



August 17, 2022

*Via Electronic Form Submission only*

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PO Box 47696  
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**Re: Draft Concentrated Animal Feeding Operation General Permit, National Pollutant Discharge Elimination System and State Waste Discharge General Permit and Draft Concentrated Animal Feeding Operation General Permit, A State Waste Discharge General Permit**

Dear Ms. Morris:

Puget Soundkeeper Alliance, Friends of Toppenish Creek, Sierra Club, Waterkeeper Alliance, Center for Food Safety, and Western Environmental Law Center, on behalf of their tens of thousands of members, supporters, and volunteers throughout the State of Washington, respectfully submit these comments on the Draft National Pollutant Discharge Elimination System (“NPDES”) and State Waste Discharge General Permit Concentrated Animal Feeding Operation General Permit (“Combined Permit”) and the Draft State Waste Discharge Concentrated Animal Feeding Operation General Permit (“State Permit”) released for public comment by the Department of Ecology (“Ecology”) on June 22, 2022. Our organizations are committed to conserving and protecting the surface and ground waters of Washington state from the numerous pollutants that are being discharged into waters of the state from Concentrated Animal Feeding Operations (“CAFOs”), as well as the fundamental constitutional rights of Washingtonians who are entitled to a healthful and pleasant environment, clean drinking water, and swimmable, fishable waterways. RCW 43.21A.010; 33 U.S.C. § 1251 *et seq.*

As discussed in detail below, the time has come for Ecology to develop a CAFO permit that protects human health and the environment. Ecology has the legal tools and science it needs to produce a permit that fulfills the purposes of the many federal and state laws designed to protect the public from the rampant pollution that comes from these industrial facilities. Thousands of Washington residents in the rural communities affected by these facilities are forced to live with contaminated drinking water, polluted surface water, decreased property

values, increased health risks, and reduced quality of life. A lawful CAFO permit represents the best option available to restore water quality and protect public health in these communities. However, with these draft Permits, Ecology has once again failed to protect communities and ensure sustainable agriculture.

With this third iteration of the CAFO general permit, Ecology must move towards, at long last, eliminating once and for *all* the discharge of pollution from these facilities. This is, of course, the true goal of both state and federal law. Indeed, 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 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.* (emphasis added). The Clean Water Act, in turn, is designed “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters,” 33 U.S.C. § 1251(a), with the goal of not just reducing, but eliminating, all water pollution. *Waterkeeper Alliance, Inc. v. U.S. E.P.A.*, 399 F.3d 486, 490 (2d Cir. 2005) (citing 33 U.S.C. § 1251(a)(1)). Ecology must put these goals into practice.

### **CAFOs Cause Significant Environmental Harm**

CAFOs closely confine animals, feed, manure and urine, dead animals, and production operations on a small land area. These industrial-scale factory farms account for over three-fourths of the state’s dairy production. Washington is home to approximately 285 dairies, across 28 of the 39 Washington counties, which keep approximately 260,000 cows. Adult dairy cows in Washington collectively produce between 16 and 40 million pounds of manure daily.

Unfortunately, Ecology has failed to require CAFOs to implement basic, scientifically proven, affordable best practices to prevent damaging water pollution from CAFOs statewide. These requirements, like those for other industrial operations discharging waste to public waters, protect the environment and public health from dangerous pollutants. For example, the draft CAFO permits only apply to medium and large CAFOs where there has been a proven discharge of pollutants. Currently, despite widespread evidence of CAFO discharges, there are only 26 actively permitted CAFOs in the state.

As a result of Ecology’s failure, the direct and indirect impacts of CAFOs on the environment are making our communities unhealthy, unsafe, and less prosperous. These avoidable impacts are all too predictable. For example, animal waste contains nitrogen, which moves through different phases to ammonia, nitrite, and nitrate. Nitrates and nitrites in drinking water are hazardous to human health, especially infants. Courts have found that CAFOs in Washington have contaminated the waters of the state with nitrate and other pollutants, causing an “imminent and substantial endangerment to health [and] the environment.” *Cnty. Ass’n for Restoration of the Env’t, Inc. (CARE) v. Cow Palace, LLC*, 80 F. Supp. 3d 1180, 1196 (E.D. Wash. 2015); *see also Cnty. Ass’n for the Restoration of the Env’t v. Nelson Faria Dairy, Inc.*,

No. CV-04-3060-LRS, 2011 WL 6934707, at \*10 (E.D. Wash. Dec. 30, 2011) (“Faria’s manure management practices have caused or significantly contributed to the excessive nitrate contamination of the local groundwater . . .”).

Nitrate contamination threatens drinking water 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. Ecology, Manure and Groundwater Quality Literature Review Publication No. 16-03-026 (June 2016) (“Manure Literature Review”), at 23. Nitrates are difficult for residents to detect because they are odorless, colorless, and flavorless. They can cause multiple adverse health outcomes such as methemoglobinemia (“blue baby syndrome”), cardiovascular harm, strokes, reproductive problems such as miscarriages, thyroid problems, and some cancers.<sup>1</sup> Boiling water just makes the problem worse, and for many environmentally overburdened communities, such as those in Yakima County, the costs of remedial measures such as filtration or bottled water are too high, forcing Washington residents—disproportionately Indigenous and people of color—to unwillingly sacrifice their own health for someone else’s private profit.

In addition to the impact on drinking water, the discharge of pollutants from CAFOs significantly impacts the water quality of the state’s rivers, streams, and marine waters. For example, the discharge of nutrients, pathogens, and toxic pollution from facilities such as CAFOs into Puget Sound and its tributaries is creating a water quality crisis. Perhaps the most immediate and pressing problem with the Sound’s water quality is dangerously low dissolved oxygen levels caused by excessive nutrients from various sources, including wastewater treatment plants and the overapplication of manure and fertilizers. As Ecology itself stated a dozen years ago, “[f]ish need oxygen” yet “[t]here are many areas in Puget Sound with very low levels of dissolved oxygen.” Ecology, Public Notice South Puget Sound Dissolved Oxygen Study (2006).

Ecology itself reports that excess nutrients in the water—i.e., nitrogen and phosphorous—are causing dissolved oxygen levels to drop to these critically low levels in some parts of Puget Sound. Ecology, Puget Sound and the Straits Dissolved Oxygen Assessment Impacts of Current and Future Human Nitrogen Sources and Climate Change through 2070, at 98–101 (2014). Ecology knows that low oxygen levels in Puget Sound are “bad news for aquatic life” such as shellfish, salmon, Southern Resident orcas, and other species.<sup>2</sup> Yet Ecology’s approach to CAFO management ignores the clear connection between ongoing pollution from these operations, the Sound’s failure to meet water quality standards, and the threats to these species.

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<sup>1</sup> See <https://www.ewg.org/research/nitratecost/> (last visited Aug. 12, 2022); <https://www.nrdc.org/sites/default/files/cafos-dont-know-hurting-us-report.pdf> (last visited Aug. 12, 2022); <https://progressreport.cancer.gov/prevention/nitrate> (last visited Aug. 12, 2022); and <https://www.atsdr.cdc.gov/ToxProfiles/tp204-c1.pdf> (last visited Aug. 12, 2022).

<sup>2</sup> Ecology, Nutrient pollution modeling shows different futures for Puget Sound, Blog, <https://ecology.wa.gov/Blog/Posts/September-2021/Latest-Salish-Sea-modeling-results-bring-us-closer> (last visited Aug. 12, 2022).

In addition to these direct threats, CAFOs are a significant contributor 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 the well-known greenhouse gas, carbon dioxide (CO<sub>2</sub>), but they are much more potent: methane has a Global Warming Potential (GWP) 84-87 times that of CO<sub>2</sub> over 20 years, and nitrous oxide has a GWP of 264-268 times that of CO<sub>2</sub> for the same period.<sup>3</sup> 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.<sup>4</sup>

Washington is already experiencing the catastrophic effects of climate change through dwindling snowpack and freshwater resources, unprecedented and deadly heatwaves, and increased wildfire. Those most vulnerable to climate change are people of color, Indigenous people, members of Tribes, and others subject to disproportionate impacts from historic and ongoing systemic and structural racism. 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.

## Discussion

In June of 2021, the Washington State Court of Appeals invalidated the previous iteration of Ecology's general CAFO permits because they failed to comply with the law in several important ways. *Wash. State Dairy Fed'n v. Dep't of Ecology*, 18 Wn. App. 2d 259, 490 P.3d 290 (2021). First, the court held that Ecology did not follow the state statute requiring a determination of what modern pollution controls were reasonable to control the discharge of nutrients, bacteria, and other pollutants before issuing the permit. Second, the court found that the permit did not adequately limit the discharge of pollutants to protect nearby waterways' health, as required under state and federal law. Third, the court found the permit did not include sufficient monitoring of surface waters and groundwater to determine both whether the permit was working and whether the permittees were complying with their obligations. Fourth, Ecology failed to require site-specific Nutrient Management Plans that met federal standards as required to ensure meaningful evaluation of, and public participation in, the development of the measures

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<sup>3</sup> IPCC, *Climate Change 2013: The Physical Science Basis*, Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (2013), available at <https://www.ipcc.ch/report/ar5/wg1/>.

<sup>4</sup> EPA, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2011*, Table 6-1 (Apr. 25, 2013), available at <https://www.epa.gov/sites/default/files/2015-12/documents/us-ghg-inventory-2013-main-text.pdf>.

meant to protect local waterbodies and communities. Finally, the Court held that under state law, Ecology must consider the impacts of climate change when developing the permit.<sup>5</sup>

In reissuing the CAFO Permits, Ecology must, at a minimum, strengthen the Permit to redress the deficiencies identified by the Appellate Court in its opinion. Yet, as discussed in detail below, Ecology appears to have failed to comply with the court's order in several ways and has not taken the steps necessary to develop a lawful, protective permit. For example, the Permits authorize discharges to the State's surface water and groundwater but never require a permittee to determine the quality of those waters before discharge and do not require permittees to demonstrate how they will comply with the minimum federal requirements for controlling those discharges—a prerequisite for obtaining a permit and authorizing the limited discharges allowed under federal law. The Permits contain an effluent limitation obligating a permittee not to violate an applicable water surface or groundwater quality criteria but never require a permittee to demonstrate that it can comply with that limitation, or even sample that surface or groundwater or the content of its discharges. Indeed, the Permits authorize residual soil nitrate and phosphorus levels that are not supported by science. The Permits allow a permittee to discharge pollution from existing manure storage lagoons without ever applying AKART to those lagoons and without ever having to monitor the pollution emanating from those lagoons. We outline these, and additional, deficiencies in detail below.

#### **A. Ecology Must Identify the Facilities that May be Covered Under this Permit**

Ecology's original error in developing these draft permits was its failure to take the first essential step in any permitting process—namely, identifying who will be covered by the Permits. This significant oversight would have been avoided had Ecology followed the most basic requirements for developing these permits.

First, in Washington, general NPDES permits are allowed in only certain circumstances, where a category of dischargers meets “all of the following requirements”:

- (i) Involve the same or substantially similar types of operations;
- (ii) Discharge the same or substantially similar types of wastes;
- (iii) Require the same or substantially similar effluent limitations or operating conditions, and require similar monitoring; and
- (iv) The director's opinion is more appropriately controlled under a general permit than under individual permits.

WAC 173-226-050(3)(b). When Ecology develops a general permit, it must make “a preliminary determination to develop a general permit.” WAC 173-226-060(1). Ecology must “provide public notice of all preliminary determinations to develop a general permit.” *Id.* 173-226-060(2). In doing so, Ecology must “request comments on whether a general permit is appropriate for the proposed category of dischargers or whether individual permits are necessary.” *Id.* 173-226-

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<sup>5</sup> Commenters attach, and hereby incorporate by reference, the record that was developed in *Washington State Dairy Federation v. State*, PCHB No. 17-016c, available at [https://drive.google.com/drive/folders/10pGRyjS-2iU9gpOwI7\\_wPyJRrIB\\_ZOJE](https://drive.google.com/drive/folders/10pGRyjS-2iU9gpOwI7_wPyJRrIB_ZOJE).

130(b). Through this process, Ecology must solicit and review any “information on dischargers proposed to be covered under a general permit including [a]ny documented information on the characteristics of the discharge including effluent quantity, quality, and any receiving water impacts” and “other relevant information.” *Id.* 173-226-130(c).

To satisfy this requirement, Ecology must explain why it believes CAFOs are a “[c]ategor[y] of dischargers that . . . [r]equire the same or substantially similar effluent limitations or operating conditions, and require similar monitoring.” WAC 173-226-050(3)(b)(iii). To do so, Ecology must gather information on the facilities that may be covered under the permit, the current conditions of those facilities, the locations of those facilities, the status of the potential receiving waters, and other relevant information to support its conclusion. Providing this information would allow Ecology, and the public, to fully understand the true scope of the impacts of these facilities on the environment and communities throughout Washington.

Second, when developing any NPDES permit, Ecology must prepare a Fact Sheet. WAC 173-226-120(1). The Fact Sheet must include “[a] listing or some other means of identifying the facilities proposed to be covered under the general permit.” WAC 173-226-120(1)(d); WAC 173-226-130(e) (“The department shall make available during the public comment period . . . (v) A listing or some other means of generally identifying the facilities proposed to be covered under the general permit.”).

The Fact Sheet for the CAFO general permit does not contain this information. To ensure the permits’ conditions comply with state and federal law, Ecology must identify each facility currently eligible for coverage under this permit because it currently meets the regulatory definition of a medium or large CAFO. Second, Ecology must identify every small CAFO that may be required to obtain coverage under the permit. Finally, Ecology must also determine the areas in the state where CAFOs may be sited in the future. This information is vitally important for the permit development process. As discussed in detail below, Ecology can only begin to develop the required effluent limits if it knows what facilities may be covered, their location, and the current condition of the facilities and receiving waters.

**B. Ecology Must Regulate Discharges to Groundwater that are the Functional Equivalent of Discharges to Surface Waters Under the Combined Permit.**

Although Ecology must ensure the discharges to groundwater are regulated under state law, where those discharges are the functional equivalent of discharges to surface water they must be regulated under the Combined Permit. Ecology must acknowledge the scientific and legal reality that CAFO discharges into groundwater are likely conveying pollutants into the surface water via the groundwater. That is, Ecology has a legal responsibility to “consider the interrelationship of the groundwater with the surface waters . . .” *Postema*, 142 Wash. 2d at 80. Recently, in *County of Maui, Hawaii v. Wildlife Fund*, the Supreme Court held that the Clean Water Act requires an NPDES permit when there is a direct discharge of pollutants from a point source or when there is “the functional equivalent of a direct discharge” into navigable waters. 140 S.Ct. 1462, 1468 (2020). There, the county wastewater reclamation facility discharged partially treated sewage into four injection wells. *Id.* Because the wastewater originated from the

point source of the injection wells, the Court held the discharge was “the functional equivalent of a direct discharge” and required an NPDES permit even though the discharge traveled through groundwater first. *Id.* The Court listed seven factors that should be considered in the functional equivalent analysis: (1) transit time, (2) distance traveled, (3) the nature of the material through which the pollutant travels, (4) the extent to which the pollutant is diluted or chemically changed as it travels, (5) the amount of pollutant entering the navigable waters relative to the amount of the pollutant that leaves the point source, (6) the manner by or area in which the pollutant enters the navigable waters, and (7) the degree to which the pollution, at that point, has maintained its specific identity. *Id.* at 1476.

The rationale supporting this conclusion is simple and persuasive: “since the goal of the CWA is to protect the quality of surface waters, any pollutant which enters such waters, whether directly or through groundwater, is subject to regulation by NPDES permit.” *Washington Wilderness Coal. v. Hecla Min. Co.*, 870 F. Supp. 983, 990 (E.D. Wash. 1994). Stated even more simply, whether pollution is introduced by a visible, above-ground conduit or enters the surface water through the aquifer matters little to the fish, waterfowl, and recreational users who are affected by the degradation of our nation’s rivers and streams. *Id.* at 1179-80.

