitive and produces measurable results in the sample and EPA has listed it as an EPA-approved method in 40 CFR Part 136. If the Permittee uses an alternative method, not specified in the permit and as allowed above, it must report the test method, detection limit (DL), and quantification limit (QL) in the required report. If the Permittee is unable to obtain the required DL and QL in its effluent due to matrix effects, the Permittee must submit a matrix-specific detection limit (MDL) and a QL to Ecology with appropriate laboratory documentation.

3. **Submitting work plans and reporting results for all facilities**

   Work plans and groundwater evaluation study must be submitted to Ecology according to deadlines specified above. Routine monitoring results must be submitted to Ecology with the annual report required in S7.D. Each document must be submitted using WQWebPortal as described in special condition S7.D *Annual Report* and must include the certification statement and signature required by general condition G14.

Table 10 Groundwater monitoring

Parameter	Units & Speciation	Laboratory Method	Sampling Frequency [a]	Sample Type
Measured Depth to Groundwater	Feet (nearest 0.01 ft)	NA	At least quarterly	Field Measurement
pH	Standard Units	NA	At least quarterly	Field Measurement
Conductivity	Micromho/cm	NA	At least quarterly	Field Measurement
Temperature	Degrees C	NA	At least quarterly	Field Measurement
Dissolved Oxygen	mg/L	NA	At least quarterly	Field Measurement
Total Nitrogen (TN)	mg/L as N	NA	At least quarterly	Calculated
Nitrate plus Nitrite-N (NO_3-N + NO_2-N)	mg/L as N	SM4500-NO3-E/F/H	At least quarterly	Grab
Total Kjeldahl Nitrogen (TKN)	mg/L as N	SM4500-N_{org}B/C and SM4500NH_3-B/C/D/EF/G/H	At least quarterly	Grab

Parameter	Units & Speciation	Laboratory Method	Sampling Frequency [a]	Sample Type
Escherichia Coli (E. coli)	CFU or MPN per 100 mL	SM 9221B, 9221F, 9223B, EPA 1603	At least quarterly	Grab

[a] Unless groundwater evaluation study recommends more frequently monitoring

S5.E. Surface Water Monitoring

1. **Standard Protocol**

   If any discharge of pollutants occurs from the production area to surface water or a prohibited discharge occurs from land application areas to surface water, the permittee must:

   a. Record the date and time the discharge was identified, the date and time the discharge is halted, and an estimate of the volume of the discharge.

   b. Collect a minimum of one grab sample from the point of overflow or discharge within 30 minutes of detecting the discharge. The sample(s) collected must be representative of the discharge. Analyze the sample(s) for the parameters listed in Table 11.

   c. Notify the appropriate Ecology regional office in person or by phone, within 24 hours of detecting the discharge.

   d. Submit the results from the above actions to Ecology using the Water Quality Permitting Portal, unless granted a waiver from electronic reporting according to S7.A *How to Submit Documents to Ecology*.

   e. If the discharge is unauthorized, follow reporting requirements in special condition S7.E *Reporting Permit Violations*.

2. **Protocol when conditions are unsafe**

   If conditions are not safe for sampling, the permittee must provide documentation of why samples could not be collected and analyzed. For example, the permittee may be unable to collect samples during dangerous weather conditions (such as local flooding, high winds, hurricane, tornadoes, electrical storms, etc.).

   a. Record the date and time the discharge was identified, the date and time the discharge is halted, and an estimate of the volume of the discharge.

   b. Notify the appropriate Ecology regional office by phone, within 24 hours of detecting the discharge.

   c. Once dangerous conditions have passed, collect a minimum of one sample from the point of overflow or discharge.

   d. Submit the results from the above actions to Ecology using the Water Quality Permitting Portal, unless granted a waiver from electronic reporting according to S7.A *How to Submit Documents to Ecology*.

e. Follow reporting requirements in special condition S7.E *Reporting Permit Violations*.

3. **Ecology Regional Office Contact Information**

Central Region at (509) 575-2490 for Benton, Chelan, Douglas, Kittitas, Klickitat, Okanogan, or Yakima County

Eastern Region at (509) 329-3400 for Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, or Whitman County

Northwest Region at (425) 649-7000 for Island, King, Kitsap, San Juan, Skagit, Snohomish, or Whatcom County

Southwest Region at (360) 407-6300 for Clallam, Clark, Cowlitz, Grays Harbor, Jefferson, Lewis, Mason, Pacific, Pierce, Skamania, Thurston, or Wahkiakum County

Table 11 Surface Water Monitoring

Parameter	Units & Speciation	Laboratory Method	Sampling Frequency	Sample Type
Escherichia Coli (E. coli), for discharges to freshwater	CFU or MPN per 100 mL	EPA 1603	1/event	Grab
Enterococci, for discharges to marine water	CFU or MPN per 100 mL	EPA 1600	1/event	Grab
Fecal Coliform Bacteria, for discharges to marine water	CFU or MPN per 100 mL	SM 9222D	1/event	Grab
Total Nitrogen (TN)	mg/L as N	NA	1/event	Calculated
Nitrate plus Nitrite-N (NO_3-N + NO_2-N)	mg/L as N	SM4500-NO3-E/F/H	1/event	Grab
Total Kjeldahl Nitrogen (TKN)	mg/L as N	SM4500-N_{org}B/C and SM4500NH_3-B/C/D/EF/G/H	1/event	Grab
Total Phosphorus	mg/L	EPA 365.1	1/event	Grab
Volume of discharged water	Gallons/day	NA	Daily, as needed	Measured

S5.F. Laboratory Accreditation

The Permittee must ensure that all monitoring data required by Ecology for permit specified parameters is prepared by a laboratory registered or accredited under the provisions of chapter 173-50 WAC, *Accreditation of Environmental Laboratories*.

Soils data are process control parameters, which do not require preparation by an accredited laboratory. However, the Permittee must obtain this data from a reputable agricultural test lab that is an active participant in a nationally recognized agricultural laboratory proficiency testing program, such as the North American Proficiency Testing Program (NAPT). You can find more information on the NAPT website[18] .

[18] http://www.naptprogram.org/

S6. RECORD KEEPING

S6.A. Operations and Maintenance Records

The Permittee must record the outcome of the visual inspections/monitoring required by special condition S5.A *Operations and Maintenance*. A template for this record keeping is available on Ecology's CAFO permit webpage[19].

S6.B. Land Application Records

The Permittee must keep the following records of land application for each field where manure, litter, process wastewater, or other organic by-products were applied:

1. Dates of all applications.
2. The field name consistent with the MPPP field map and field specific nutrient budget.
3. Method of land application.
4. Application rate, including commercial/chemical fertilizer, in pounds, gallons, tons, or ft3 per acre.
5. The total nitrogen applied (ammonia-N (NH3-N), ammonium-N (NH4-N), nitrate (NO3-N), and organic nitrogen) in pounds per acre.
6. Total phosphorus applied in pounds per acre.
7. Weather 24 hours before land application.
8. Weather during land application.
9. Weather 24 hours after land application.
10. Total amount of irrigation water applied to each field in acre-feet and fractions thereof.

A template for this record keeping is available on Ecology's CAFO permit webpage[20].

Upon determination that a high late summer or early fall soil nitrate test is due to crop failure or other unusual environmental conditions, the Permittee must keep records of how the determination was made, including any data, measurements, or best professional judgment by technical assistance providers.

S6.C. Export Records

The Permittee must record the information listed below each time it exports manure, litter, process wastewater, or other organic by-products. A template for this record keeping is available on Ecology's CAFO permit webpage[21].

[19] https://ecology.wa.gov/cafo
[20] https://ecology.wa.gov/cafo
[21] https://ecology.wa.gov/cafo

1. Amount of manure, litter, process wastewater, or other organic by-products exported in gallons for liquid/slurry and tons for solids
2. Name of entity manure was exported to
3. Date export took place

The permittee must provide the most recent manure, litter, process wastewater, or other organic by-product nutrient analysis to the recipient as required by special condition S4.O *Manure Export*.

S6.D. Monitoring Records

For each measurement or sample taken, the Permittee must record the following information:

1. The date, exact place, method, and time of sampling or measurement
2. The individual who performed the sampling or measurement
3. The dates the analyses were performed
4. The individual who performed the analyses
5. The analytical techniques or methods used
6. The results of all analyses

S6.E. Providing Records

The Permittee must provide a copy of their MPPP, records, or other documents required by this permit to Ecology or WSDA within 14 days of their request.

The Permittee must maintain a copy of their MPPP, records, or other documents required by this permit on-site and make these documents available to Ecology or WSDA during site visits.

Updated MPPP must be submitted to Ecology within the timeframe required in S4.A.5 *Update of the MPPP*.

S6.F. Records Retention

The Permittee must retain records for a minimum of five (5) years. Such information must include copies of all monitoring, reports, and records required by this permit, and records of all data used to complete the application for this permit.

The Permittee must keep records longer in the event of unresolved litigation regarding the discharge of pollutants by the Permittee or when requested by Ecology.

S7. REPORTS AND SUBMITTALS

S7.A How to Submit Documents to Ecology

The permittee must use Ecology's Water Quality Permitting Portal[22] to submit all documents, data, and submittals required in this permit.

If the Permittee is unable to submit electronically (for example, they do not have access to the internet), they must contact Ecology to request an Electronic Reporting Waiver form and submit the completed form to Ecology at:

Washington State Department of Ecology
Water Quality Program
Attn: CAFO Permit Manager
PO Box 47696
Olympia, WA 98504-7696

All submittals (documents, data, reports, etc.) must be approved and signed by a responsible person in accordance with General Condition G14 (Signatory Requirements).

S7.B. Submittal of MPPP

The Permittee must submit the CAFO's initial MPPP to Ecology with the permit application.

Updated MPPPs must be submitted to Ecology within the timeframe required in S4.A.5 *Update of the MPPP*.

S7.C. Waste Storage Structure Assessment

The permittee must conduct and submit an assessment of the condition of each storage structure used for manure, litter, process wastewater and other organic by-products according to the procedures below.

The Permittee shall continue to address any deficiencies identified in the assessment required in the previous Concentrated Animal Feeding Operation General Permit.

1. **Assessment for waste storage ponds with leak detection systems and permanent aboveground tanks**

   If the waste storage pond has a leak detection system, follow the leak detection plan as written in the MPPP. See special condition S4.C.3 *Maintain Storage Facilities* for plan requirements.

   If using a permanent aboveground tank, follow maintenance requirements in special condition S4.C.3 *Maintain Storage Facilities*. Conduct and document visual inspections and repairs as required in special condition S5.A *Operations and Maintenance*.

[22] https://secureaccess.wa.gov/ecy/wqwebportal

2. **Assessment for waste storage ponds without leak detection systems**

   If a waste storage pond does not have a leak detection system in place, a ***qualified expert*** must assess the pond for compliance with requirements in special condition S4.C or by completing the Washington NRCS Engineering Technical Note 23 - Assessment Procedure for Existing Waste Storage Ponds. The Technical Note is available on Ecology's CAFO permit webpage[23].

   The Permittee must submit the results of the assessment for each waste storage pond without a leak detection system to Ecology within 2 years of permit coverage. The assessment must include the certification statement and signature required by general condition G14.

   If the assessment identifies that repairs are needed, the permittee must discontinue use of the waste storage pond and develop a plan for repair. The repair plan must be submitted to Ecology with an updated MPPP within 6 months in accordance with procedures in S4.A.5.b *When Ecology, WSDA, or Permittee assessments require MPPP updates*. The repair plan must include:

   a. A description of how the Permittee will ensure compliance with special condition S4.C.

   b. Timelines of when repairs will be completed.

   c. A certification statement and signature as required by general condition G14.

   Ecology may require a work plan and groundwater evaluation study (special condition S5.D *Groundwater Monitoring*) if the assessment determines that:

   a. there is less than two feet of vertical separation between the bottom of the waste storage pond (inside the pond above the liner) and the seasonal high water table, or

   b. there is a reasonable potential to impact groundwater due to the condition of the structure.

   Work proposed in the repair plan must be completed within 18 months of the completion of the waste storage pond assessment.

   To request a time extension on work proposed in the repair plan, a Permittee shall submit a detailed explanation of why it is making the request (technical basis) to Ecology in accordance with special condition S4.A.5.b *When Ecology, WSDA, or Permittee assessments require MPPP updates*, 120 days prior to the deadline. Ecology will approve or deny the request within 60 days of receipt of a complete request.

[23] https://ecology.wa.gov/cafo

3. **Assessment for solids storage, dry stacks, and compost piles on impervious surfaces**

   If the storage area is located on an impervious surface, follow maintenance requirements in special condition S4.C.3 *Maintain Storage Facilities*. Conduct and document visual inspections and repairs as required in special condition S5.A *Operations and Maintenance*.