All unlined manure lagoons leak pollutants. In Washington, there is strong scientific evidence that supports the connectivity of groundwater to surface water. Ecology must require all facilities with unlined manure lagoons to obtain coverage under a combined state and federal NPDES permit. A facility that believes its groundwater discharges are isolated from surface water may seek an exception to this rule only if it proves the hydrologic isolation using the state’s legal recognition of hydrologic connectivity. *Cf.* EPA, NPDES Permit Writers’ Manual for Concentrated Animal Feeding Operations, at O-25-26, (Feb. 2012) (“NPDES CAFO Manual”)<sup>6</sup> (“The permittee shall document that no direct hydrologic connection exists between the contained wastewater and surface waters of the United States. Where the permittee cannot document that no direct hydrologic connection through ground water exists, the ponds, lagoons and basins of the containment facilities must have a liner which will prevent the potential contamination of surface waters.”). Where the facility cannot make that showing, Ecology must ensure that those discharges are regulated under the Combined Permit, and those facilities are required to comply with effluent limits developed in compliance with the federal regulations, AKART, and the state’s water quality standards for surface waters.

### **C. Ecology Must Establish Appropriate Effluent Limits**

The draft Permit fails to include appropriate technology-based effluents limits and water quality-based effluent limits in violation of the Clean Water Act, state law, and Ecology’s permitting regulations. As a result of these systemic, fundamental failures, below we recite in detail the steps Ecology must take as it revises these proposed permits to ensure their compliance with the law.

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<sup>6</sup> [https://www.epa.gov/sites/default/files/2015-10/documents/cafo\\_permitmanual\\_entire.pdf](https://www.epa.gov/sites/default/files/2015-10/documents/cafo_permitmanual_entire.pdf) (last visited Aug. 12, 2022).

## 1. Overview of Effluent Limit Requirements

General permits issued by Ecology “shall apply and insure compliance with . . . [t]echnology-based treatment requirements and standards reflecting all known, available, and reasonable methods of prevention, treatment, and control required under RCW 90.48.010, 90.48.520, 90.52.040, and 90.54.020[.]” WAC 173-226-070. In addition, the permit must include water quality based effluent limits (“WQBELs”) when “such limitations are necessary to comply with chapter 173-200 [groundwater water standards] and/or 173-201A WAC [surface water water quality standards] for the majority of the dischargers intended to be covered under the general permit.” WAC 173-226-070(2)(b). Such WQBELs must “control all pollutants or pollutant parameters which the department determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion of state ground or surface water quality standards.” WAC 173-226-070(2)(b). To these ends, WQBELs must, in relevant part, include [a]ny more stringent limitations or requirements, including those necessary to:

- (a) Meet water quality standards, sediment quality standards, treatment standards, or schedules of compliance established pursuant to any state law or regulation under authority preserved to the state by section 510 of the FWPCA;
- (b) Meet any federal law or regulation other than the FWPCA or regulations thereunder;
- (c) Implement any legally applicable requirements necessary to implement total maximum daily loads established pursuant to section 303(d) and incorporated in the continuing planning process approved under section 303(e) of the FWPCA and any regulations and guidelines issued pursuant thereto; [and]
- (d) Prevent or control pollutant discharges from plant site runoff, spillage or leaks, sludge or waste disposal, or materials handling or storage.

WAC 173-226-070(3).

### a. EPA’s Effluent Limit Guidelines

The federal CAFO Rule applies to Ecology’s NPDES Permit; thus, the permit must conform to these and other NPDES permitting requirements. *See* 40 C.F.R. § 123.25 and 40 C.F.R. § 123.36. Ecology’s NPDES Permit must establish requirements at least as stringent as the federal implementing regulations for CAFO Permits. 33 U.S.C. § 1311(b)(1)(C); 33 U.S.C. § 1313(e)(3)(A); 40 C.F.R. § 123.25; *Am. Paper Inst. v. EPA*, 996 F.2d 346, 349 (D.C. Cir. 1993).

The Federal CAFO Rule requires that all applicants for a CAFO NPDES Permit must submit a Notice of Intent (“NOI”) that includes a Nutrient Management Plan that meets the requirements of 40 C.F.R. § 122.42(e) and applicable effluent limitations and standards, including those specified in 40 C.F.R. § 412. 40 C.F.R. §§ 122.21(i)(1)(x) and 122.23(h)(1). The permitting authority is required to review notices of intent submitted by CAFO owners or



operators to ensure that the notice of intent includes the information required by 40 C.F.R. § 122.21(i)(1), including a Nutrient Management Plan that meets the requirements of 40 C.F.R. § 122.42(e) and applicable effluent limitations and standards, including those specified in 40 C.F.R. § 412. If the NOI meets the requirements, the agency must notify the public of the proposed permit and must “make available for public review and comment the notice of intent submitted by the CAFO, including the CAFO’s nutrient management plan and the draft terms of the nutrient management plan to be incorporated into the permit,” and “[t]he process for submitting public comments and hearing requests, and the hearing process if a request for a hearing is granted, must follow the procedures applicable to draft permits set forth in 40 CFR § 124.11 through 124.13.” 40 C.F.R. § 122.23(h)(1). If a general permit is granted, “the terms of the nutrient management plan shall become incorporated as terms and conditions of the permit for the CAFO.” *Id.* Further, the federal CAFO Rule expressly provides that: “[a]ny permit issued to a CAFO must include a requirement to implement a nutrient management plan that, at a minimum, contains best management practices necessary to meet the requirements of this paragraph and applicable effluent limitations and standards, including those specified in 40 CFR part 412.” 40 C.F.R. § 122.42.

The CAFO Rules for large CAFOs that confine dairy cattle and cattle other than veal calves, 40 C.F.R. subparts 412.30-37, address both the production and land application areas. The requirements in subpart C are identical for existing sources and new sources. Those sources may not discharge manure into waters of the U.S. from the production area. 40 C.F.R. §§ 412.31(a), 412.32(a), 412.33(a). The only exception to that no-discharge standard is when precipitation causes an overflow, provided the production area is designed, constructed, operated, and maintained to contain all manure, litter, and process wastewater, including the runoff and direct precipitation from a 25-year, 24-hour rainfall event. When a facility applies for a permit, it must demonstrate how it will meet each of these standards and prohibitions for the facility’s production and land application areas. It is not enough for a facility to simply state that it will comply – it must demonstrate in detail how it will do so, and Ecology must evaluate whether the applicant’s plans are adequate to achieve compliance.

For example, to ensure that a facility meets the no-discharge standard, the CAFO must ensure that the production area has adequate storage structures that are designed, constructed, operated, and maintained to contain all manure, litter, and process wastewater, including the runoff and direct precipitation from a 25-year, 24-hour rainfall event. An important consideration of whether the CAFO meets these requirements is whether it has adequate storage or treatment structure capable of containing all manure, litter, and process wastewater that accumulate during the critical storage period. To comply with the ELG, the storage volume in the production area must contain all those wastes. In addition, to meet the no-discharge requirement, the CAFO must operate the production area in accordance with additional measures and record-keeping requirements specified in 40 CFR parts 412.37(a)-(b), 412.47(a)-(b). These include requirements for routine visual inspections of the production area, depth markers for liquid impoundments, corrective action when deficiencies are identified, and mortality handling. Records must be maintained onsite, including records for each of the above measures and records documenting the design of storage structures and any overflows.

The federal CAFO Rule also requires that states adopt technical standards for nutrient management that ensure “[a]pplication rates for manure, litter, and other process wastewater applied to land under the ownership or operational control of the CAFO . . . minimize phosphorus and nitrogen transport from the field to surface waters.” 40 C.F.R. § 412.4(c)(2). These technical standards must:

- 1) Include a field-specific assessment of the potential for nitrogen and phosphorus transport from the field to surface waters, and address the form, source, amount, timing, and method of application of nutrients on each field to achieve realistic production goals, while minimizing nitrogen and phosphorus movement to surface waters; and
- 2) Include appropriate flexibilities for any CAFO to implement nutrient management practices to comply with the technical standards, including consideration of multi--year phosphorus application on fields that do not have a high potential for phosphorus runoff to surface water, phased implementation of phosphorus-based nutrient management, and other components, as determined appropriate by the Director.

*Id.* The CAFO Rule requires that the state’s technical standards be a part of every approved state’s NPDES program, and that they be established by the deadlines specified in 40 C.F.R. § 123.62(e) for revision of state programs. 40 C.F.R. § 123.36. State technical standards are subject to review and approval by EPA under 40 CFR Part 123.62 as program revisions. NPDES CAFO Manual at pp. 4-16.<sup>7</sup>

The federal CAFO Rule includes several provisions requiring NPDES permits to control land application rates for phosphorus and nitrogen. Manure, litter, or process wastewater must be applied in accordance with site-specific nutrient management practices that ensure appropriate agricultural utilization of the nutrients in the manure, litter, or process wastewater. 40 C.F.R. § 122.42(e)(1)(vi)-(ix). Additionally, the nutrient management plan, with respect to protocols for land application of manure, litter, or process wastewater required by paragraph [122.42] (e)(1)(viii) and, as applicable, 40 CFR 412.4(c), must include the fields available for land application; field-specific rates of application properly developed, as specified in paragraphs (e)(5)(i) through (ii), “to ensure appropriate agricultural utilization of the nutrients in the manure, litter, or process wastewater . . .” 40 C.F.R. § 122.42(e)(5). The land application rates must address phosphorus and nitrogen by one of two methods—the linear approach and/or the narrative rate approach, 40 C.F.R. § 122.42(e)(5)—and the results of calculations undertaken in accordance with these approaches are required to be submitted annually to the permitting authority. 40 C.F.R. § 122.42(e)(4)(viii). For CAFOs subject to Part 412, including Large Dairy CAFOs, the Nutrient Management Plan must incorporate the requirements of paragraphs (c)(2) through (c)(5) “based on a field specific assessment of the potential for nitrogen and phosphorus transport from the field and that addresses the form, source, amount, timing, and method of application of nutrients on each field to achieve realistic production goals, while minimizing nitrogen and phosphorus movement to surface waters. 40 C.F.R. § 412.4(c)(1). Paragraph (c)(2)

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<sup>7</sup> To date, Ecology has not established technical standards that meet these requirements. Ecology must revise its NPDES program to include Technical Standards that meet the requirement of the federal CAFO Rule and any applicable state laws.

of section 412.4 also contains detailed requirements for establishing phosphorus and nitrogen land application rates. 40 C.F.R. § 412.4(c)(2). These provisions apply to state delegated programs, including issuing state NPDES CAFO permits. *See* 40 C.F.R. §§ 123.25 and 123.36.

Finally, the CAFO Rule specifies that the site-specific conservation practices for a permitted Large CAFO must include maintaining a 100-foot setback or establishing a 35-foot vegetated buffer between land application areas and any downgradient surface waters, open tile line intake structures, sinkholes, agricultural well heads, or other conduits to surface waters. 40 C.F.R. § 412.4(c)(5). The rule allows for alternatives in place of the setback or buffer under certain scenarios.

The federal CAFO rule establishes these, and other, minimum requirements for Ecology's CAFO permits and applicants for a permit must demonstrate how they will comply with these standards prior to receiving a permit. Ecology must, of course, impose additional requirements necessary to ensure compliance with AKART, consistency with state regulations and policies, and protect water quality and salmon, as discussed below.

#### **b. AKART**

As Ecology's Permit Manual notes, when using EPA's effluent guidelines, such as the CAFO Rule, to develop technology-based effluent limits, after the permit writer calculates the final effluent limits based on the ELGs, "there is another decision to be made at this point. The decision is whether the effluent guidelines also constitute all known, available and reasonable methods of treatment (AKART)." Ecology, Water Quality Program Permit Writer's Manual, Publication No. 92-109, 85 (July 2018) at 66 ("Permit Writer's Manual"). That is, while the federal guidelines set the floor for technology-based effluents, Ecology may be required to do more to ensure compliance with AKART. And as the manual notes, "[i]f the effluent guidelines are over 10 years old, the permit writer should, at the minimum, conduct an analysis of unit processes design and efficiencies at the facility to determine if the effluent guidelines constitute AKART." *Id.* Here, Ecology must do more.

Since 1945, Washington State has declared a public policy of maintaining the state's waters to "the highest possible standards." Laws of 1945, Ch. 216, § 1. To implement that policy, for more than 70 years, Washington has required the use of all known, available, and reasonable treatment methods to prevent and control in-state water pollution. *See* Laws of 1945, Ch. 216; *see also* RCW 90.48.010.

AKART in Washington law is both a procedural and substantive requirement. The procedural requirement applies to Ecology. That agency must make an AKART determination each time it issues an NPDES permit to a discharger under section 402 of the Clean Water Act and RCW 90.48.162 authorizing a discharge of treated sewage to state waters. It must then establish effluent limits in the permit that are consistent with the AKART determination. RCW 90.48.520 ("In order to improve water quality by controlling toxicants in wastewater, the department of ecology shall in issuing and renewing state and federal wastewater discharge permits review the applicant's operations and incorporate permit conditions which require all known, available, and reasonable methods to control toxicants in the applicant's wastewater.").

*See also* RCW 90.48.010 (“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.”); RCW 90.52.040 (the Director of Ecology “shall . . . require wastes to be provided with all known, available, and reasonable methods of treatment prior to their discharge or entry into waters of the state.”); RCW 90.54.020(3)(b) (“wastes and other materials and substances shall not be allowed to enter such waters which will reduce the existing quality thereof, except in those situations where it is clear that overriding considerations of the public interest will be served.”).

In 1983, faced with questions on whether sewage discharged to Puget Sound required secondary treatment, the Washington Attorney General issued an opinion making clear that Ecology must evaluate AKART each time it issues an NPDES permit:

Such statutory directions [to implement AKART] to the Department of Ecology, however, clearly do bring into play the expertise of the department as administrator of the state’s water pollution control system. *Accord, Weyerhaeuser v. Southwest Air Pollution Control Authority*, 91 Wn.2d 77, 586 P.2d 1163 (1978). The precise level of treatment required by those general standards involves, primarily, engineering determinations; *i.e.*, as to what treatment methods are “known,” what treatment methods are “available,” and what treatment methods are “reasonable” with respect to the particular installation in light of the factual circumstances surrounding it. To make those determinations a review must be conducted by the department of existing engineering technologies in order to enable it to decide which methods of treatment—including but not limited to “secondary treatment” as above defined—are suitable with respect to the waste situation involved in the particular case. *Cf., Weyerhaeuser, supra*.

Washington Attorney General Opinion, AGO 1983 No. 23, at 14 (footnotes omitted) (“Attorney General 1983”).

AKART is also a substantive requirement that applies to all dischargers: “Regardless of the quality of the waters of the state, all wastes and other materials and substances proposed for entry into said waters shall be provided with all known, available, and reasonable methods of treatment prior to entry.” RCW 90.54.020(3)(b); *see also* WAC 173-201A-500 (“it shall be required that all activities which discharge wastes into waters within the state, or otherwise adversely affect the quality of said waters, be in compliance with the waste treatment and discharge provisions of state or federal law.”).<sup>82</sup> In order to implement AKART, Ecology must

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<sup>82</sup> AKART applies as a technology-based requirement, regardless of the quality of the receiving water. *See* RCW 90.52.040 (Ecology shall require AKART “regardless of the quality of the water of the state to which wastes are discharged or proposed for discharge, and regardless of the minimum water quality standards established by the director for said waters”); RCW 90.54.020(3)(b) (“Regardless of the quality of the waters of the state, all wastes and other materials and substances proposed for entry into said waters shall be provided with all known, available, and reasonable methods of treatment prior to entry.”); RCW 90.48.520 (Ecology is required to incorporate permit conditions that require AKART “regardless of the quality of

require dischargers to use increasingly more stringent treatment as technological advancements become known, available, and reasonable in order to prevent, control, and abate the discharge of pollutants. *See* WAC 173-201A-020 (“AKART shall represent *the most current* methodology that can be reasonably required for preventing, controlling, or abating the pollutants associated with a discharge.”) (emphasis added); *see also* *Attorney General 1983* fn. 19 (citing *Weyerhaeuser v. Southwest Air Pollution Control Authority*, 91 Wn.2d 77, 586 P.2d 1163 (1978)) (“The use of the encompassing word ‘all’ [in AKART] indicates to us that the existing ‘state of the art’ or ‘best available’ treatment technologies are required to be used.”); *Puget Soundkeeper v. State*, 102 Wn. App. 783, 789, 892, 895 (2000) (“[T]he statutory scheme envisions that effluent limitations will decrease as technology advances.”). By requiring that dischargers implement and incorporate new technologies as they become available, AKART ensures that water quality continues to improve as “reductions in effluent limits are driven by advances in technology.” *Id.*; *see also* *Attorney General 1983* at 14 (AKART “include[s] but [is] *not limited* to ‘secondary treatment’”) (emphasis added). By definition, known, available, and reasonable technology will change over time.

In addition, Ecology must apply AKART when it issues NPDES permits under the federal Clean Water Act because the AKART standard is incorporated into the state’s antidegradation policy and implementation methods, components of the state’s federally-approved water quality standards. One stated purpose of the state’s antidegradation policy is to “[e]nsure that all human activities that are likely to contribute to a lowering of water quality, at a minimum, apply all known, available, and reasonable methods of prevention, control, and treatment (AKART).” WAC 173-201A-300(2)(d). *See also* 40 C.F.R. §§ 122.4(d) (NPDES permits must comply with water quality standards), 131.6(d) (water quality standards include antidegradation policy). Washington’s water quality standards also place a premium on the implementation of AKART before a discharger may take advantage of any dilution analysis available under the state’s mixing zone policy that relaxes the applicability of water quality standards in a defined area. *See* WAC 173-201A-400(2) (“A discharger shall be required to fully apply AKART prior to being authorized a mixing zone.”); WAC 173-201A-400(13)(a) (AKART’s role re-emphasized for any discharger seeking an exceedance from the mixing zone policy’s numeric size and overlap criteria). Finally, Washington’s antidegradation policy places a premium on improving the definition of AKART by the “use and demonstration of innovative pollution control and management approaches that would allow a significant improvement in AKART for a particular industry or category of action.” WAC 173-201A-320(4)(iii).

The Washington Court of Appeals recently ruled on the legal requirement that a permit apply AKART at the time a permit is issued. In *Washington State Dairy Federation*, the court held that: “When issuing a general waste discharge permit, Ecology must ensure that the permit conditions “apply and insure compliance” with “[t]echnology-based treatment requirements” that “reflect [AKART].” 18 Wn. App. 2d at 275. There, the Pollution Control Hearings Board had evidence that Ecology did not have sufficient information about the condition of various treatment methods to impose an AKART requirement in a general permit. The court rejected

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receiving water and regardless of the minimum water quality standards.”); *Attorney General 1983* at 7.

Ecology’s argument that an “information gathering condition” in the permit was an AKART requirement:

We agree with Soundkeeper that the PCHB erred when it approved the permits while simultaneously finding that they did not contain an AKART requirement applicable to existing manure lagoons. Under RCW 90.52.040, “all wastes and other materials and substances proposed for entry into [waters of the state] shall be provided with [AKART] prior to entry.” The same requirement is set forth in RCW 90.54.020(3)(b). Both RCW 90.52.040 and 90.54.020 are incorporated into WAC 173-226-070(1), which provides that general state waste discharge permits issued by Ecology “shall” comply with AKART as required under these statutes. These statutes, therefore, apply to both the state permit and the combined permit.

*Id.* at 278. The court further noted that the permit’s granting up to three and a half years after issuance without requiring a single action to prevent or abate manure seepage from lagoons was not AKART. *Id.* at 280-81.

### **c. Water Quality-Based Effluent Limitations**

#### **1. Standard for developing Water Quality-Based Effluent Limitations**

All dischargers must meet the requirements in the Clean Water Act and federal regulations, regardless of whether they are covered under an individual or general permit. If the technology-based limits required by the statute and regulations are insufficient to ensure that a discharge will not cause or contribute to violations of water quality standards, permits must include water quality-based effluent limits (WQBELs). 33 U.S.C. §§ 1311(b)(1)(C), 1342(a)(2) (“[T]here shall be achieved . . . any more stringent limitation, including those necessary to meet water quality standards . . . established pursuant to any State law or regulations [.]”); *see also, id.* §§ 1311(e), 1312(a), 1313(d)(1)(A), (d)(2), (e)(3)(A); 40 C.F.R. §§ 122.4(a), (d).<sup>9</sup> The agency issuing an NPDES permit “is under a specific obligation to require that level of effluent control which is needed to implement existing water quality standards without regard to the limits of practicability.” S. Rep. No. 92-414, at 43 (1971). Because WQBELs are set irrespective of costs and technology availability, they further the technology-forcing policy of the CWA. *See NRDC v. U.S. E.P.A.*, 859 F.2d 156, 208 (D.C. Cir. 1987) (“A technology-based standard discards its fundamental premise when it ignores the limits inherent in the technology. By contrast, a water quality-based permit limit begins with the premise that a certain level of water quality will be maintained, come what may, and places upon the permittee the responsibility for realizing that goal.”); *see also Riverkeeper, Inc. v. U.S. E.P.A.*, 475 F.3d 83, 108 (2d Cir. 2007) (Sotomayor, J.) (referencing the Act’s “technology-forcing imperative”), *rev’d sub nom by Entergy Corp*, 556 U.S. 208.

WQBELs must be set at a level that achieves water quality standards developed by the states for waters within their boundaries. *See* 33 U.S.C. §§ 1313(a)(3), (c)(2)(a); 40 C.F.R. Part

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<sup>9</sup> The federal regulations are made applicable to states by 40 C.F.R. § 123.25(a).

131; *PUD No. 1 of Jefferson Cnty. v. Wash. Dept. of Ecology*, 511 U.S. 700, 704–707 (1994); WAC 173-220-130(1)(b)(i) and (iii), (2), (3)(b); *Port of Seattle v. Pollution Control*, 90 Pd.3d 659, 677 (Wash. 2004) (“NPDES permits may be issued only where the discharge in question will comply with state water quality standards.”); *Defenders of Wildlife v. Browner*, 191 F.3d 1159, 1163 (9th Cir. 1999). Such water quality standards consist of designated uses for waters and water quality criteria (both numeric and narrative) necessary to protect those uses. 33 U.S.C. § 1313(c)(2)(a); 40 C.F.R. §§ 131.10-.11. Under the CWA’s “antidegradation policy,” state standards must also protect existing uses of waters and prevent their further degradation. 40 C.F.R. § 131.12; *see also* WAC 173-201A-010(1)(a) (“All surface waters are protected by numeric and narrative criteria, designated uses, and an antidegradation policy.”).

EPA’s permitting regulations mirror the statutory requirement for WQBELs. 40 C.F.R. § 122.44(d). NPDES effluent limitations must control all pollutants that 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. § 122.44(d)(1)(i). Accordingly, WQBELs in NPDES permits must be “derived from” and comply with all applicable water quality standards. 40 C.F.R. § 122.44(d)(1)(vii). WQBELs are typically expressed numerically, but when “numeric effluent limitations are infeasible,” a permit may instead require “[b]est management practices (BMPs) to control or abate the discharge of pollutants.” 40 C.F.R. § 122.44(k)(3). However, “[n]o permit may be 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).

When EPA or states establish WQBELs, they must translate applicable water quality standards into permit limitations. *See Trustees for Alaska v. U.S. E.P.A.*, 749 F.2d 549, 556–57 (9th Cir. 1984) (holding that a permit must do more than merely incorporate state water quality standards—it must translate state water quality standards into the end-of-pipe effluent limitations necessary to achieve those standards). As the D.C. Circuit put it, “the rubber hits the road when the state-created standards are used as the basis for specific effluent limitations in NPDES permits.” *American Paper Inst., Inc. v. U.S. E.P.A.*, 996 F.2d 346, 350 (D.C. Cir. 1993). NPDES “permits authorizing the discharge of pollutants may issue only where such permits *ensure* that every discharge of pollutants will comply with all applicable effluent limitations and standards[.]” *Waterkeeper Alliance, Inc. v. EPA*, 399 F.3d 486, 498 (2d Cir. 2005) (emphasis in original).

Although numeric criteria are easier to translate into a permit limitation, permit writers must also translate state narrative standards. *See id.*<sup>10</sup> As the court in *American Paper* found,

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<sup>10</sup> EPA regulations clearly specify that narrative criteria must be evaluated and must be met, and that limits must be established to ensure they are met. *See* 40 C.F.R. §§ 122.44(d)(1) (limits must be included to “[a]chieve water quality standards established under section 303 of the CWA, including State narrative criteria for water quality”); 122.44(d)(1)(i) (limitations must include all parameters “including State narrative criteria for water quality”); 122.44(d)(1)(ii) (reasonable potential must be evaluated for “in-stream excursion above a narrative or numeric criteria”); 122.44(d)(1)(v) (WET tests required where reasonable potential exists to cause or contribute to a narrative criterion excursion unless chemical-specific pollutants are “sufficient to attain and

faced with the conundrum of narrative criteria, “some permit writers threw up their hands and, *contrary to the Act*, simply ignored water quality standards including narrative criteria altogether when deciding upon permit limitations. *Id.* at 350 (emphasis added); *see also, id.* at 353, “[EPA’s] initiative seems a preeminent example of gap-filling in the interest of a continuous and cohesive regulatory regime[.]”).

EPA has explained that a WQBEL is “[a]n effluent limitation determined by selecting the most stringent of the effluent limits calculated using all applicable water quality criteria (e.g., aquatic life, human health, wildlife, translation of narrative criteria) for a specific point source to a specific receiving water.” EPA, *NPDES Permit Writers’ Manual*, Appendix A at A-17 (Sept. 2010) (“EPA Manual”).<sup>11</sup> The first step in establishing a WQBEL is determining if one is required. 40 C.F.R. § 122.44(d)(1) (“Limitations must control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director 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.”). Because one requirement in issuing a WQBEL is both to determine if the discharge, collectively with other sources of the same pollutant, are causing or contributing to violations of water quality standards, and to limit that discharge accordingly, the federal regulations require the permit writer to assess the role of other sources in causing the violation. *Id.* at § (d)(1)(ii) (“When determining whether a discharge causes, has the reasonable potential to cause, or contributes to an in-stream excursion above a narrative or numeric criteria within a State water quality standard, the permitting authority shall use procedures which account for existing controls on point and nonpoint sources of pollution, the variability of the pollutant or pollutant parameter in the effluent, the sensitivity of the species to toxicity testing (when evaluating whole effluent toxicity), and where appropriate, the dilution of the effluent in the receiving water.”). If, having conducted this evaluation, the permit writer determines that a discharge “causes, has the reasonable potential to cause, or contributes to an instream excursion above the allowable ambient concentration of a State numeric criteria within a State water quality standard for an individual pollutant, the permit must contain effluent limits for that pollutant.” *Id.* at § (d)(1)(iii). Where a state finds a reasonable potential to cause or contribute to a violation of narrative criteria for which the state has no numeric criteria, the federal regulations establish methods for establishing effluent limits. *Id.* at § (d)(1)(vi)(A)-(C).

The matter of determining whether a discharge is causing or contributing to a violation of standards is not resolved by the permit writer’s merely looking at the point of discharge and whether it is on the state’s 303(d) list for a parameter or pollutant discharged or affected by a parameter or pollutant in the discharge. For example, a waterbody need not already be impaired in order for a discharge to present a reasonable potential to cause or contribute to violations of

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maintain applicable numeric and *narrative State water quality standards*”); 122.44(d)(1)(vi) (options for establishing limitations where reasonable potential exists for a discharge to cause or contribute to an excursion *above a narrative criterion*) (emphases added).

<sup>11</sup> Available at [http://www.epa.gov/npdes/pubs/pwm\\_app-a.pdf](http://www.epa.gov/npdes/pubs/pwm_app-a.pdf).



water quality standards. Again, the EAB provides assistance on the plain meaning of the permitting regulations and the policy rationale behind them:

NPDES regulations do not support the City’s contention that a permit authority must include effluent limits only for the pollutants discharged into receiving waters that are identified as impaired on the state’s 303(d) list.

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NPDES permitting under CWA section 301 applies to individual discharges and represents a more preventative component of the regulatory scheme [than 303(d)] in that, under section 301, no discharge is allowed except in accordance with a permit. Moreover, the CWA’s implementing regulations require the Region to include effluent limits in discharge permits based on the reasonable potential of a discharge facility to cause or contribute to exceedances of water quality standards, even if the receiving water body is not yet on a state’s 303(d) list. *See* 40 C.F.R. § 122.44(d)(1)(i).

Although a 303(d) listing could presumably establish that water quality standards are being exceeded, necessitating an appropriate permit limit, the Region is not constrained from acting where a water body has not yet been placed on the 303(d) list. *Id.*; *see also In re Upper Blackstone Water Pollution Abatement Dist.*, 14 E.A.D. 577, 599 (EAB 2010) (explaining that the NPDES regulations require a “precautionary” approach to determining whether the permit must contain a water quality-based effluent limit for a particular pollutant), *aff’d*, 690 F.3d 9 (1st Cir. 2012), *cert. denied*, 133 S. Ct. 2382 (2013).

*In re City of Taunton* at 38-39.

And a permit writer cannot fail to include an effluent limit because to do so is challenging. Again, “NPDES permits ‘may issue only where such permits *ensure* that every discharge of pollutants will comply with all applicable effluent limitations and standards.’” *NRDC v. U.S. EPA* 808 F.3d 556, 578 (2d Cir. 2015) (emphasis in original). Moreover:

Even if determining the proper standard is difficult, EPA cannot simply give up and refuse to issue more specific guidelines. *See Am. Paper Inst., Inc. v. EPA*, 996 F.2d 346, 350 (D.C. Cir. 1993) (articulating that, even if creating permit limits is difficult, permit writers cannot just “thr[o]w up their hands and, contrary to the Act, simply ignore[] water quality standards including narrative criteria altogether when deciding upon permit limitations”). Scientific uncertainty does not allow EPA to avoid responsibility for regulating discharges. *See Massachusetts v. EPA*, 549 U.S. 497, 534 (2007) (“EPA [cannot] avoid its statutory obligation by noting the uncertainty surrounding various features of climate change and concluding that it would therefore be better not to regulate at this time.”).

*Id.* The First Circuit and EAB have agreed that uncertainty does not excuse the permit writer from its obligation to set permit limits. *Upper Blackstone Water Pollution Abatement District v. U.S. EPA*, 690 F.3d 9 (1st Cir. 2012), *cert. denied*, 133 S. Ct. 2382 (2013); *In re City of Taunton* at 61-62.

## 2. Water Quality Standards Applicable to Discharges from CAFOs

In Washington, the waters of the state include both surface waters and groundwater. RCW 90.48.020. As a result, when issuing a general discharge permit Ecology must “apply and insure compliance with “[w]ater quality-based effluent limitations . . . necessary to comply with chapter 173-200 and/or 173-201A WAC for the majority of the dischargers intended to be covered under the general permit. WAC 173-226-070(2)(a). Such limits “must control all pollutants or pollutant parameters which the department determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion of state ground or surface water quality standards.” *Id.* 173-226-070(2)(b).

### a. Surface Waters

Water quality standards are defined as the designated beneficial uses of a water body, in combination with the numeric and narrative criteria to protect those uses and an antidegradation policy. 40 C.F.R. § 131.6. The CWA requires numeric criteria adopted in water quality standards to protect the “most sensitive use.” 40 C.F.R. § 131.11(a)(1).