4. **Assessment for solids storage, dry stacks, and compost piles on soil pads**

   Each solids storage area located on soil pads must be assessed for compliance with requirements in special condition S4.C through a qualified expert or by completing the double-ring infiltrometer test (ASTM D3385-88). The infiltrometer test procedure is available on Ecology's CAFO Permit webpage[24].

   The Permittee must submit the results of the assessment for each soil pad to Ecology within 2 years of permit coverage.

   If the assessment identifies deficiencies, the permittee must collect soil samples at depth increments of 0-12 inch and 12-24 inches and analyze for parameters in Table 4. The permittee must develop a compliance plan to address the deficiencies. The plan must be submitted with an updated MPPP to Ecology within 6 months in accordance with procedures in S4.A.5.b *When Ecology, WSDA, or Permittee assessments require MPPP updates*. The compliance plan must include:

   a. A description of how the Permittee will ensure compliance with special condition S4.C.2 *Solid Material Storage Facilities*.

   b. Timelines of when work to address the deficiency will be completed.

   c. Results from analyzed soil samples.

   d. A certification statement and signature as required by general condition G14.

   Work proposed in the compliance plan must be completed within 18 months of the completion of the solids storage assessment. To request a time extension on work proposed in the compliance plan, a Permittee shall submit a detailed explanation of why it is making the request (technical basis) to Ecology in accordance with special condition S4.A.5.b *When Ecology, WSDA, or Permittee assessments require MPPP updates*, 120 days prior to the deadline. Ecology will approve or deny the request within 60 days of receipt of a complete request.

S7.D. Annual Report

By February 1 each year, the Permittee must submit an annual report using Ecology's Water Quality Permitting Portal – Permit Submittals application, unless Ecology grants the permittee a waiver from electronic reporting according to S7.A *How to submit documents to Ecology*. Use the form in Appendix B if granted a waiver.

[24] https://ecology.wa.gov/cafo

The reporting period is the previous calendar year (January 1 to December 31). Permittees must include the following with each annual report:

1. Number of animals and manure, litter, wastewater generated.
2. Discharges from production area or land application fields, if they occurred.
3. Nutrient source content results, analyzed according to S5.B.
4. Field land application information for each field.
5. Soil nutrient results, analyzed according to S5.C.
6. Yearly field-specific nutrient budgets for each field, including double crop or winter crop if applicable, developed according to S4.K.1.
7. The certification statement and signature according to G14.

S7.E. Reporting Permit Violations

In the event the Permittee is unable to comply with any of the permit terms, conditions, or discharge limits, due to any cause, the Permittee must:

1. Immediately take action to minimize or otherwise stop the violation, and correct the problem.
2. Sample and analyzed all discharges to surface water according to procedures in special condition S5.E *Surface Water Monitoring*.
3. Notify the appropriate Ecology regional office in person or by phone, within 24 hours of when the Permittee becomes aware of the noncompliance:

   Central Region at (509) 575-2490 for Benton, Chelan, Douglas, Kittitas, Klickitat, Okanogan, or Yakima County

   Eastern Region at (509) 329-3400 for Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, or Whitman County

   Northwest Region at (425) 649-7000 for Island, King, Kitsap, San Juan, Skagit, Snohomish, or Whatcom County

   Southwest Region at (360) 407-6300 for Clallam, Clark, Cowlitz, Grays Harbor, Jefferson, Lewis, Mason, Pacific, Pierce, Skamania, Thurston, or Wahkiakum County

4. Submit a written report to Ecology within 5 days using Ecology's Water Quality Permitting Portal, unless granted a waiver from electronic reporting according to S7.A *How to Submit Documents to Ecology*. The report must include:
   a. A description of the noncompliance
   b. A descriptions of the cause of the noncompliance
   c. The period of noncompliance including exact dates and times

d. A statement about whether the noncompliance has been corrected, or if it has not been corrected how long the noncompliance is expected to last

e. A description of the steps taken, or being taken to correct the noncompliance corrective action taken and/or planned, steps to be taken to prevent a recurrence, results of the re-sampling, and any other pertinent information.

f. Sample results required by special condition S5.E *Surface Water Monitoring.*

g. The certification statement and signature required by general condition G14.

5. The Permittee must review their MPPP for compliance with the permit and make appropriate updates within 14 days of the noncompliance to address the noncompliance and reflect any necessary changes to the facility. If the MPPP is revised, submit the updated MPPP in accordance with procedures in S4.A.5.b *When Ecology, WSDA, or Permittee assessments require MPPP updates*. The Permittee must also immediately begin the process to fully implement and maintain appropriate source control and/or treatment infrastructure or practices, addressing the deficiencies no later than 45 days from the date of noncompliance. If installation of necessary infrastructure or practices is not feasible within 45 days Ecology may approve additional time when an extension is requested by a Permittee within the initial 45-day period.

Compliance with the requirements of this special condition (special condition S7.E) does not relieve the Permittee from responsibility to maintain continuous compliance with the terms and conditions of this permit or the resulting liability for failing to comply.

S7.F. Spills Reporting

The Permittee must report spills of oil or hazardous materials (e.g. pesticides) in accordance with the requirements of RCW 90.56.280 and 173-303-145 WAC by calling the National Response Center 1-800-424-8802, and the Washington Emergency Management Division 1-800-258-5990. Permittees can obtain additional instructions on Ecology's Report a Spill webpage[25].

S8. APPENDICES

The attached appendices are incorporated by reference into this permit.

APPENDIX A: DEFINITIONS

APPENDIX B: ANNUAL REPORT

APPENDIX C: NITRATE PRIORITY AREAS

[25] https://ecology.wa.gov/Footer/Report-an-environmental-issue/Report-a-spill

GENERAL CONDITIONS

G1. DISCHARGE VIOLATIONS

All discharges and activities authorized by this general permit shall be consistent with the terms and conditions of this general permit. The discharge of any pollutant more frequently than, or at a concentration in excess of that authorized by this general permit is a violation of the terms and conditions of this general permit.

G2. PROPER OPERATION AND MAINTENANCE

The Permittee shall, at all times, properly operate and maintain all facilities or systems of treatment and control (and related appurtenances) which are installed to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems, which are installed by a Permittee only when the operation is necessary to achieve compliance with the conditions of this permit.