However, since that is not always possible, the task of evaluating whether standards have been met also requires an assessment of the impacts on designated beneficial uses. In *PUD No. 1 of Jefferson County v. Washington Department of Ecology*, 114 S. Ct. 1900, 1912 (1994), the U.S. Supreme Court underscored the importance of protecting beneficial uses as a “complementary requirement” that “enables the States to ensure that each activity—even if not foreseen by the criteria—will be consistent with the specific uses and attributes of a particular body of water.” The Supreme Court explained that numeric criteria “cannot reasonably be expected to anticipate all of the water quality issues arising from every activity which can affect the State’s hundreds of individual water bodies.” *Id.*<sup>12</sup> In short, a permitting agency cannot ignore the narrative criteria and use only numeric criteria where either numeric criteria do not exist or where the numeric criteria fall short of providing full support for designated uses.

Washington’s water quality standards are intended to be “consistent with public health and public enjoyment of the waters and the propagation and protection of fish, shellfish, and wildlife, pursuant to the provisions of chapter 90.48 RCW.” WAC 173-201A-010(1). As in federal law, Washington’s regulations make the legal definition of a water quality standard very

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<sup>12</sup> EPA regulations implementing section 303(d) of the CWA reflect the independent importance of each component of a state’s water quality standards:

For the purposes of listing waters under §130.7(b), the term “water quality standard applicable to such waters” and “applicable water quality standards” refer to those water quality standards established under section 303 of the Act, including numeric criteria, narrative criteria, waterbody uses, and antidegradation requirements.

40 C.F.R. § 130.7(b)(3).

clear: “All surface waters are protected by numeric and narrative criteria, designated uses, and an antidegradation policy.” WAC 173-201A-010(1)(a). In addition, the state rules clarify that:

Compliance with the surface water quality standards of the state of Washington requires compliance with chapter 173-201A WAC, Water quality standards for surface waters of the state of Washington, chapter 173-204 WAC, Sediment management standards, and applicable federal rules.

WAC 173-201A-010(4). The designated uses for the state’s waters are set out at WAC 173-201A-600 - 612.

In addition to the designated uses that are at risk, the pollutants discharged from CAFOs will implicate a wide range of Washington’s water quality criteria. For example, the discharges of nutrients to surface waters will impact the dissolved oxygen levels, in both marine and freshwater. *See* WAC 173-201A-200(1)(d); WAC 173-201A-210(1)(d). In addition, the discharges will likely affect numerous other parameters, such as temperature, pH, bacteria, turbidity, and fine sediment. *See* WAC 173-201A-200; WAC 173-201A-210.

In addition, Washington’s narrative criteria also apply:

Toxic, radioactive, or deleterious material concentrations must be below those which have the potential, either singularly or cumulatively, to adversely affect characteristic water uses, cause acute or chronic conditions to the most sensitive biota dependent upon those waters, or adversely affect public health[.]

Aesthetic values must not be impaired by the presence of materials or their effects, excluding those of natural origin, which offend the senses of sight, smell, touch, or taste.

WAC 173-201A-260(2)(a)-(b) (hereinafter “narrative criteria”).

Importantly, Washington’s criteria also specifically note the requirement that “[u]pstream actions must be conducted in manners that meet downstream water body criteria.” WAC 173-201A-260(3)(b). As a result, “[e]xcept where and to the extent described otherwise in this chapter, the criteria associated with the most upstream uses designated for a water body are to be applied to headwaters to protect nonfish aquatic species and the designated downstream uses.” *Id.*

Finally, Washington’s water quality standards contain an antidegradation policy, the purpose of which is to “[r]estore and maintain the highest possible quality of the surface waters of Washington” and “apply to human activities that are likely to have an impact on the water quality of a surface water.” WAC 173-201A-300(2)(a), (c). To ensure this outcome, Tier I of the antidegradation policy “is used to ensure existing and designated uses are maintained and protected and applies to all waters and all sources of pollution.” *Id.* (2)(e)(i). Tier I requires:

- (1) Existing and designated uses must be maintained and protected. No degradation may be allowed that would interfere with, or become injurious to, existing or designated uses, except as provided for in this chapter.
- (2) For waters that do not meet assigned criteria, or protect existing or designated uses, the department will take appropriate and definitive steps to bring the water quality back into compliance with the water quality standards.

WAC 173-201A-310. Federal regulations explain the meaning of “existing uses” that may not be designated uses: Tier I requires the maintenance and protection of “[e]xisting instream water uses and the level of water quality to protect the existing uses[.]” 40 C.F.R. § 131.12(a)(1). Existing uses are “those uses actually attained in the water body on or after November 28, 1975, whether or not they are included in the water quality standards.” 40 C.F.R. § 131.13(e).

### **b. Groundwater Water Quality Criteria**

Similarly, Washington law is clear that Ecology must protect groundwater. RCW 90.48.010, 020. To this end, Washington’s “anti-degradation” policy for the State’s groundwater states that “[e]xisting and future beneficial uses shall be maintained and protected and degradation of groundwater quality that would interfere with or become injurious to beneficial uses shall not be allowed.” WAC 173-200-030(2)(a). Ecology enacted specific groundwater quality standards “to establish maximum contaminant concentrations for the protection of a variety of beneficial uses of Washington’s groundwater.” WAC 173-200-040(1). “Drinking water is the beneficial use generally requiring the highest quality of groundwater . . . . Providing protection to the level of drinking water standards will protect a great variety of existing and future beneficial uses.” WAC 173-200-040(1)(a)-(b).

### **c. Sediment Standards**

Each general permit must ensure compliance with the state’s sediment management standard. WAC 173-226-070(3)(a). The sediment management standards protect aquatic biota and human health. WAC 173-204. When necessary to ensure compliance with these standards, Ecology must require a Permittee to evaluate the potential for the discharge to cause a violation of sediment standards. WAC 173-204-400(3).

## **2. The Permit Fails to Establish Lawful Effluent Limits**

### **a. The Narrative Water Quality Condition is Insufficient to Meet Legal Requirements (S3)**

A narrative requirement that discharges meet water quality standards is not sufficient to ensure compliance with water quality standards, as federal and state law requires. As the Second Circuit court explained with respect to a similar provision in a case about the U.S Environmental Protection Agency’s general permit for vessel discharges,

This narrative standard is insufficient to give a shipowner guidance as to what is expected or to allow any permitting authority to determine whether a shipowner is violating water quality standards. By requiring shipowners to control discharges “as necessary to meet applicable water quality standards” without giving specific guidance on the discharge limits, EPA fails to fulfill its duty to “regulat[e] in fact, not only in principle.” As this Circuit held in *Waterkeeper Alliance*, NPDES permits “may issue only where such permits ensure that every discharge of pollutants will comply with all applicable effluent limitations and standards.” *Id.* That is hardly the case here.

*Nat. Res. Def. Council v. U.S. E.P.A.*, 808 F.3d 556, 578 (2d Cir. 2015) (quoting *Waterkeeper Alliance, Inc. v. U.S. E.P.A.*, 399 F.3d 486, 498 (2d Cir. 2005)). Likewise, Ecology’s use of a narrative limit that merely cites the water quality standards in Condition S3 fails to regulate discharges from CAFOs “in fact, not only in principle.” *Id.* The Second Circuit elaborated:

Even if determining the proper standard is difficult, EPA cannot simply give up and refuse to issue more specific guidelines. *See Am. Paper Inst., Inc. v. EPA*, 996 F.2d 346, 350 (D.C. Cir. 1993) (articulating that, even if creating permit limits is difficult, permit writers cannot just “thr[o]w up their hands and, contrary to the Act, simply ignore[ ] water quality standards including narrative criteria altogether when deciding upon permit limitations”). Scientific uncertainty does not allow EPA to avoid responsibility for regulating discharges. *See Massachusetts v. EPA*, 549 U.S. 497, 534 (2007) (“EPA [cannot] avoid its statutory obligation by noting the uncertainty surrounding various features of climate change and concluding that it would therefore be better not to regulate at this time.”).

*Id.* at 578. This is particularly true when what it means not to violate water quality standards is complex and involves interpretations of the narrative criteria.

As the Court of Appeals explained when rejecting this same provision from the last iteration of the general permit, “the broad condition that CAFOs must not discharge in violation of water quality standards is not an adequate effluent limitation where the permit could have imposed additional requirements.” *Wash. State Dairy Fed’n*, 18 Wn. App. 2d at 297. Moreover, “[t]he issue with this vague condition is compounded by the fact that Ecology did not explain how the permit meets surface water quality standards . . . in the fact sheet as required under WAC 173-226-110(1)(j)(ii).” *Id.*

Yet, the permit language remains unchanged. As discussed in detail below, Ecology’s failure to include specific measures in the permit to ensure compliance with water quality standards is a fatal flaw. *Id.* at 298 (“Although the permits prohibit discharges that would violate water quality standards, they allow for operation of production areas that pose a risk of doing precisely that.”). As a result, this narrative provision cannot save the permit. Similarly, Ecology must require applicants to demonstrate how they will comply with water quality standards prior to issuing a permit, however, no such demonstration is required under the draft permit.

**b. The Provision on Discharges to Waters Covered by EPA-Approved TMDLs is Not Adequate (Condition S3.A)**

A TMDL represents the maximum amount of a pollutant that a waterbody can receive each day and meet water quality standards. 33 U.S.C. § 1313. Wasteload allocations (“WLA”), for point sources, and load allocations, for nonpoint sources, are developed as part of a TMDL for an impaired water body. All NPDES permits must contain requirements “consistent with the assumptions and requirements of any available wasteload allocation.” 40 C.F.R. § 122.44(d)(1)(vii)(B); *see also id.* § 122.34(e)(1) (permittees “must comply with any more stringent effluent limitations in your permit, including permit requirements that modify, or are in addition to, the minimum control measures based on an approved total maximum daily load (TMDL) or equivalent analysis”).

Ecology should not assume, as it appears to do here, that the absence of a WLA means the TMDL is not relevant for the NPDES permit. Many TMDLs do not include a WLA for NPDES permitted facilities or new NPDES point sources discharging to the impaired waterbody. In such cases, to be consistent with the “assumptions” that went into the TMDL’s allocations, any other permits should prohibit any discharge of the pollutant of concern since the TMDL made no provision for such discharges. 40 C.F.R. § 122.44(d)(1)(B)(vii). Ecology appears to recognize this, *see* Fact Sheet at 22, but has failed to write the permit condition consistent with the Clean Water Act’s implementing regulations. It is not adequate, however, to simply restate the law’s discharge prohibition in the permit. Ecology must require the applicant to demonstrate how it will comply with the prohibition and the agency must ensure that the applicant’s demonstration is adequate. The draft permit does not require this.

Moreover, Ecology has failed to explain how it will ensure that each facility will comply with the restrictions imposed by each applicable TMDL. That is, how will this narrative requirement be transformed into effective and enforceable effluent limits? Therefore, Ecology must explain in the permit itself the steps it will take to review each application and every applicable TMDL, and how it will develop effluent limits that meet the assumptions and requirements of the TMDLs for each permittee prior to issuing them a permit.

**c. The Proposed Permit’s Requirements regarding Impaired Waters is Not Protective (S3.B)**

The proposed permit fails to protect already impaired waters. The proposed permit states:

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.

Special Condition S3.B. This provision is inadequate for at least four reasons.

First, this provision is improperly limited to the specific “pollutant(s) for which the waterbody is listed as impaired.” This limitation evidences a misunderstanding of the state’s water quality standards, what may lead to listing a waterbody as impaired, and the science

behind impairments. A waterbody may be listed as impaired for several reasons, including when it fails to support a designated use. As a result, often, a waterbody will not be listed because of a specific pollutant or pollutants, or at least the impairing pollutant will not be expressly identified on the state's 303(d) list. Moreover, there may be instances where the existence of one pollutant may contribute to the conditions that lead to a listing, even if the listing is attributed to another pollutant. Therefore, Ecology must ensure this provision accounts for all pollutants that may be causing or contributing to an impairment.

Second, relatedly, this provision fails to ensure the discharges from these facilities will comply with narrative water quality criteria. Where a waterbody is listed on the 303(d) because it violates one of the narrative criteria, the specific pollutant(s) causing the impairment may not be identified or even immediately apparent. As a result, Ecology must again, at the outset, identify what is causing or contributing to the impairment and ensure the potential permittee can eliminate all of those parameters from their discharge before granting permit coverage.

Third, this provision fails to account for the potential downstream impacts caused by the pollution discharged from these facilities. Washington's water quality standards make clear that:

Upstream actions must be conducted in manners that meet downstream water body criteria. Except where and to the extent described otherwise in this chapter, the criteria associated with the most upstream uses designated for a water body are to be applied to headwaters to protect nonfish aquatic species and the designated downstream uses.

WAC 173-201A-260(3)(b). As such, the permit must ensure that any discharge will not violate water quality standards downstream of the facility. This requirement is applied regardless of the status of the immediate receiving water. That is, even if the receiving water is not water quality limited for a given parameter, the inquiry as to whether the discharge is allowed does not end there.

This is particularly important when dealing with pollutants, such as nutrients, that have far afield effects. For example, nitrogen discharges can impact dissolved oxygen levels and algal growth—which can be both deleterious by itself and contribute to lowered dissolved oxygen—far away from the point of discharge. *See, e.g.*, EPA Manual at 176 (“Nutrients are another class of pollutants which would be examined for impacts at some point away from the discharge. The special concern is for those water bodies quiescent enough to produce strong algae blooms. The algae blooms create nuisance conditions, dissolved oxygen depletion, and toxicity problems (i.e., red tides or blue-green algae.)”); *id.* at 198 (“[pollutants] such as BOD may not reach full effect on dissolved oxygen until several days travel time down-river.”).

For pollutants such as nutrients, the Environmental Appeals Board (EAB) has held that:

The plain language of the regulatory requirement (that a permit issuer determine whether a source has the “reasonable potential to cause or contribute” to an exceedance of a water quality standard) does not require a conclusive demonstration of “cause and effect.” *See In re Upper Blackstone Water Pollution*

*Abatement Dist.*, NPDES Appeal Nos. 08-11 through 08-18 & 09-06, slip op. at 31-34 & n.29 (EAB May 28, 2010), 14 E.A.D. \_\_\_\_.

*In re Town of Newmarket*, NPDES Appeal No. 12-05, slip op. at 54 n.23 (EAB Dec. 2, 2013) (emphasis added). Indeed, Ecology has recently determined that all sources of nitrogen discharging into Puget Sound are causing or contributing to violations of water quality standards. *See, e.g.*, Letter from Heather Bartlett, Ecology to Susan Poulson, EPA, Re: Clean Water Act 401 Final Certification for EPA National Pollutant Discharge Elimination System Permit No. WA0023256 – Suquamish Wastewater Treatment Plant (Dec. 16, 2019) at 3 (“Nutrients discharged from wastewater treatment plants contribute to low dissolved oxygen (D.O.) levels, below state water quality criteria, in Puget Sound. . . . All wastewater discharges to Puget Sound containing inorganic nitrogen contribute to the D.O. impairment.”).

Finally, this provision fails to protect waterbodies that are impaired but not currently listed on the state’s EPA-approved 303(d) list. The key here is impairment, not the technicality of 303(d) listing. *See In re: City of Taunton Department of Public Works*, at 38 (“NPDES regulations do not support the City’s contention that a permit authority must include effluent limits only for the pollutants discharged into receiving waters that are identified as impaired on the state’s 303(d) list.”). Moreover, the finding of reasonable potential has repeatedly been deemed to be a low bar to ensure that NPDES permits protect water quality. EPA regulations require that NPDES limits “*must* control all pollutants” that “*may be* discharged at levels” that will cause or contribute to violations. 40 C.F.R. § 122.44(d)(1)(i) (emphasis added). The emphasis is on the regulation of discharges that *may* be a problem.