G3. RIGHT OF ENTRY

The Permittee shall allow an authorized representative of Ecology, upon the presentation of credentials and such other documents as may be required by law:

1. To enter upon the premises where a discharge is located or where any records shall be kept under the terms and conditions of this permit;
2. To have access to and copy at reasonable times any records that shall be kept under the terms of this permit;
3. To inspect at reasonable times any monitoring equipment or method of monitoring required in this permit;
4. To inspect at reasonable times any collection, treatment, pollution management, or discharge facilities; and
5. To sample at reasonable times any discharge of pollutants.

G4. PERMIT COVERAGE REVOKED

Pursuant with chapter 43.21B RCW and chapter 173-226 WAC, the Director may require any discharger authorized by this permit to apply for and obtain coverage under an individual permit or another more specific and appropriate general permit. Cases where revocation of coverage may be required include, but are not limited to, the following:

1. Violation of any term or condition of this permit.
2. Obtaining coverage under this permit by misrepresentation or failure to disclose fully all relevant facts.

3. Failure or refusal of the Permittee to allow entry as required in RCW 90.48.090.
4. A determination that the permitted activity endangers human health or the environment, or contributes to water quality standards violations.
5. Nonpayment of permit fees or penalties assessed pursuant to RCW 90.48.465 and chapter 173-224 WAC.
6. Failure of the Permittee to satisfy the public notice requirements of WAC 173-226-130(5), when applicable; or Permittees who have their coverage revoked for cause according to WAC 173-226-240 may request temporary coverage under this permit during the time an individual permit is being developed, provided the request is made within ninety (90) days from the time of revocation and is submitted along with a complete individual permit application form.

G5. GENERAL PERMIT MODIFICATION AND REVOCATION

This permit may be modified, revoked and reissued, or terminated in accordance with the provisions of chapter 173-226 WAC. Grounds for modification or revocation and reissuance include, but are not limited to, the following:

1. When a change which occurs in the technology or practices for control or abatement of pollutants applicable to the category of dischargers covered under this permit;
2. When effluent limitation guidelines or standards are promulgated pursuant to the FWPCA or chapter 90.48 RCW, for the category of dischargers covered under this permit;
3. When a water quality management plan containing requirements applicable to the category of dischargers covered under this permit is approved; or
4. When information is obtained which indicates that cumulative effects on the environment from dischargers covered under this permit are unacceptable.

G6. COMPLIANCE WITH OTHER LAWS AND STATUTES

Nothing in this permit shall be construed as excusing the Permittee from compliance with any applicable Federal, State, or local statutes, ordinances, or regulations.

G7. ADDITIONAL MONITORING

Ecology may establish specific monitoring requirements in addition to those contained in this permit by administrative orders or permit modification.

G8. PAYMENT OF FEES

The Permittee shall submit payment of fees associated with this permit as assessed by Ecology. Ecology may revoke this permit coverage or take enforcement, collection, or other actions, if the permit fees established under chapter 173-224 WAC are not paid.

G9. REQUESTS TO BE EXCLUDED FROM COVERAGE UNDER A GENERAL PERMIT

Any discharger authorized by this permit may request to be excluded from coverage under this general permit by applying for an individual permit. The discharger shall submit to the Director an application as described in WAC 173-220-040 or WAC 173-216-070, whichever is applicable, with reasons supporting the request. These reasons must fully document how an individual permit will apply to the applicant in a way that the general permit cannot. Ecology may make specific requests for information to support the request. The Director shall either issue an individual permit or deny the request with a statement explaining the reason for the denial. When an individual permit is issued to a discharger otherwise subject to this general permit, the applicability of this general permit to that Permittee is automatically terminated on the effective date of the individual permit.

G10. PENALTIES FOR VIOLATING PERMIT CONDITIONS

Any person who is found guilty of willfully violating the terms and conditions of this permit shall be deemed guilty of a crime, and upon conviction thereof shall be punished by a fine of up to ten thousand dollars and costs of prosecution, or by imprisonment in the discretion of the court. Each day upon which a willful violation occurs may be deemed a separate and additional violation. Any person who violates the terms and conditions of a waste discharge permit shall incur, in addition to any other penalty as provided by law, a civil penalty in the amount of up to ten thousand dollars for every such violation. Each and every such violation shall be a separate and distinct offense, and in case of a continuing violation, every day's continuance shall be deemed to be a separate and distinct violation.

G11. SIGNATORY REQUIREMENTS

All applications, reports, or information submitted to Ecology shall be signed and certified.

1. All permit applications shall be signed:
    a. In the case of corporations, by a responsible corporate officer.
    b. In the case of a partnership, by a general partner of a partnership.
    c. In the case of sole proprietorship, by the proprietor.
    d. In the case of a municipal, state, or other public facility, by either a principal executive officer or ranking elected official.
2. All reports required by this permit and other information requested by Ecology shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:
    a. The authorization is made in writing by a person described above and submitted to Ecology.
    b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position

having overall responsibility for environmental matters. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.)

3. Changes to authorization. If an authorization under paragraph B.2 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph B.2 above must be submitted to Ecology prior to or together with any reports, information, or applications to be signed by an authorized representative.
4. Certification. Any person signing a document under this section shall make the following certification:

   I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

G12. APPEALS

The terms and conditions of this general permit are subject to appeal. There are two different appeal categories.

1. The permit terms and conditions as they apply to the appropriate class of dischargers are subject to appeal within thirty (30) days of issuance of this general permit in accordance with chapter 43.21(B) RCW and chapter 173-226 WAC; and
2. The applicability of the permit terms and conditions to an individual discharger are subject to appeal in accordance with chapter 43.21(B) RCW within thirty (30) days of the effective date of coverage of that discharger.

An appeal of the coverage of this general permit to an individual discharger is limited to the applicability or non-applicability of this permit to that same discharger. Appeal of this permit coverage of an individual discharger will not affect any other individual dischargers. If the terms and conditions of this general permit are found to be inapplicable to any discharger(s), the matter shall be remanded to Ecology for consideration of issuance of an individual permit or permits.

G13. SEVERABILITY

The provisions of this permit are severable, and if any provision of this general permit or application of any provision of this general permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this general permit, shall not be affected thereby.

G14. DUTY TO REAPPLY

The Permittee shall reapply for coverage under this permit at least one hundred and eighty (180) days prior to the specified expiration date of this permit. An expired permit and coverage under the permit continues in force and effect until Ecology issues a new permit (coverage) or until Ecology cancels it. Only those facilities that have reapplied for coverage under this permit are covered under the continued permit.

APPENDIX A: DEFINITIONS

25-year, 24-hour Storm Event:

The amount of precipitation from a 24-hour storm event that has the likelihood of occurring once in a 25-year period. The amount of precipitation from a storm event of this type varies by location.

Agricultural Stormwater:

Discharges to surface water from land application fields generated only by precipitation provided that the following are true:

1. The discharge was not from the production area,
2. The discharge was not caused by human activities even if the activity took place during precipitation, and
3. Permittee is in compliance with their CAFO permit (including use of best management practices), where the manure, litter, process wastewater, or other organic by-products have been applied in accordance with site specific yearly field nutrient budget and other relevant permit requirements.

Applicant:

The person or entity applying for permit coverage.

Application for Coverage:

The form developed by Ecology used by a discharger to apply for coverage under a general permit. It is specific to each general permit. Also referred to as a Notice or Intent or NOI.

Application Rate:

The rate in quantity per acre (e.g. gallons/acre, tons/acre) that manure, litter, process waste, process wastewater, other organic by-products, or other nutrients from all sources are applied to a land application field.

Beneficial Use:

All existing and future uses of waters of the state as defined in WAC 173-200-020(4), and the use designations specified in WAC 173-201A-602. All uses have the same priority.

Composite Sample:

A series of grab samples collected over several locations within a field or ***management unit*** and combined together.

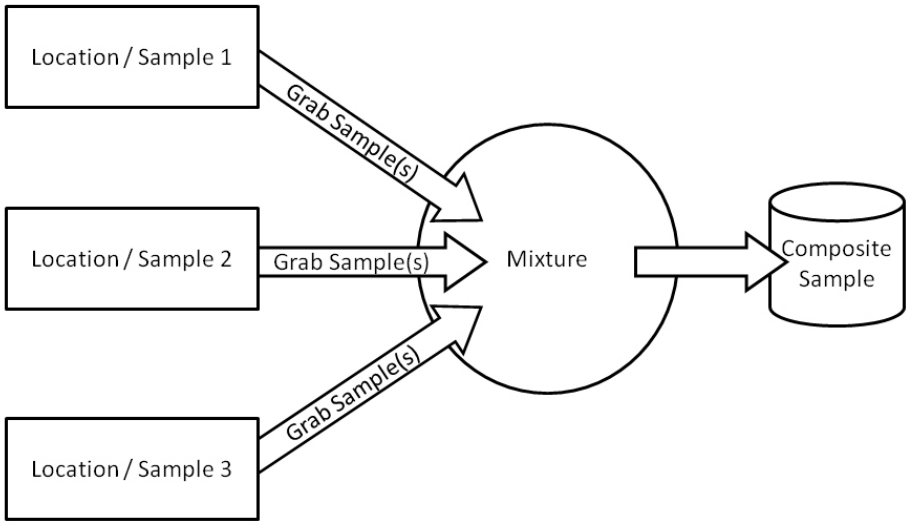


Figure 1 Composite Sample

Control:

Performing, directing, managing, overseeing, supervising, or giving instruction about any action or decision.

Crest:

The highest point of the structural (e.g. embankment) wall of a waste storage pond or other liquid storage structure.

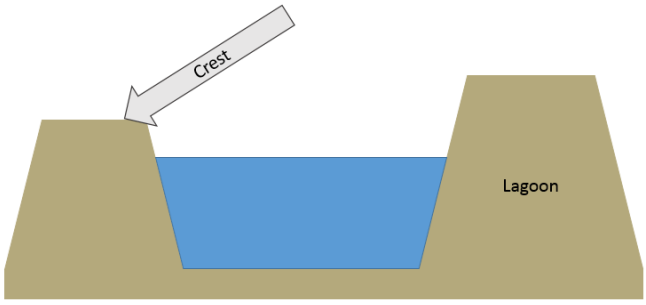


Figure 2 Crest of a waste storage structure

Discharge:

The addition of any pollutant or combination of pollutants to waters of the state.

Discharger:

The owner or operator of any commercial or industrial operation subject to regulation under chapter 90.48 RCW or the federal Clean Water Act due to a discharge.

Drier Climate:

A region in the State of Washington that receives, on average, 25 inches or less of precipitation annually.

Effluent Limitation:

Synonymous with discharge limits. Any restriction on timing, quantities, rates, and concentrations of pollutants discharged into waters of the state.

Export:

The removal of manure, litter, and process wastewater, or other organic by-products from the CAFO's production system to another party that is not under the control of the Permittee.

Feed:

Materials used for animal nutrition or that will be processed and used for animal nutrition that are stored by the CAFO such as hay, silage, grain, vegetable leavings, or other materials used for animal nutrition.

Filter Strip:
A strip of dense permanent vegetative cover such as grass and shrubs which slow land application field run-off and work to filter out nutrients and other contaminants (e.g. sediment, chemicals, bacteria, pathogens).

Freeboard:

The vertical distance from the maximum storage level (including normal storage plus storage volume for a 25-year, 24-hour storm event) of a waste storage pond to the lowest point on the waste storage pond ***crest***.

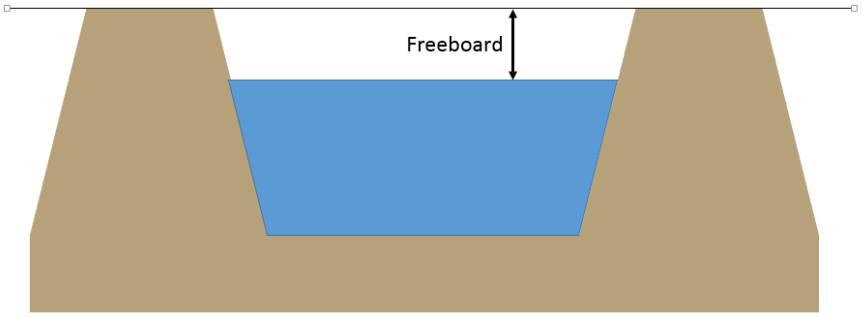


Figure 3 Freeboard

General Permit:

A permit that covers multiple dischargers of a source category within a designated geographical area in lieu of issuing individual site-specific permits to each discharger.

Geomembrane Liner:

A type of storage pond liner material that is a synthetic polymer such as reinforced polypropylene, high density polyethylene (HDPE), or polyvinyl chloride (PVC) and that is usually between 35 and 60 mil thick.

Groundwater:

Water in a saturated zone or stratum beneath the surface of land or below a surface water body. Surficially perched water is groundwater (Douma v. Ecology PCHB 00-019).