**d. The Proposed Permit’s Discharge Limits for Production Areas are Not Protective (S3.C)**

The proposed permits’ effluent limits for CAFO production areas generally fall well short of the legal requirements as they fail to meet the minimum standards under the federal rules, do not meet AKART, and are not proven to ensure compliance with water quality standards. As a result, Ecology must make several critical revisions to these limits to comply with federal and state law. Indeed, as the Permit Writer’s Manual notes, where “the effluent guidelines are over 10 years old, the permit writer should, at the minimum, conduct an analysis of unit processes design and efficiencies at the facility to determine if the effluent guidelines constitute AKART.” Permit Writer’s Manual at 66. Here because the CAFO Rules were written in 2003, below we offer several updates to the effluents limit beyond the minimum requirements of the federal standards.

First, Ecology must clearly state that for all existing facilities granted coverage by this permit, there may be no discharge of manure, litter, or process wastewater pollutants into waters of the state from the production area except as provided below. The term “Production area” includes all areas under the control of the operation, except the land application area. Ecology must also specify that the types of discharge that are prohibited include but are not limited to:

- a) contaminated runoff from confinement or waste accumulation areas;
- b) overflow or discharges from waste storage facilities;



- c) discharges due to equipment failure;
- d) pollutants blown from confinement areas by building fans; or
- e) leakage or seepage from facilities in the Production area.

Second, as written, the permits would allow the discharge of pollutants to surface waters from the production areas if:

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 rainfall 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.

Condition S3.C. These exceptions fail to include important components of the federal rules that ensure each facility is designed, constructed, operated, and maintained in a manner that will comply with the CAFO Rule's no discharge requirement. Ecology must update the draft Permit to include the requirement that the Production area is properly 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.<sup>13</sup> However, we believe Ecology must go further, to ensure that facilities in Washington not only meet this minimum standard, but implement the controls to comply with AKART and ensure compliance with water quality. To this end, Ecology must require Washington CAFOs to design storage to handle a volume equal to the sum of:

- a) Double the estimated volume of manure, litter, process wastewater, and other wastes accumulated during the storage period;
- b) The normal precipitation less evaporation during the storage period for the location of the facility;
- c) The normal runoff during the storage period into the storage structure for the location of the facility;
- d) Direct precipitation from the 100-year 24-hour precipitation event for the location of the facility;
- e) Runoff from the 100-year 24-hour precipitation event from the Production area into the storage structure for the location of the facility;
- f) Residual solids after liquids are removed;
- g) Necessary freeboard to maintain structural integrity. After settlement, the top of the embankment shall be at least 1 foot above the surrounding grade, or greater than the minimum determined by the current NRCS Conservation Practice Standard Code 313, whichever is greater; and

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<sup>13</sup> For the purpose of this provision, "to contain" must be defined to mean to prevent any release of any pollutant from the area, including by leakage into groundwater.

h) A minimum treatment volume, in the case of treatment lagoons.

In addition, because Ecology claims that it cannot establish numeric effluent limits and must instead identify best management practices to articulate the technology and water quality based effluent limits in this permit, it must actually do so. This means Ecology must ensure the other critical elements of a properly operated and maintained facility are clearly identified as effluent limits and must determine, prior to issuing a permit, that applicants can comply with these effluent limitations. This demonstration must be set forth in the facility's Nutrient Management Plan. *See e.g.*, 40 C.F.R. §122.23(h) ("The Director must review notices of intent submitted by CAFO owners or operators to ensure that the notice of intent includes the information required by § 122.21(i)(1), including a nutrient management plan that meets the requirements of § 122.42(e) and applicable effluent limitations and standards, including those specified in 40 CFR part 412.")

### **1. Visual Inspections**

Ecology must specify the required minimum visual inspection schedule, including but not limited to:

- a) Weekly visual inspections of all stormwater diversion devices, runoff diversion structures, and devices channeling contaminated stormwater to the wastewater or manure storage structures;
- b) Daily visual inspections of all water lines, including drinking water and cooling water lines;
- c) Weekly inspections of the manure, litter, and process wastewater impoundments, storage, and containment structures.
- d) Daily inspection of the depth marker and recoding of the level in liquid impoundments as indicated by the depth marker.

### **2. Depth Marker**

Ecology must also specify, as an effluent limit, that all open surface liquid impoundments must have a depth marker that clearly indicates the minimum capacity necessary to contain the runoff and direct precipitation of the 100-year 24-hour precipitation event, the design storage volume, and the depth of manure and process wastewater. The marker shall be visible from the top of the levee.

### **3. Correction and Repair Schedule**

The permits must also mandate the timely correction or repair of any deficiencies in their operations that may result in or raise the potential for a discharge of pollutants. Such actions must occur within 48 hours of discovering the deficiency. Ecology must make clear that correcting an identified deficiency does not relieve the owner or operator of the responsibility for any permit violation.

#### **4. Mortality Management**

The requirements for properly managing animal mortalities must be spelled out in the effluent limits. Specifically, Ecology must require that the permittee handle and dispose of dead animals in a manner that prevents any contact between dead animals and waters of the state, including via water that reaches waters of the state. Mortalities must not be disposed of in any liquid manure or process wastewater system not specifically designed to treat animal mortalities. Animals must also be disposed of to prevent the creation of a public health hazard or nuisance. Mortality handling practices shall follow all applicable state and local regulatory requirements. Rendering and composting, consistent with NRCS Practice Standards 316 and 317 as applicable, shall be utilized where those practices meet appropriate state and local regulatory requirements. Finally, the permittee shall perform daily visual inspections for mortalities, and mortalities shall be removed and disposed of upon discovery.

#### **5. Diversion of Clean Water**

The diversion of clean water away from areas of potential contamination is also an essential element of the proper operation. As such, the permit must require that clean water is diverted, as appropriate, from the production area. For this permit, clean water includes, but is not limited to, rain falling on the facilities' roofs and run-on from adjacent land. Ecology must also make clear that any clean water that is not diverted and comes into contact with raw materials, products, or by-products, including manure, litter, process wastewater, feed, milk, eggs, or bedding, is subject to the effluent limitations of the permit. Where clean water is not diverted from the production area, the retention structures shall include adequate storage capacity for the additional clean water.

#### **6. No Direct Animal Contact With Waters of the State**

The permits must also include an effluent limit that prevents direct contact of live confined animals with waters of the state, or with land within 30 feet of waters of the state. Previous iterations of the permits prohibited animal contact with water, but puzzlingly, these draft permits now appear to allow it.

#### **7. Chemical and Contaminant Exposure**

Finally, the permit must specify that the permittees must ensure that chemicals and other contaminants handled on-site are not disposed of in any manure, litter, or process wastewater, or in any stormwater storage or treatment system unless specifically designed to treat such chemicals and other contaminants. Such chemicals include, but are not limited to, pesticides and petroleum products/byproducts.

As discussed below, the nutrient management plan developed for each facility must describe, in detail, how each facility will meet, implement, and ensure compliance with each of these limits. This, however, does not alleviate the need for Ecology to develop and prescribe the specific limits that are necessary to meet the agency's duty to develop a permit that will implement AKART and protect water quality.

**e. The Proposed Permit's Discharge Limits for Field Applications are Not Consistent with State and Federal Law (S3.D)**

Similar to the shortcomings of the effluent limits for production areas, Ecology's proposed permits fail to establish the required and appropriate limits controlling activities on the operation's land application areas. As a result, Ecology must eliminate the exception for the discharge of agricultural stormwater, and specify the effluent limits necessary to ensure compliance with the CAFO Rule, AKART, and the state's water quality standards.

**1. Ecology Must Eliminate the Exception For Agricultural Stormwater**

Ecology must eliminate its exception for agricultural stormwater from the Combined Permit. The proposed Combined Permit states that "[t]he 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." S3.D. Ecology then defines "agricultural stormwater" to mean discharges to surface water from land application fields generated only by precipitation provided that

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.

*Id.* App. A. This exception is contrary to state law and is inconsistent with the Clean Water Act and EPA's regulations.

First, as Ecology notes, the "[s]tate waste discharge permit rules excludes irrigation return flows, but not agricultural stormwater, in the definition of point source." Fact Sheet, at 29 citing WAC 173-226-030. As a result, Ecology has no reason to include this exemption in its permit. Washington should impose stricter requirements than the federal minimum under the Clean Water Act. *See* 33 U.S.C. § 1370.

Indeed, not only is it permissible for Ecology to remove this exception, but it is necessary to comply with state law. Ecology, the state agency "designated as the state water pollution control agency for all purposes of the federal clean water act," RCW 90.48.260, has broad authority "to control and prevent the pollution of streams, lakes, rivers, ponds, inland waters, salt waters, water courses and other surface and underground waters of the state of Washington." *Id.* 90.48.030. With this authority, Ecology is compelled to enforce the state law that:

It shall be unlawful for any person to throw, drain, run, or otherwise discharge into any of the waters of this state, or to cause, permit or suffer to be thrown, run, drained, allowed to seep or otherwise discharged into such waters any

organic or inorganic matter that shall cause or tend to cause pollution of such waters according to the determination of the department, as provided for in this chapter.

RCW 90.48.080. As Ecology makes clear, “[u]nder state law, it does not matter whether the pollution comes from a point or NPS [nonpoint source], all pollution of state waters is subject to Ecology’s authority to control and prevent pollution.” Ecology, Washington’s Water Quality Management Plan to Control Nonpoint Sources of Pollution, Ecology Publication No. 15-10-015 (July 2015) at 7. Thus, Ecology must regulate the discharge of agricultural stormwater discharged from CAFOs.

Moreover, Ecology has the authority and obligation to take enforcement action not only when a person pollutes the water by violating a discharge permit but also if that person “creates a substantial potential to violate” Washington water quality laws. RCW 90.48.120.<sup>14</sup> The Washington Attorney General’s office has interpreted the “potential to pollute” authority to encompass the authority to mandate specific best management practices:

Consequently, Ecology not only has authority to take action following non-point source pollution but has specific statutory authority to act proactively to prevent non-point source pollution from occurring in the first place. Ecology’s authority includes the authority to require a non-point source polluter to implement specific management measures. Ecology’s authority can be used to prevent nonpoint pollution and require 6217 management measure implementation,<sup>15</sup> as necessary.

Ecology, Washington’s Water Quality Management Plan to Control Nonpoint Sources of Pollution, Ecology Publication No. 15-10-015 (July 2015) at Appendix B (Letter from Ron Lavigne, Assistant Attorney General). Therefore, Ecology has the authority and responsibility to prevent pollution, even if it comes in the form of “agricultural stormwater,” as defined by federal law.

Second, the Clean Water Act does not mandate the exclusion of agricultural stormwater from regulation under this permit. It is undoubtedly true that the Clean Water Act exempts “agricultural stormwater discharges and return flows from irrigated agriculture” from the

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<sup>14</sup> See also *Lemire v. Dep’t of Ecology*, 309 P.3d 395, 401-02, 178 Wash. 2d 227, 239-241, (2013) (en banc) (holding that the Department of Ecology acted within its authority in issuing administrative order pursuant to Water Pollution Control Act requiring livestock rancher to address conditions that resulted in substantial potential for nonpoint source pollution on his property. “Ecology has broad authority to regulate any person causing the discharge of matters into waterways that cause or tend to cause pollution... We hold that Ecology did not exceed its authority when it ordered Lemire to comply with regulations concerning nonpoint source pollutant discharge into Pataha Creek.”)

<sup>15</sup> Coastal Zone Act Reauthorization Amendments (CZARA) Section 6217 requires state water quality agencies to develop and implement management measures to restore and protect coastal waters from adverse impacts of NPS pollution.

definition of a “point source.” See 33 U.S.C. § 1362(14). But, because CAFOs are defined as a point source, and CAFOs may discharge pollutants as agricultural runoff, or through irrigated agricultural return flow, as the Second Circuit stated, “this provision is self-evidently ambiguous,” which the “Act makes absolutely no attempt to reconcile . . .” *Waterkeeper All., Inc. v. U.S. E.P.A.*, 399 F.3d 486, 507 (2d Cir. 2005). Indeed, as the Ninth Circuit recently noted, “EPA has interpreted the stormwater and irrigation discharge exceptions as not applying when such discharges are from a CAFO.” *Food & Water Watch v. U.S. Env’t Prot. Agency*, 20 F.4th 506, 510 (9th Cir. 2021). As support for this, the court notes that EPA’s general permit for CAFOs in Idaho specifically prohibits dry weather discharges from a CAFO’s land application area, including “discharges ... through tile drains, ditches or other conveyances, and *irrigation return*.” *Id.* (quoting EPA, Final Reissuance of NPDES General Permit for Concentrated Animal Feeding Operations in Idaho (IDG010000) (emphasis in original)). The court further noted that “while the EPA has partially incorporated the stormwater discharge exception into a CAFO regulation, it has done so as a matter of regulatory discretion rather than statutory compulsion.” *Id.*

Third, Ecology has failed to define “agricultural stormwater” consistently with EPA’s definition, thus negating the specific, protective conditions EPA thought necessary to allow for this significant exemption. In order to be considered an agricultural stormwater discharge, the discharge must be precipitation-related from a land area under the control of a CAFO, and the manure, litter, or process wastewater must have “been applied in accordance with site specific nutrient management practices that ensure appropriate agricultural utilization of the nutrients in the manure, litter or process wastewater, as specified in § 122.42(e)(1)(vi)-(ix).” 40 C.F.R. § 122.23(e). If Ecology insists on applying this exception, it must use the correct definition and limitations.

## **2. Ecology Must Establish Effluent Limits for Field Applications**

To comply with the state and federal permitting requirements, the CAFO permits must, at a minimum, include the following effluent limits:

1. The permit must establish an effluent limit requiring that the CAFO’s site-specific NMP document the calculation of land application rates of manure, litter, or process wastewater, and must incorporate the information gathered through field-specific assessment of the potential for N, P, K, and NH<sub>4</sub> transport from the field. Ecology must also develop the technical standard for nutrient management, as required by 40 C.F.R. § 123.36, and incorporate those standards in the effluent limit. Moreover, the permit must clarify that the rate calculation shall address the form, source, amount, timing, and application method for each field to achieve realistic production goals and complete agricultural utilization of nutrients. The rate calculation shall be based on the results of a field-specific assessment of the potential for nitrogen and phosphorus transport from the field to surface waters using an assessment protocol established by Ecology. Finally, the effluent limit should specify that the calculated “realistic production goal” shall not exceed the highest average per-acre yield from the previous five years, plus 5%, unless Ecology grants a waiver authorizing a different yield

calculation based on scientific evidence of superior expected yields submitted to Ecology.

2. The permit must include an effluent limit that requires the permittee to identify appropriate site-specific conservation practices to be implemented, including, as appropriate, buffers or equivalent practices, to control runoff of pollutants to state waters, in compliance with the permit's directions for the NMP. Similarly, the effluent limits must direct the permittee to establish protocols for applying manure, litter, or process wastewater in accordance with site-specific nutrient management practices that ensure appropriate agricultural utilization of the nutrients.
3. To ensure the permittees meet the requirements for the proper levels of nutrient applications to fields, the permit must establish an effluent limit specifying the manure and soil sampling schedule. Specifically, the permit must specify the minimum sampling requirements that manure must be analyzed at least once annually for total nitrogen, NTK, ammonia, nitrate-nitrogen, and total phosphorus content. Soil, in turn, must be analyzed at least twice annually for N, P, K, and NH<sub>4</sub>, including once in the month preceding planting and once in the month after harvest. The results of the analyses, including nutrient uptake rates estimated by preplanting and postharvest soil analyses, must be used in determining application rates for manure, litter, and process wastewater.
4. The equipment used for land application of manure, litter, or process wastewater, including wastewater conveyance lines, must be inspected for leaks before each land application or waste disposal, and the permittee must record the results of the inspection in an on-site log.
5. The permit must include an effluent limit requiring that the permittee manage its irrigation systems to minimize ponding or puddling of wastewater on land application fields, and to prevent: a) any wastewater from reaching ground and surface water, and b) the occurrence of nuisance conditions such as odors and flies. In addition, the permit must mandate the use of moisture sensors to ensure proper irrigation rates.
6. In order to prevent the discharge from tile drains, when applied to land with subsurface tile drainage systems, applications are prohibited when tiles are actively flowing. In addition, applications must also be prohibited unless manure is applied using aerators and incorporation techniques. The application of wet manure must be limited to avoid manure flowing into tile drain inlets, and all drainage tile outlets shall be inspected after land application to ensure there is no discharge from the application field.
7. The permit must also prohibit dry weather discharge of manure, litter, or process wastewater to a water of the state from a CAFO as a result of the application of manure, litter, or process wastewater to land areas under the control of the CAFO. This prohibition includes discharges to waters of the United States through tile drains, ditches, other conveyances, and irrigation return.

8. The permit must include specific prohibitions on the application of manure, litter, or process wastewater in areas or times that may increase the likelihood of a discharge, cause water quality problems, or cause a public nuisance. To these ends, the permit must prohibit the application of manure, litter, or process wastewater on frozen or snow-covered ground, during periods of crop dormancy, to saturated soils, or before forecast precipitation events that may result in saturated soils or surface runoff. Similarly, Ecology must not allow the application of manure, litter, or process wastewater on grades exceeding 3% (except by injection or immediate incorporation). To prevent potential harm from the more frequent significant precipitation events that are likely to occur, the permit should eliminate field applications within a 10-year floodplain. In addition, to protect the local community, the permit should prevent discharges within 0.5 miles of any school, hospital, or public park, or within 0.25 miles of any residence or residential well (unless the owner or operator demonstrates in the NMP that pollutants in applied manure, litter, or process wastewater will not reach such well). Similarly, waste must be applied by injection if the application area lies within 2,500 feet of a residence.
9. Ecology must impose an effluent limit that requires the use of effective, science-based buffers to prevent the discharge of pollutants to surface waters. In this regard, because of the importance of and need for healthy riparian habitat throughout Washington, Ecology must go beyond the minimum requirements of the CAFO Rule and establish an effluent limit based on AKART, consistent with state laws, policies, and commitments to protect salmon, and the requirement to protect water quality standards from all pollutants, including temperature. Specifically, we ask Ecology to refrain from developing or adopting regulations or policies that achieve less than the ‘1 site potential tree height’ riparian buffer standard recognized by the Governor’s office and WDFW as current science.

**3. The Permit Fails to Require Adequate Nutrient Management Plans that Will Ensure the Permittees Comply with the Permit, Implement AKART, and Protect Water Quality**

With those specific effluent limits established, sections 122.42(e)(1)(vi)-(ix) of the federal CAFO Rule, in turn, require the permittee to develop and implement a NMP describing how it will meet the limits and other requirements of the rules through the implementation of site-specific conservation practices, site-specific land application limitations that ensure appropriate agricultural utilization of the nutrients in the manure, litter, or process wastewater, and recordkeeping requirements. As detailed below, Ecology’s NPDES Permit does not require a site-specific NMP that incorporates these requirements. As a result, draft permits adopt the exclusion of coverage contemplated by EPA’s rules but do not carry forward the associated protective conditions. As a result, the draft permits are significantly less protective than the CAFO Rule, in direct violation of the law. *See* 33 U.S.C. § 1370.

To begin with, the proposed permits do not require the NMPs to describe how the permittees will comply with all of the requirements of Condition S3. Rather, under the draft permits the NMP “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.” Combined Permit, S4.A.1. This is inconsistent with the CAFO rule. 40 C.F.R. § 122.42(e)(1). Ecology must revise the permits to require the permittees to develop, submit, and implement a site-specific NMP. In addition, Ecology must make clear that the NMP shall identify and describe practices that the permittee will implement to ensure compliance with the permit’s effluent limitations and special conditions.

In addition to this necessary change, Ecology must update the specific requirements of the NMP, as discussed below, to ensure the permittee will be required to implement the limitations, standards and best management practices necessary to comply with the CAFO rule, AKART, and the state’s water quality standards.

**a. The Proposed Permit Fails to Establish the Required Effluent Limits for Lagoons (S4.C)**

Ecology appears to have set a technology-based effluent limit for all lagoons that will allow a discharge of 924 gallons/acre/day to groundwater. Combined Permit, S4.C.1. Ecology has not explained why it proposes allowing the discharge of pollutants from storage lagoons. Indeed, the Fact Sheet has no analysis or explanation of how Ecology chose this standard, what other standards it analyzed, what information it used to conduct its analysis, what factors it considered, what financial information it used in determining this standard was “reasonable,” or any other relevant information. The sum total of the analysis is Ecology’s unsupported observation that:

The current industry standard for agricultural waste storage facility construction is NRCS Conservation Practice Standard 313. Agricultural engineers use NRCS’ Agricultural Waste Management Field Handbook to design new and refurbish waste storage facilities to the Practice Standard.

Fact Sheet, at 47. Ecology then goes on to explain:

Ecology is proposing to change the standard to which a new waste storage pond must be designed and built. In typical waste storage pond design guidance, the liner standards are represented as either a combination of permeability and liner thickness or seepage rate, sometimes called specific discharge. NRCS engineers in Washington indicated a preference for the seepage rate measurement. We adopted the design standard used in NRCS’ agricultural waste management design handbook (NRCS, 2009) and practice standards (NRCS, 2017).

*Id.* at 49. These statements may be true. But Ecology fails to explain what this means, what the limits are, how they were derived, or how those limits ensure compliance with the permitting requirements. *See* WAC 173-226-110(j).

Regardless of how Ecology derived this limit, this is inconsistent with the law because this standard fails to ensure each facility will comply with AKART and fails to protect water quality.

## 1. Ecology Fails to Ensure Compliance with AKART

First, Ecology is required to ensure that all permittees will implement and comply with AKART to control the discharges to groundwater. AKART is technology that is “previously developed and presently available.” *ITT Rayonier v. Ecology*, PCHB 85-218, \*9 (Final Findings of Fact, Conclusions of Law and Order) (Jan. 5, 1989). After determining what technology is available, Ecology must also consider whether such technology is “reasonable.” To determine if available technology is “reasonable,” Ecology has adopted EPA’s reasonableness tests: “Ecology has adopted EPA’s [Best Conventional Pollutant Control Technology] BCT and [Best Available Technology Economically Achievable] BAT economic tests for AKART analysis” depending on the type of pollutant discharged. Permit Writer’s Manual, at 95.

Ecology is well aware that technology exists to eliminate the discharge of pollutants from lagoons. There is no dispute that double-synthetic liners with leak detection systems are known and available. *See Wash. State Dairy Fed’n v. State*, PCHB No. 17-016c \*8 (Findings of Fact, Conclusions of Law and Order)(Oct. 25, 2018). As Ecology’s Permit Writer’s Manual states, “although there is no explicit statement in RCW 90.48 equivalent to the ‘zero discharge’ goal of the Clean Water Act, both of these laws have a technology-based principle which, when followed to the logical conclusion lead to zero discharge, when achievable and reasonable.” Permit Writer’s Manual at 93-94. Thus, this must be the starting point for the AKART analysis, because this will ensure that all facilities comply with AKART. *See WAC 173-226-070(1)* (“the department shall apply and insure compliance with . . . [t]echnology-based treatment requirements and standards reflecting all known, available, and reasonable methods of prevention, treatment, and control . . .”).<sup>16</sup>

However, to the extent Ecology believes that implementing the controls necessary to *eliminate* the discharge of pollutants to groundwater is not “reasonable” for some facilities, allowing all facilities to discharge is inconsistent with the requirement to “apply and insure compliance with” AKART for all facilities. Rather, to allow for some facilities to demonstrate why this known and available technology is not reasonable, Ecology must establish the test for making such a showing in the permit.

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<sup>16</sup> The Court of Appeal’s reflection that “double-synthetic liners with leak protection” did not represent the AKART standard for existing manure lagoons for the purposes of the 2016 permit, is of course not dispositive here. *Wash. State Dairy Fed’n*, 18 Wn. App. 2d at 281. AKART requires First, Ecology must evaluate what is necessary to ensure compliance with AKART each time it issues a permit. *Nw. Env’t Advocs. v. Dep’t of Ecology*, 18 Wn. App. 2d 1005 (2021) (“Ecology has interpreted RCW 90.48.520 to mandate that AKART be applied in each permit on a case-by-case basis.”). And what is AKART, will by definition, change over time as new technology becomes known, available and reasonable to implement. *See WAC 173-201A-020* (“AKART shall represent *the most current* methodology that can be reasonably required for preventing, controlling, or abating the pollutants associated with a discharge.”); *Puget Soundkeeper v. State*, 102 Wn. App. 783, 789, 892, 895 (2000) (“[T]he statutory scheme envisions that effluent limitations will decrease as technology advances.”).

Here, the pollutant of primary concern is nitrate. Nitrate contamination threatens drinking water in communities with high concentrations of CAFOs. Nitrates cause multiple adverse health outcomes such as methemoglobinemia (“blue baby syndrome”), cardiovascular harm, strokes, reproductive problems such as miscarriages, thyroid problems, and some cancers.

As a result, as the Ecology’s Permit Writer’s Manual explains, Ecology must ensure CAFOs use the Best Available Technology Economically Achievable to control or eliminate any discharges. Permit Writer’s Manual, at 106. Thus, to properly implement this approach, Ecology must require each facility to provide the information necessary to conduct the appropriate economic analysis based on the ownership of the facility and the type of financial information the facility can make available. Such information will include, but is not limited to:

- An evaluation by a professional engineer, of the current condition of the facility’s liquid storage structures, documenting the seepage rate and supported by the necessary information such as complete as-built plans, specifications, drawings, etc.
- The cost estimates for a range of control technology, including a) two layer synthetic liners with a leak detection and capture system between the layers; b) steel and concrete above ground storage structures; c) synthetic liner over clay (GCL); d) concrete lined lagoons; and e) other appropriate alternative designs
- The necessary income statement data—revenue, costs, and earnings—for the most recent three years to allow for the assessment

Under this test, “treatment technology to be economically achievable if its use would not cause the plant to shut down. That is, the technology is economically achievable if its annual cost is less than the plant’s annual profits.”<sup>17</sup> Permit Writer’s Manual, at 107.

## **2. Ecology Has Not Established Protective WQBELs for Lagoons**

Second, Ecology has failed to establish appropriate WQBELs for lagoons. As discussed above, when setting effluent limits, Ecology must choose the more restrictive of the technology based effluent limits and any additional limits that may be necessary to ensure compliance with water quality standards. Also, with each general permit, Ecology must impose water quality-based effluent limitations to ensure “the majority of the dischargers intended to be covered under the general permit” will not cause or contribute to a violation of water quality standards, including groundwater standards. WAC 173.226.070(2)(a). Because in many areas across the state any discharge of pollutants from these facilities will violate water quality standards, to meet

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<sup>17</sup> “The permit holders are responsible for providing the cost, earnings, and revenue data needed to perform the economic achievability test. If they refuse to supply the data, then it should be assumed that the treatment technology is economically achievable.” Permit Writer’s Manual, at 111.

the state’s permitting requirements, Ecology has failed to demonstrate how allowing each facility to discharge 924 gallons/acre/day to groundwater meets this requirement.<sup>18</sup>

Washington law is clear, Ecology must protect groundwater. RCW 90.48.010, 020. Specifically, Washington’s “anti-degradation” policy for the State’s groundwater states that “[e]xisting and future beneficial uses shall be maintained and protected and degradation of groundwater quality that would interfere with or become injurious to beneficial uses shall not be allowed.” WAC 173-200-030(2)(a). Ecology enacted specific groundwater quality standards “to establish maximum contaminant concentrations for the protection of a variety of beneficial uses of Washington’s groundwater.” WAC 173-200-040(1). To that end, “[d]rinking water is the beneficial use generally requiring the highest quality of groundwater . . . . Providing protection to the level of drinking water standards will protect a great variety of existing and future beneficial uses.” WAC 173-200-040(1)(a)-(b).

Ecology implements the anti-degradation policy and its groundwater quality standards through “enforcement limits.” WAC 173-200-050(6) (“The enforcement limit for a specific activity may be established through, but not limited to the following mechanisms: A state administrative rule, a state waste discharge permit, other department permit, [1] or administrative order.”). The “enforcement limit is a value assigned to any contaminant for the purposes of regulating that contaminant to protect existing groundwater quality and to prevent groundwater pollution.” WAC 173-200-050(1). In setting “enforcement limits” in compliance with the groundwater quality standards, Ecology is required to take into account:

- (i) The antidegradation policy;
- (ii) Establishment of an enforcement limit as near the natural groundwater quality as practical;
- (iii) Overall protection of human health and the environment;
- (iv) Whether the potentially affected area has been designated as a special protection area;
- (v) Protection of existing and future beneficial uses;
- (vi) Effects of the presence of multiple chemicals, multiple exposure pathways in accordance with subsection (5) of this section, and toxicity of individual contaminants;
- (vii) Federal, state, tribal, and local land use plans, policies, or ordinances including wellhead protection programs;
- (viii) Pollution of other media such as soils or surface waters; and
- (ix) Any other considerations the department deems pertinent to achieve the objectives of this chapter.

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<sup>18</sup> And how could it have, given that, as discussed above, Ecology has failed to identify which facilities may be covered under the permit, where those facilities may be located, and the condition of the potential receiving waters in those areas? If Ecology maintains that the permit may cover an unknown number of facilities anywhere across the state, the only reasonable water quality-based effluent limit is zero.

WAC 173-200-050(3)(a).

The starting point for any “enforcement limit” for a contaminant, such as nitrate,<sup>19</sup> is the water quality standard criteria found in Appendix A of WAC 173-200-040. WAC 173-200-050(3)(b). However, “[w]hen the background groundwater quality exceeds a criterion, the enforcement limit at the point of compliance shall not exceed the background groundwater quality for that criterion.” WAC 173-200-050(3)(b)(ii). Importantly, “[e]nforcement limits based on elevated background groundwater quality *shall in no way be construed to allow continued pollution of the receiving groundwater.*” *Id.* (emphasis added).

Enforcement limits are intended to be met at the “point of compliance,” which is “the location where the enforcement limit, set in accordance with WAC 173-200-050, *shall be measured and shall not be exceeded.*” WAC 173-200-060(1) (emphasis added). Ecology is required to establish the point of compliance for any discharge activity,<sup>20</sup> which “shall be established in the groundwater as near the source as technically, hydrogeologically, and geographically feasible.” WAC 173-200-060(1)(a). “Compliance with the enforcement limits shall be maintained throughout the site from the uppermost level of the saturated zone extending vertically to the lowest depth that could potentially be affected by an activity.” WAC 173-200-060(1)(b).

The regulations protecting the State’s groundwater quality “shall be met for all groundwaters to meet the requirements of this chapter at all places and at all times.” WAC 173-200-100(1). “The Chapter shall be enforced through all legal, equitable, and other methods available to the department including, but not limited to: Issuance of state waste discharge permits . . . [and] other departmental permits[.]” WAC 173-200-100(3). As such, “[p]ermits issued or reissued by the department *shall be conditioned in such a manner as to authorize only activities that will not cause violations of this chapter.*” WAC 173-200-100(4) (emphasis added).

Ecology’s assumption that permit compliance automatically equates to compliance with the State’s groundwater quality standards is incompatible with protections afforded to groundwater under State law, amounting to a misapplication of the law. The strict anti-degradation policy adopted by Washington mandates that Ecology issue state discharge permits that protect groundwater quality for its highest beneficial use, most commonly as a source of drinking water. WAC 173-200-040(1)(a). It also requires that permits have enforcement limits based on either the groundwater quality standards or if the groundwater has already exceeded those standards, the present “background” quality of the water underneath a permittee’s facility. WAC 173-200-050(3)(b)(ii). Yet, a permittee can be “complying” with the Permits while discharging pollution into groundwater of unknown quality in violation of the anti-degradation policy. This is not consistent with Ecology’s regulations, which require that discharge permits “be conditioned in such a manner as to authorize only activities that will not cause violations” of

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<sup>19</sup> Nitrate is the primary pollutant of concern for groundwater that originates with CAFOs. It has a groundwater quality standard of 10 mg/L. WAC 173-200-040 (Table 1).