Indian Country:

As defined in 18 USC 1151: "Except as otherwise provided in sections 1154 and 1156 of this title, the term ''Indian country'', as used in this chapter, means (a) all land within the limits of any Indian reservation under the jurisdiction of the United States Government, notwithstanding the issuance of any patent, and, including rights-of-way running through the reservation, (b) all dependent Indian communities within the borders of the United States whether within the original or subsequently acquired territory thereof, and whether within or without the limits of a state, and (c) all Indian allotments, the Indian titles to which have not been extinguished, including rights-of-way running through the same."

Land Apply/Application:

The process of putting manure, litter, process wastewater, or other organic by-products on to a field to provide nutrients for crop growth.

Land Application Field:

An area of land, including ***management units***, under the control of the CAFO (excluding the production area) to which manure, litter, process wastewater, or other organic by-products are applied as a fertilizer or soil amendment.

Litter:

Animal bedding, materials used in animal housing such as straw, sand, or shavings on the floor, or spilled feed that has come into contact with manure, other organic by-products, or other contaminants.

Management Unit:

Portions of a field or portions of multiple closely located fields which have the same or very similar soil and crop growth characteristics which allow the areas to be managed as a single land application field.

Manure:

Liquid and solid livestock excrement.

Nitrate priority area:

Area prioritized by Ecology where conditions are vulnerable to nitrate transport to groundwater and wells sampled for nitrate exceed or approach the drinking water maximum contaminant limit of 10 mg/L. Areas are based on factors such as topography, nitrate risk studies, recharge,

land use, geology, soil properties, travel time through the soil profile, nitrate concentrations, and public health exposure. Priority areas are classified as Very High (bin 1), High (bin 2), Moderately High (bin 3), Moderate (bin 4), and Moderate- Urban (bin 5). Areas classified as Low (bin 6) and Insufficient Data (bin 7) have vulnerable conditions, but little to no nitrate results above 5 mg/L.

Notice of Intent (NOI):

A formal application or request for coverage under a general permit pursuant to WAC 173-226-200. See also Application for Coverage.

Notice of Termination (NOT):

A request by the ***Permittee*** to Ecology to end the Permittee's permit coverage because the facility no longer requires a permit.

Over-Top:

The addition of manure, litter, process wastewater, other organic by-products, or other material (e.g. precipitation) to a waste storage pond until the level of the liquid in the pond rises over the pond crest.

Other Organic By-Product:

Decomposable materials such as compost, biosolids, digestate, crop residues, or other organic sources of nutrients that may be land applied.

Permit:

An authorization, license, or equivalent control document issued by Ecology to implement chapter 90.48 RCW, the federal Clean Water Act, and associated statutes by allowing discharges of pollutants to waters of the state within constraints.

Permittee:

The person or entity that holds a permit coverage allowing specific discharge(s) to waters of the state (surface or ground).

Point Source:

Any discernible, confined, and discrete conveyance, including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged.

Pollutant:

Dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, dirt, sediment, industrial, municipal, and agricultural waste, or any other organic or inorganic matter that shall cause or tend to cause pollution when discharged into water.

Pollution:

Such contamination, or other alteration of the physical, chemical or biological properties, of any waters of the state, including change in temperature, taste, color, turbidity, or odor of the waters, or such discharge of any liquid, gaseous, solid, radioactive, or other substance into any waters of the state as will or is likely to create a nuisance or render such waters harmful, detrimental or injurious to the public health, safety or welfare, or to domestic, commercial, industrial, agricultural, recreational, or other legitimate ***beneficial uses***, or to livestock, wild animals, birds, fish or other aquatic life.

Process Wastewater:

Any water that is used as part of the operation of a CAFO that has come into contact with manure, litter, feed, ***other organic by-products***, or other contaminants on the facility.

Production Area:

The locations making up a CAFO facility that are used for animal confinement, manure, litter, feed, and process wastewater storage, product processing facilities (e.g. milking parlor, egg washing, feed mixing), and other areas used for the storage, handling, treatment, processing, or movement of raw materials, products, or wastes. This includes manure stockpiled on fields.

Qualified Expert:

Individuals who: (1) Have received professional training in waste storage facility design and construction and (2) Are capable of evaluating the conditions of the facility that could impact water quality at the site as required by this permit.

Saturated Soil:

Soil that has water filling 100% of its soil pore volume and that no longer has the capacity to retain additional water within is pore structure.

Storage Period:

The period of time (generally fall to early spring) during which manure, litter, process wastewater and other organic by-products must be stored because they may not be land applied and comply with permit requirements.

Synthetic Liner:

Synonymous with **geomembrane liner**.

T-SUM 200:

A sum of the daily heat units above zero for each day since January 1 until 200 heat units are reached. Heat units are the average of each day's low and high temperatures in degrees Celsius.

Top of the Bank:

The point on the edge of a field past which the land drops quickly down into a drainage ditch, surface water, or depression in the land.

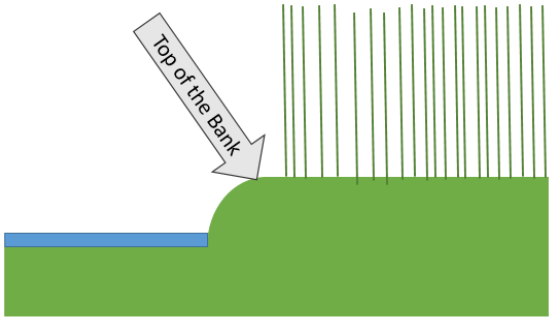


Figure 4 Top of the Bank

Total Maximum Daily Load (TMDL):

A calculation of the maximum amount of a pollutant that a water body can receive and still meet state water quality standards. Percentages of the total maximum daily load are allocated to the various pollutant sources. A TMDL is the sum of the allowable loads of a single pollutant from all contributing point and nonpoint sources. The TMDL calculations include a "margin of safety" to ensure that the water body can be protected in case there are unforeseen events or unknown sources of the pollutant. The calculation also accounts for seasonable variation in water quality.

Trust or Restricted Lands:

As defined in 25 USC § 2201(4): "(i) '*trust or restricted lands' means lands, title to which is held by the United States in trust for an Indian tribe or individual, or which is held by an Indian tribe or individual subject to a restriction by the United States against alienation; and (ii) 'trust or restricted interest in land' or 'trust or restricted interest in a parcel of land' means an interest in land, the title to which interest is held in trust by the United States for an Indian tribe or individual, or which is held by an Indian tribe or individual subject to a restriction by the United States against alienation*."