<sup>20</sup> “Activity” is defined as “any site, area, facility, structure, vehicle, installation, or discharge which may produce pollution.” WAC 173-200-020(1).

the groundwater quality standards. WAC 173-200-100(4). Instead, to ensure compliance with these requirements, Ecology must prohibit the discharge of pollutants into groundwater and, prior to issuing a permit, Ecology must ensure that a permittee has the capacity and plans in place to comply with that prohibition.

To the extent Ecology believes, however, that requiring all facilities to eliminate the discharge of pollutants from lagoons is not necessary to ensure that the “majority” of facilities will not violate water quality standards, Ecology must establish an alternative permitting scheme to meet this regulatory requirement. To do so, Ecology must establish permit terms requiring each applicant to provide information on the current status of the potential receiving waters so that Ecology can conduct the analysis required under WAC 173-200. The current permit fails to accomplish this.

**b. The Proposed Permit Fails to Establish the Required Effluent Limits for Composting Areas**

The proposed permits fail to establish appropriate effluent limits to control the discharge of pollutants from composting areas. Under the proposed permit, solid materials storage facilities must “minimize the discharge of pollutants from solid manure, litter, compost, and feed storage areas” by “[l]ocat[ing] structures on impervious surfaces (such as concrete) or soil pads with low permeability,” and “[d]irect[ing] contaminated runoff to structures designed to store liquid manure and process wastewater or through a vegetated treatment area designed and operated in accordance with Error! Reference source not found.” Combined Permit, S4.C.2.<sup>21</sup> This provision fails to ensure compliance with AKART or protect groundwater.

Composting areas discharge pollutants to groundwater. As a result, Ecology must impose technology based effluent limits, consistent with AKART. Here, Ecology has fallen well short of this requirement by allowing facilities to place and operate composting areas on “soil pads with low permeability.” Ecology has not defined what low permeability means. Nor has Ecology explained how this meets the definition of AKART when it has identified numerous options for waste storage that are known, available, and in use at these types of facilities that will prevent the discharge of pollutants to groundwater. *See* Fact Sheet at 29. “*When issuing a general waste discharge permit, Ecology must ensure that the permit conditions ‘apply and insure compliance’ with ‘[t]echnology-based treatment requirements’ that reflect ‘all known, available, and reasonable methods of prevention, treatment, and control,’ or ‘AKART,’ required under the WPCA, the Pollution Disclosure Act of 1971, ch. 90.52 RCW, and the Water Resources Act of 1971, ch. 90.54 RCW. WAC 173-226-070(1).’*” *Wash. State Dairy Fed’n*, 18 Wn. App. 2d at 275 (emphasis added). Thus, leaving the determination of reasonableness concerning the cost associated with treatment levels entirely to the permittee is an impermissible provision for self-regulation.

Moreover, Ecology has failed to implement any necessary water quality based effluent limits for composting areas. The discharge from composting areas likely represents a significant

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<sup>21</sup> It is not clear from the Fact Sheet what document or standard Ecology intended to insert into this provision.

portion of the pollutants from a facility to groundwater. Given the impairments in groundwater quality found in areas with high concentrations of CAFOs, there is a reasonable potential that these discharges may be causing or contributing to a violation of water quality criteria. As a result, Ecology must develop water quality based effluent limits for composting areas. As the Court of Appeals held regarding the previous permit, the “[p]ermit conditions pertaining to existing manure lagoons, *compost areas*, and high risk fields are inconsistent with the permits’ requirement that ‘[d]ischarges conditionally authorized by this permit must not cause or contribute to a violation of water quality standards.’” *Wash. State Dairy Fed’n*, 18 Wn. App. 2d at 298. Ecology cannot repeat that mistake here.

**c. The Proposed Permit Fails to Establish the Required Effluent Limits for Field Applications**

Ecology has again failed to establish appropriate and effective effluent limits to protect surface and groundwater from contamination associated with the field application of manure. As a result, Ecology’s proposed permit is inconsistent with the CAFO rules, fails to ensure compliance with groundwater water quality standards, fails to regulate the discharge of phosphorous, and fails to establish buffers necessary to protect nearby surface waters.

First, as discussed above, the federal CAFO Rule includes several provisions requiring NPDES permits to control land application rates for phosphorus and nitrogen. Manure, litter, or process wastewater must be applied in accordance with site-specific nutrient management practices that ensure appropriate agricultural utilization of the nutrients in the manure, litter, or process wastewater. 40 C.F.R. § 122.42(e)(1)(vi)–(ix). The NMP, concerning protocols for land application of manure, litter, or process wastewater required by 40 C.F.R. 122.42(e)(1)(viii) and, as applicable, 40 C.F.R. § 412.4(c), must include the fields available for land application; field-specific rates of application properly developed, as specified in paragraphs (e)(5)(i) through (ii), “to ensure appropriate agricultural utilization of the nutrients in the manure, litter, or process wastewater . . .” 40 C.F.R. § 122.42(e)(5); *see also* 40 C.F.R. § 412.4(c). Ecology’s NPDES Permit does not comply with these minimum requirements for establishing nitrogen and phosphorus land application rates under the federal CAFO Rule, nor does it comply with the requirements for Nutrient Management Plans.

With regard to the required, site-specific land application rate calculations based on one of the two detailed methods required by 40 C.F.R. § 122.42(e)(5), Ecology proposes to allow each facility to prepare, outside the permitting process, an annual Nutrient Budget that tallies the difference between nutrients inputs and outputs without expressly providing any objective standard that limits the application rates. Fact Sheet at 54-57. This different approach is not allowed under the federal CAFO Rule. The Fact Sheet refers to the “maximum amount of needed nutrients” derived from this Nutrient Budget as a “technology-based effluent limitation.” Fact Sheet at 19. As discussed above, effluent limitations are required to be reviewed by Ecology during the permit review process, evaluated during the public review process, and included in the final permit. *See Waterkeeper Alliance, Inc. v. EPA*, 399 F.3d 486 (2nd Cir. 2005). Additionally, the Nutrient Budget and the permit do not contain binding criteria that limit the land application of nitrogen to agronomic need or otherwise limit it in accordance with one of the two approaches permitted by the federal CAFO Rule. Instead, Ecology has adopted an adaptive management

approach, based on “action levels” that allow land application of nitrogen far in excess of crop need under an approach that is not consistent with the Linear or Narrative approaches permitted under the federal CAFO Rule. Moreover, these vague limits on land application in Permit Condition S4.J can also be waived by Ecology in an “emergency situation.” Permit, S4.K.5.

Not only is this scheme inconsistent with the controlling federal regulations, it fails to establish effluent limits that protect surface water and groundwater. Again, “[t]he Clean Water Act demands regulation in fact, not only in principle. Under the Act, permits authorizing the discharge of pollutants may issue only where such permits *ensure* that every discharge of pollutants will comply with all applicable effluent limitations and standards.” *Waterkeeper All., Inc. v. U.S. E.P.A.*, 399 F.3d 486, 498 (2d Cir. 2005) (emphasis in original). Ecology’s proposed adaptive management approach to field applications violates this fundamental principle. Indeed, the Court of Appeal has already held that this approach is unlawful. *Wash. State Dairy Fed’n*, 18 Wn. App. 2d at 298. There, the court specifically identified the “adaptive management” permitting scheme as unlawful, for failing to ensure compliance with water quality standards, because, as “Ecology admitted . . . a CAFO would not be in violation of its permit as long as the CAFO was taking the required actions under the permit, even if the field remained in the ‘high risk’ category.” *Id.* To be clear, it was not the length of time that the permittee would be allowed to violate the law by continuing to potentially cause or contribute to the violation of water quality standards that the court found problematic, as Ecology appears to suggest. Fact Sheet at 62 (“Ecology shortened the number of consecutive years that require additional action in response to *Wash. State Dairy Fed’n v. Dep’t of Ecology* (2021).”). Rather, it is the scheme itself and the fact that the permit “allow[s] for operation of production areas that pose a risk of” continuing to violate water quality standards unchecked. *Wash. State Dairy Fed’n*, 18 Wn. App. 2d at 298.<sup>22</sup> By failing to develop a permitting structure that sets specific, enforceable effluent limits that will ensure the application of manure, litter, or process wastewater will protect water quality, Ecology is violating the court’s order “remand[ing] the permits to Ecology for rewriting consistent with this opinion.” *Id.*, 18 Wn. App. 2d at 315.

One solution with regard to nitrogen would be for Ecology to return to its prior proposal to require permittees to manage land application fields such that end of season soil test results at the 3-foot depth do not exceed 15 ppm nitrate.<sup>23</sup> This scientifically-based standard provides the

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<sup>22</sup> *Accord Puget Soundkeeper Alliance, et al. v. Ecology*, PCHB Nos. 05-150, 05-151, 06-034 & 06-040 (consolidated) (Findings of Fact, Conclusions of Law and Order) (Jan. 26, 2007) at 3 (“We further find that the adaptive management approach is incomplete because it does not require implementation of triggered responses nor does it address what happens when permittees continue to exceed benchmark levels after completing all three response levels.”); *Cf. Puget Soundkeeper All. v. State, Pollution Control Hearings Bd.*, 189 Wn. App. 127, 146–47, 356 P.3d 753, 762 (2015) (“Issuing a permit that allows [the permittee] to fail a WET test without violating the permit would allow the introduction of toxic substances with the potential to cause acute toxicity in contradiction of this standard. WAC 173–201A–240.6 Thus, the challenged permit condition allows discharges prohibited by law.”).

<sup>23</sup> Sampling at the three-foot depth is necessary to determine whether nitrate is getting below the root zone and is no longer capable of being used by the crops. While Ecology does include



Permittee with clear guidance on what to look for when doing the soil testing. It also creates a standard that is enforceable by both the public and Ecology alike. According to Ecology:

Soil nitrate values are a proven tool to determine plant-available nitrogen present in the soils as well as providing the effectiveness of manure management.

Ecology, Manure Literature Review, at 96. Specifically, the soil nitrate threshold limits recommended in the literature . . . *for fall soil nitrate values range from 5 to 24 ppm depending on the site-specific conditions.*

*Id.* at 97 (emphasis added). Commenters urge Ecology to implement the recommendations of its own scientists and simply adopt the soil nitrate threshold limits contained in its Manure Literature Review. *Id.* at 41 (Table 7). Such a numeric limit for soil nitrate would make it possible to ascertain whether the Permittee is following the annual field nutrient budget and whether the Permittee is violating state water quality standards. Simply, if a Permittee exceeds these soil nitrate limits, then that should constitute a permit violation, not a never-ending path of adaptive management.

In addition, the permit violates the requirements of the federal CAFO Rule because it does not address phosphorus land application rates and limits land application based solely on nitrogen in disregard of clear evidence that excessive phosphorus application is causing pollution in state waterways. Ecology justifies this by stating in the Fact Sheet that nitrate is the “primary nutrient of concern” and “[i]t is highly likely that if Ecology were to require phosphorus-based nutrient budgets that many land application fields would no longer be available to use for manures due to the current phosphorus levels from many years of receiving manure.” Fact Sheet at 59. This is a shocking admission.<sup>24</sup> The fact that it is “highly likely” that many fields would be excluded by limiting phosphorus application rates as required by federal law only emphasizes the need to regulate phosphorus application rates, as it demonstrates the existence of application in excess of agronomic need and this causes water pollution discharges. Ecology’s permit must meet the minimum requirements of the federal CAFO Rule, and the rule mandates that the permit ensure appropriate agriculture utilization of both nitrogen and phosphorus through a detailed, site-specific Nutrient Management Plan that establishes application rates based on one of two approaches identified in the regulations and, for CAFOs subject to Part 412, additional requirements for field-specific assessments of nitrogen and phosphorus and detailed requirements for Nutrient Management Plans.

It is well established that phosphorus in dairy manure moves through runoff, infiltration and leaching from manure storage sites and soil erosion, that these losses increase substantially as phosphorus is applied in excess of the plant needs and that this phosphorus migrates to lakes,

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testing at the three-foot depth, it is only required after the soil tests show that nitrate has been overapplied to the field, at which point it is too late to prevent the discharge to waters of the state.

<sup>24</sup> Although it probably should not be, given this was repeated, verbatim from the Fact Sheet from the prior permit. 2016 Fact Sheet at 54.

rivers, estuaries, and coastal oceans causing excessive algal growth, dissolved oxygen shortages, fish toxicity, habitat loss, and decreased species diversity. *See* The Rationale for Recovery of Phosphorus and Nitrogen from Dairy Manure, Washington State University Extension Fact Sheet – FS136E (2014).<sup>25</sup> Washington state dairy CAFOs also commonly apply manure phosphorus in excess of agronomic requirements and are not ensuring appropriate agricultural utilization of the manure phosphorus. *Id.* (In 2000, only 1% of large dairies (those with more than 1000 animal units) were applying phosphorus at agronomic rates, while only 23% were applying nitrogen at agronomic rates (Ribaud et al. 2003). Data also indicate that larger operations apply manure to cropland at rates that are more than three times higher than smaller farms, suggesting that excess nutrient applications are still an issue, particularly for large operations (MacDonald and McBride 2009). This observation is also supported by a study of manure application to field corn (the receiving crop for more than half of all applied manure), which found that the vast majority of dairies applied manure to fewer acres than would be needed to meet best management practices for nutrient management (USDA ERS 2011)).

#### **D. The Proposed Permit’s Monitoring Requirements Are Inadequate**

According to Ecology “[m]onitoring is truly the cornerstone of the NPDES program.” Permit Writer’s Manual, at 386. As such, “[a]ll permits must require monitoring of effluent in order to determine if the facility is in compliance with the permit.” *Id.* at 389. “The main purpose of self monitoring requirements is to determine compliance with effluent limits and other permit conditions.” *Id.*

To these ends, NPDES permits must contain conditions requiring monitoring and reporting. 33 U.S.C. § 1342(a)(2); 40 C.F.R. § 122.44(i)(1) & (2). EPA’s regulations specify that permits shall include conditions requiring monitoring “[t]o assure compliance with permit limitations.” 40 C.F.R. § 122.44(i)(1). More specifically, a permit must include “requirements to monitor . . . each pollutant limited in the permit” to ascertain whether the pollutants in the discharge stay within the limitations the permit prescribes. *Id.* § 122.44(i)(1)(i). Ecology’s permitting regulations, in turn, require the imposition of reasonable monitoring requirements whenever a general permit authorizes the discharge of pollutants into waters of the state. WAC 173-226-090(1). In particular, Ecology’s regulations state that “[a]ny discharge authorized by a general permit may be subject to such monitoring requirements as may be reasonably required by the department, including the installation, use, and maintenance of monitoring equipment or methods[.]” WAC 173-226-090(1)(a).

As the Washington Court of Appeals succinctly explained when rejecting the previous iteration of the CAFO permit, “an NPDES permit is unlawful if a permittee is not required to effectively monitor its permit compliance.” *Wash. State Dairy Fed’n*, 18 Wn. App. 2d at 299 (quoting *Nat. Res. Def. Council v. County of Los Angeles* (NRDC), 725 F.3d 1194, 1207 (9th Cir. 2013)). Despite this, Ecology has failed to include the necessary and appropriate monitoring requirements to ensure the permittees will comply with the Permits’ effluent limits.

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<sup>25</sup> <https://pubs.extension.wsu.edu/the-rationale-for-recovery-of-phosphorus-and-nitrogen-from-dairy-manure-anaerobic-digestion-systems-series>.