Vegetated Treatment Area:

An area of permanent vegetation used to treat contaminated runoff from areas such as feedlots, feed storage, compost areas, solid manure storage areas, barnyards and other livestock holding areas.

Waste Storage Pond:

A structure designed for storage of liquid manure, process wastewater, other organic by-products, or other liquids or slurries. May also be referred to as a temporary storage pond or lagoon.

Water Table:

The level at, and below, which the ground is completely saturated with water.

Waters of the State:

Includes lakes, rivers, ponds, streams, inland waters, underground waters (***groundwater***), salt waters and all other surface waters and watercourses within the jurisdiction of the state of Washington (RCW 90.48.020).

Water Quality Standards:

The current state and federal standards for water quality including, but not limited to:

- Surface Waters of the State of Washington (chapter 173-201A WAC).
- Ground Water Quality Standards (chapter 173-200 WAC).
- Sediment Management Standards (chapter 173-204 WAC).
- Human health based criteria in the National Toxics Rule (40 CFR § 131.36).

Wetter Climate:

A region in the State of Washington that receives, on average, more 25 inches of precipitation annually.

APPENDIX B: CAFO GENERAL PERMIT ANNUAL REPORT FORM

Permit No. WAG_____

Facility Name: _____

Facility County: _____

Use this form to submit your annual report to Ecology. All facilities must submit a signed annual report each year on or before December 31st.

This report is for the activities conducted during calendar year 20_____

Permittee Information

Facility Name

Responsible Person

Email

Phone Number

Operator Information

Operator Name

Email

Phone Number:

Facility Information

Provide the maximum number of each type of animal confined at the facility during the calendar year.

Milking Cow:

Dry Cow:

Calf:

Feedlot Beef:

Chicken - Broiler:

Chicken - Layer:

Swine at least 55 pounds:

Swine smaller than 55 pounds:

Sheep and lambs:

Turkeys:

Ducks:

Other:

How much manure, litter, process waste, process wastewaster, and other organic by-products did your facility generate during the past year?

Liquid Manure:	Units:
Solid Manure	Units:
Poultry Litter:	Units:
Process Wastewater:	Units:
Digestate:	Units:
Other Organic By-products:	Units:

How much manure, litter, process waste, process wastewaster, and other organic by-products did your facility export during the past year?

Liquid Manure:	Units:
Solid Manure	Units:
Poultry Litter:	Units:
Process Wastewater:	Units:
Digestate:	Units:
Other Organic By-products:	Units:

What is the total number of acres covered in your Manure Pollution Prevention Plan?

What is the total number of acres you applied nutrients to or are in control of for this reporting period?

Discharge Information

During the year, has manure, litter, process waste, or process wastewater discharged from your production area or land application fields? If you are covered by the Combined Permit, do not include discharges of agricultural stormwater here.

☐ NO

☐ YES

If YES, provide a summary of the approximate date, time, volume and duration of the discharge(s). Summarize your response to the discharge(s) on a separate sheet of paper and attach it with your annual report.

Nutrient Source Content Analysis

Report the results of your manure, litter, and process wastewater analyses as required in special conditions S4.I and S5.B. Results must be reported "as received" or "wet weight basis". Print additional copies of this page if you have more nutrient sources than space provided.

Nutrient Source Name[26]	Sample Collection Date	Nitrate plus Nitrite-N (NO3-N + NO2-N) concentration	Ammonia-N (NH3-N) concentration	Units for Nitrogen	Total Phosphorus concentration	Units for Phosphorus

[26] As documented in your Manure Pollution Prevention Plan

Field Application Information

Fill out this page for each of the fields you applied manure nutrients to fields you control.

Field ID: Field size, acres:

1st Crop Grown: 1st Crop Yield, include units:

2nd Crop Grown: 2nd Crop Yield, include units:

Field Soil Sample Analysis

Sample Depth	Date sample collected	Nitrate plus Nitrite-N (NO3-N + NO2-N) concentration	Ammonia-N (NH3-N) concentration	Units for nitrogen concentrations	Unit conversion factor for nitrogen 27	Phosphorus (P2O5) as P concentration28	Units for Phosphorus	Unit conversion factor for phosphorus29	Organic matter content, as percent 30
0-12 inches									
13-24 inches									
25-36 inches									
0-12 inches									
13-24 inches									
25-36 inches									

[27] When reporting pounds per acre confirm the conversion factor used by the laboratory. Typically between 3.2 to 4.0 pounds per acre per 1 ppm nitrate-N.
[28] Soil Phosphorus analysis required every three years.
[29] When reporting pounds per acre confirm the conversion factor used by the laboratory.
[30] Organic Matter analysis required every three years.

Nutrient Sources Applied to Field

Fill out this page for each of the fields you applied manure nutrients to fields you control. List all sources of nutrients including commercial fertilizer that were applies to this field.

Field ID: Field Size:

Date of Application	Nutrient source name[31]	Total amount of nutrients applied	Units of nutrients applied	Total amount of nitrogen applied	Units of nitrogen applied
Annual Total					

Adaptive Management Risk Level

If the post-harvest soil nitrate test results in a field risk level of high or very high, document the reasons for the result. High risk is soil nitrate concentrations above 31 ppm or 111 pounds per acre. Very high risk is soil nitrate concentrations above 45 ppm or 165 pounds per acre.

[31] Nutrient Source Name must match the source reported in the Nutrient Source Content Analysis section.

Field Nutrient Budgets

Attach the final field-specific nutrient budgets prepared for each field that received manure nutrients. I have included my field-specific nutrient budgets for the year 20_____.

Certification

A person who has signature authority must sign the Application. Signature authority is defined in General Condition 11 as:

a. In the case of corporations, by a responsible corporate officer.

b. In the case of a partnership, by a general partner of a partnership.

c. In the case of sole proprietorship, by the proprietor.

In the case of a municipal, state, or other public facility, by either a principal executive officer or ranking elected official.

"I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Printed Name: Date:

Signature:

Paper Submittal Instructions

Once the information in above sections is complete and the form is signed by the Legally Responsible Party, mail the form and attachments to:

Washington Department of Ecology
Water Quality Program
Attn: CAFO Permit Administrator
PO Box 47600
Olympia, WA 98504-7600

Keep a copy of the completed form and attached documents for your records.

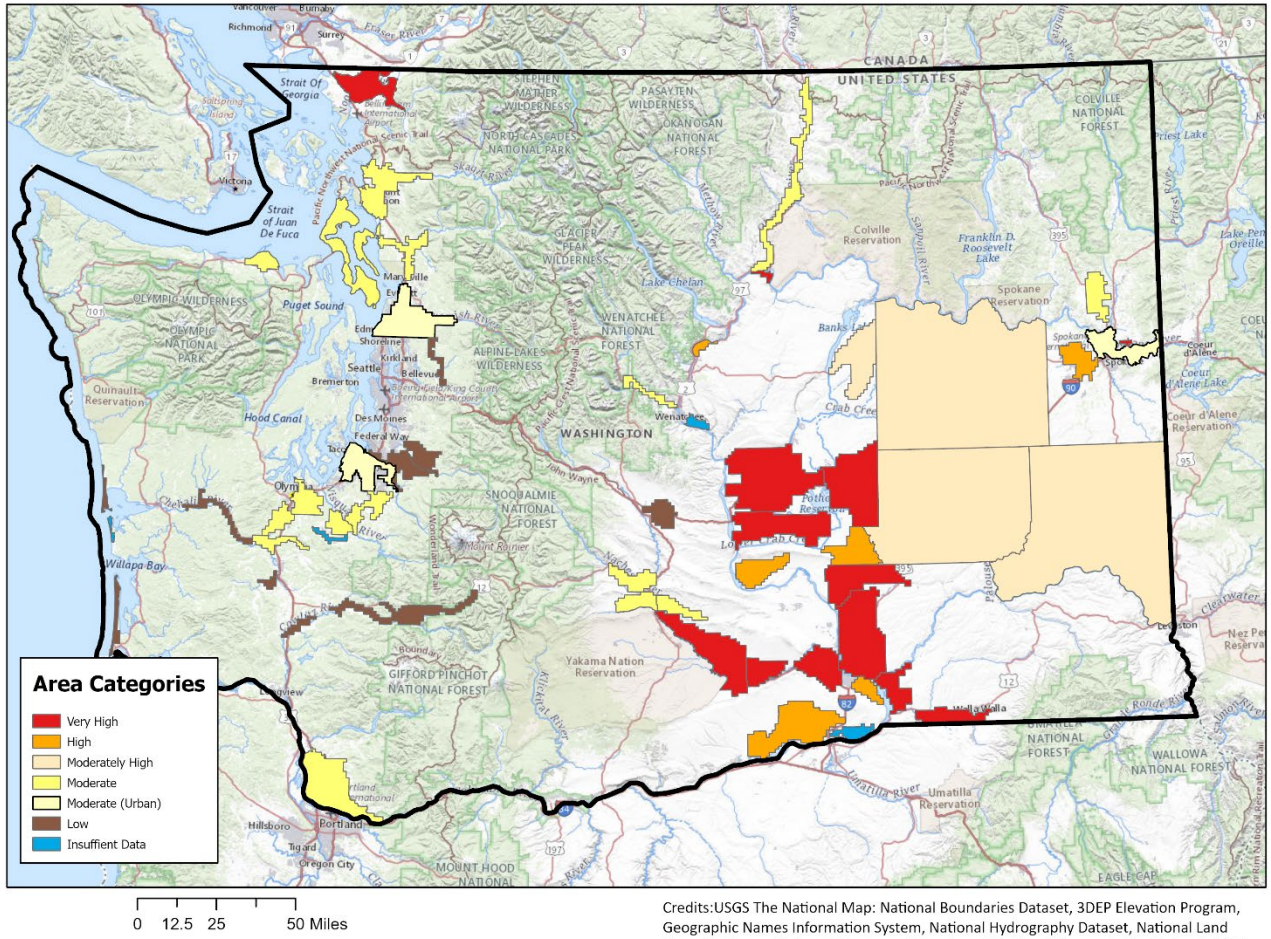
Questions

If you need assistance when filling out this report, please contact your CAFO permit inspector at the Washington Department of Agriculture.

If you're unable to reach your permit inspector, contact the CAFO permit administrator at (360) 407-6600 or cafopermit@ecy.wa.gov**.**

APPENDIX C: NITRATE PRIORITY AREAS

View this map online[32]



[32] https://arcg.is/qLKqz

STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

PO Box 47600, Olympia, WA 98504-7600 • 360-407-6000

STATE ENVIRONMENTAL POLICY ACT
DETERMINATION OF NONSIGNIFICANCE

Date of Issuance June 22, 2022

Lead agency: Department of Ecology, Water Quality Program

Agency Contact: Chelsea Morris, Chelsea.Morris@ecy.wa.gov, 360-764-0890

Permit Number: Not Applicable

Description of proposal:

Under the authority of Chapter 90.48 Revised Code of Washington (RCW), the Washington State Department of Ecology (Ecology) proposes to issue the Concentrated Animal Feeding Operation National Pollutant Discharge Elimination System and State Waste Discharge General Permits (CAFO General Permits) to establish pollution prevention practices for animal feeding operations to protect waters of the state. The general permits conditionally authorizes discharges of wastewater to surface and groundwaters of Washington State.

Location of proposal: Washington State

Applicant/Proponent:

Name: Vincent McGowan, P.E.
Program Manager
Water Quality Program
Washington State Department of Ecology
Email: Vincent.McGowan@ecy.wa.gov
Phone: 360-407-6600
Address: Washington State Department of Ecology
Water Quality Program
Attn: Vincent McGowan
PO Box 47600
Olympia, WA 98504

Ecology determined that this proposal will not have a probable significant adverse impact on the environment. An environmental impact statement (EIS) is not required under RCW 43.21C.030(2)(c). We reviewed the attached Environmental Checklist and the Fact Sheet for the CAFO General Permits. This is available at: https://ecology.wa.gov/CAFOpermit.

This determination is based on the following findings and conclusions:

Ecology proposes to reissue the CAFO General Permits to establish waste management practices for existing and new CAFOs to prevent pollution and protect waters of the state. The general permit conditionally authorizes discharges of manure, process wastewater, or other organic by-products to land, groundwater, and surface water. The conditions in the CAFO General Permits are based on state law and rules, judicial decisions, feedback from stakeholders, and best professional judgement. They were designed to prevent the impact discharges from CAFOs can have on waters of the state.

The comment period for this DNS corresponds with the comment period for the draft CAFO General Permits which ends on August 3, 2022.

Responsible official:

Vincent McGowan, P.E.
Water Quality Program
Program Manager
Department of Ecology
PO Box 47696
Olympia, WA 98504-7696
360-407-6600

Signature: _____ Date: June 22, 2022