## 1. Surface Water Monitoring

The proposed permits fail to include the monitoring requirements necessary to ensure compliance with the terms and conditions of the Permits with respect to discharges to surface water. As Ecology has previously recognized, “[w]ater quality monitoring is an essential part of a [best management practices] implementation program to reduce nonpoint source (NPS) pollution” and CAFOs because of similarities in the types of controls applied to the two sources and the needs filled by an appropriate monitoring scheme. Ecology, Preparing Elements of a Quality Assurance Monitoring Plan to Conduct Water Quality Monitoring Near Dairies and CAFOs, Publication No. 06-03-015, at 2-3 (Mar. 2006). Yet, “very few farm-specific water quality monitoring studies have been conducted that demonstrate the effectiveness of BMPs in the Pacific Northwest.” *Id.* at 3. Thus, “[c]learly, the state dairy nutrient management and CAFO program will benefit from effective monitoring and evaluation.” *Id.* According to Ecology,

Monitoring should consist of two components: BMP implementation monitoring (verify the BMPs are installed and working properly), and water quality monitoring (evaluation for changes in water quality following BMP placement). These two monitoring activities establish a relationship between BMP effectiveness and water quality changes.

*Id.* at 4. Ecology must require the monitoring regime it developed. RCW 90.64.180.

### a. There are No Monitoring Requirements that Will Reveal Unpermitted Discharges

Despite Ecology’s characterizations of the State Only Permit and Combined Permit as “no discharge” and essentially a no-discharge-to-surface-water permit, respectively, facilities operating under both Permits will discharge pollutants that will affect surface waters. Yet, Ecology fails to impose a monitoring regime that will detect such discharges. Instead, the proposed permits only require monitoring “[i]f any discharge of pollutants occurs to surface water from the production or land application areas.” State Permit, S5.E.1; Combined Permit, S5.E.1. That is, the Permits contain no monitoring requirements to identify if, and when, a facility is discharging at times other than when it is conditionally authorized to do so. This failure is particularly egregious given the myriad ways permitted facilities will likely discharge pollutants to nearby waterbodies, beyond what is allowed under the Permit. *See Wash. State Dairy Fed’n*, 18 Wn. App. 2d at 300. (“Although the permits largely prohibit such discharges as written, in practice, activities allowed under the permits may lead to unauthorized discharges if permit conditions are not observed. Surface water monitoring is, therefore, necessary to ensure that CAFOs engaged in these practices comply with the permits.”). Ecology is making the same mistake EPA did with its Idaho Permit, contrary to federal law: “Without a requirement to monitor runoff from irrigated CAFO fields, there is no way to ensure that a CAFO is complying with the Permit’s dry weather no-discharge requirement for land-application areas.” *Food & Water Watch*, 20 F.4th at 518.

The few inspection and monitoring requirements included in the permit are not sufficient. For example, there are no monitoring requirements in the permit to detect an unpermitted discharge from any of the production areas at the facility in a timely manner. Under the current

permit terms, a release could occur for days or weeks before a visual inspection is required. The permit must require additional inspections of the areas where discharges could originate and where they are likely to reach surface waters or the conduits to surface waters.

Similarly, the limited requirements to watch for discharges during various field applications are too limited in time and scope. Combined Permit, S4.K.2; S4.k.5.c. Rather, to ensure these requirements are protective, the permit must be revised to require the permitted to: 1) identify all existing tile drains and likely points of discharge, 2) monitor each of those points for the period during which a discharge may be likely to occur as a result of the activity (given that there may be a lag between the field application and a visible discharge), and 3) implement a protocol for monitoring all others areas where discharges may occur. But again, even these additional efforts may fall short.

A truly effective monitoring scheme for CAFOs must include instream monitoring. Moreover, by regularly monitoring instream water quality, the facility will be able to detect any unauthorized discharges by monitoring for changes in water quality near the facility. To isolate the origin of the discharge, such a system would require multiple sampling points. These are complex facilities, that, as the Court of Appeals noted, conduct “activities allowed under the permits may lead to unauthorized discharges if permit conditions are not observed.” These have the potential to cause significant environmental harm. A robust monitoring system, therefore, is required to detect any such discharges quickly and effectively.

**b. The Monitoring Requirements Do Not Ensure that the Permittees Comply with the Permit’s Water Quality Based Effluent Limits**

The surface water monitoring required by the proposed permits is insufficient to ensure compliance with the Permits’ requirements. In addition to detecting when discharges occur, the permit must require adequate monitoring to understand if the permittee is complying with the effluent limits to reduce or eliminate the discharge of pollutants and the requirements to not cause or contribute to a violation of water quality standards. To ensure this requirement is met, Ecology must make three changes to the permits’ monitoring requirements.

First, Ecology must ensure the sampling is truly representative of the discharge. To this end, Ecology states in the Fact Sheet that “[d]ischarges that are continuous for several days must be monitored until they stop. When a discharge occurs over multiple days, Ecology expects multiple samples to be collected when a discharge occurs over multiple days. At a minimum, there should be one sample per day.” Fact Sheet, at 75. These requirements are not in the permit. Ecology should go further, however, and require sampling at least every 4 hours during discharge. This will provide the information necessary to assess the impact of the discharge on the environment.

Second, Ecology must require the permittee to sample for total nitrogen, ammonia nitrogen, phosphorus, 5-day biochemical oxygen demand (BOD5), total suspended solids, pH, temperature, pathogens (including fecal coliform), and any pesticides or antibiotics that may be in the discharge.

Moreover, Ecology must require the permittees to conduct a WET test on its discharges. As Ecology notes in the Fact Sheet, CAFOs have the potential to discharge a host of toxic and potentially toxic pollutants, including but not limited to pathogens, metals (e.g., zinc, copper), salts (e.g., sodium, chlorides, potassium), organic chemicals, cleaning agents, vaccines, anti-microbials, growth hormones, pesticides, petroleum products, disinfection by-products, and microplastics. Fact Sheet at 8. As a result, a WET test of the discharge is required. Washington law is clear that Ecology may not issue a permit that allows toxic discharges in violation of the state’s water quality standards. RCW 90.48.520. To this end, “[t]he compliance test for acute toxicity shall be considered to be a maximum daily discharge permit limitation.” WAC 173–205–070(1)(d). The state’s narrative toxic water quality standard states:

Toxic substances shall not be introduced above natural background levels in waters of the state which have the potential either singularly or cumulatively to adversely affect characteristic water uses, cause acute or chronic toxicity to the most sensitive biota dependent upon those waters, or adversely affect public health, as determined by the department.

WAC 173–201A–240(1). To ensure compliance with this standard, Ecology “shall employ or require chemical testing, acute and chronic toxicity testing, and biological assessments, as appropriate, to evaluate compliance with” the standard. WAC 173–201A–240(2). Specifically, “[a] discharge is in compliance with the narrative water quality standard for acute toxicity when the most recent acute toxicity test has shown no statistically significant difference in response between the acute critical effluent concentration and a control.” WAC 173–205–070(1). Thus, a WET test. Here, Ecology has failed to impose this mandatory monitoring requirement.

“An NPDES permit is unlawful if a permittee is not required to effectively monitor its permit compliance.” *NRDC*, 725 F.3d at 1207. The Combined Permit falls short of providing the information necessary for Ecology, the permittees, or the public to know whether the discharges from the permitted facilities comply with the established effluent limits. In this way, the proposed Permit replicates the fatal flaw found in *Waterkeeper Alliance*, where the failure of the permit to include any mechanism for evaluating compliance with BMPs, there was no way for the agency to ensure compliance with water quality standards. 399 F.3d at 499. Ecology’s inclusion of an unenforceable limit with no mechanism to review its implementation fails to ensure that discharges under the Permit do not violate water quality standards. *See* 33 U.S.C. §§ 1311(b)(1)(C), 1342(a)(2); 40 C.F.R. §§ 122.4(d), 122.44(d)(1).

**c. There are No Monitoring Requirements to Ensure Discharges to Groundwater are Not Causing or Contributing to a Violation of Surface Water Quality Standards**

Finally, Ecology must include monitoring requirements to ensure that the authorized discharges to groundwater do not cause or contribute to the violations of water quality standards of nearby surface waters. WAC 173-226-090(1). There can be no question of the connection between groundwater and surface water. Indeed, Ecology has acknowledged “the documented

continuity between surficial groundwater and surface water in Washington State . . .” Ecology, Manure Literature Review at 29. In addition, state and federal courts have repeatedly noted the connection between surface and groundwater. *See generally Postema v. Pollution Control Hearings Bd.*, 142 Wn.2d 68, 80 (2000) (stating that “[t]he groundwater code recognizes that surface waters and groundwater may be in hydraulic continuity” and “[h]ydraulic continuity between ground and surface waters is also recognized in the Water Resources Act of 1971 . . .”).<sup>26</sup> Thus, Ecology has a legal responsibility to “consider the interrelationship of the groundwater with the surface waters . . .” *Id.* Here, this responsibility, which Ecology seems to acknowledge by including the narrative WQBEL prohibiting a violation of water quality standards, requires Ecology to take the next, necessary step of establishing monitoring requirements to ensure the Permit’s restrictions are followed and enforced.

## 2. Groundwater Monitoring

Ecology’s proposed groundwater monitoring requirements are patently inadequate. As discussed above, CAFOs can discharge significant amounts of pollutants to groundwater. Further, the Ninth Circuit recently stated unequivocally: “Without a requirement that CAFOs monitor waste containment structures for underground discharges, there is no way to ensure that production areas comply with the Permit’s zero-discharge requirement.” *Food & Water Watch*, 20 F.4th at 517. The permits, as written, allow this discharge to continue. Ecology must require the facilities to monitor these discharges. Yet, Ecology fails to do so. Instead, Ecology has proposed a scheme whereby it *may* require monitoring *if* a permittee crosses some undefined threshold of potential impacts to groundwater. This scheme is contrary to law.

As discussed above, Washington’s “anti-degradation” policy for the State’s groundwater states that “[e]xisting and future beneficial uses shall be maintained and protected and degradation of groundwater quality that would interfere with or become injurious to beneficial uses shall not be allowed.” WAC 173-200-030(2)(a). In 2016, Ecology concluded “[t]here are documented impacts to groundwater quality in Washington State from CAFO manure management practices” and “[g]roundwater monitoring is identified *as the only way to measure impacts to groundwater quality.*” Manure Literature Review, at 12 (emphasis added). Similarly, during the hearing on the previous iteration of the permit, Ecology made clear that without groundwater monitoring it will not know whether a discharge from any part of a permittee’s facility will be, or will not be, in compliance with the groundwater quality standards. Hearing Tr. 169:15-170:22 (Jennings testifies that there could be “a couple of instances” where a lagoon was not discharging pollution to groundwater, but that Ecology would never know for certain absent groundwater monitoring – “To actually know what’s in the groundwater, yes, you would need groundwater monitoring.”); Hearing Tr. 457:11-14 (Redding admits that the only way to know whether lagoons are impacting groundwater is to do groundwater monitoring); *id.* at 457:15-21 (only way to know “for sure” whether field applications are impacting groundwater quality is through groundwater monitoring); *id.* at 462:7-15 (lagoons that do not have double geomembrane liners with leak detection systems discharge to groundwater, and without

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<sup>26</sup> The concept of hydrologic connectivity is also recognized in the Water Resources Act of 1971: “Full recognition shall be given in the administration of water allocation and use programs to the natural interrelationships of surface and groundwaters.” RCW 90.54.020(9).

monitoring Ecology will not be able to ascertain what impacts are occurring to groundwater from that discharge). Furthermore, the testimony was uncontested that the only way to determine whether an exceedance of the groundwater quality standards has occurred at a specific facility requires groundwater monitoring. Hearing Tr. 169:15-170:22; 457:11-14; 457:15-2; 462:7-15.

Nevertheless, Ecology's proposed permits authorize the unmonitored discharges of unknown quantities of manure pollution to groundwater of unknown quality. Rather than establishing protective monitoring program, Ecology states:

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, the permittee must evaluate the impacts of its activities on groundwater quality by [developing and implementing a monitoring plan].

Combined Permit, S5.D; State Only Permit, S5.D. In the Fact Sheet, Ecology explains that:

Ecology's permitting approach in this permit cycle is to establish assessments of CAFO activities and use those to determine if there is a reasonable potential to impact ground water quality. Where there is early indication of a potential to cause or contribute to a violation of water quality standards, we require Permittees to follow the procedures in special condition S5.D.

Fact Sheet at 73. This approach is patently unlawful. Indeed, the Court of Appeals could not have been more clear on this point. After noting that both Ecology and the dairy industry experts agreed that "that groundwater monitoring is the only reliable method for assessing nitrate impacts on groundwater," the court concluded,

As stated above, monitoring requirements in permits exist to ensure that a permittee can effectively monitor its permit compliance. *NRDC*, 725 F.3d at 1207. Given that CAFOs are forbidden from engaging in any activity that would "cause or contribute to a violation of water quality standards," AR at 6922, soil monitoring on its own is inadequate to ensure compliance with this condition. Although groundwater monitoring wells are required under limited circumstances, for example, when existing lagoons are less than two feet above groundwater or when nitrate rates in land application fields are high risk for three consecutive years, under these permits, CAFOs may still unknowingly violate groundwater standards. Composting is an example of one practice that might contribute to groundwater contamination. Consequently, the PCHB's order concluding that soil monitoring is sufficient for groundwater is not supported by substantial evidence.

*Wash. State Dairy Fed'n*, 18 Wn. App. 2d at 302. Thus, it is inexplicable that Ecology would again fail to require effective groundwater monitoring. Because Ecology knows of and is authorizing the discharge of pollution to groundwater, it must specify the "[r]equired monitoring including type, intervals, and frequency sufficient to yield data which are representative of the monitored activity." 40 C.F.R. § 122.48(b); WAC 172-226-090(b) ("Each effluent flow or pollutant required to be monitored pursuant to (a) of this subsection shall be monitored at intervals sufficiently frequent to yield data that reasonably characterizes the nature of the

discharge of the monitored effluent flow or pollutant”). Thus, Ecology must impose a monitoring scheme that will account for the discharges from all areas of the CAFO, including storage lagoons and field applications sites, composting areas, animal pens, and other production areas. And this monitoring must begin as soon as those discharges are permitted—namely at the onset of permit coverage. Absent this, Ecology’s permits will remain in violation of the law and direct contravention of a clear court order.

Moreover, Ecology’s suggestion that it intends to use the permit to “establish assessments of CAFO activities and use those to determine if there is a reasonable potential to impact ground water quality” is not a justification for delaying the required monitoring. Indeed, the Court of Appeals rejected this “permit first, ask questions later” approach in the last permit cycle. There, Ecology failed to establish technology based effluent limits for existing lagoons in compliance with AKART. Instead, “[t]he PCHB found that the permits did not contain a specific AKART requirement for existing manure storage lagoons because Ecology did not have sufficient information regarding their current state.” *Wash. State Dairy Fed’n*, 18 Wn. App. 2d at 276. Instead, according to Ecology, “the lagoon assessment required by Condition S7.B will provide information on the range of impacts from existing lagoons and assist Ecology in future permit development.” *Id.* The court rejected this “information gathering” approach as inconsistent with the requirement that Ecology “shall apply and insure compliance with” AKART. Ecology repeats the same fundamental mistake here. Ecology’s permit unquestionably allows for the discharges of pollutants to groundwater from various sources. To delay the requirement to monitoring those discharges to some point in the future, if ever, violates the explicit requirement that “[a]ll permits shall specify [the r]equirements concerning the proper use, maintenance, and installation, when appropriate, of monitoring equipment or methods [and the r]equired monitoring including type, intervals, and frequency sufficient to yield data which are representative of the monitored activity including.” 40 C.F.R. § 122.48(a)-(b).

Finally, the suggestion that Ecology will only require groundwater monitoring “if there is a reasonable potential to impact ground water quality” is clear evidence that the permits violate the law. Again, “[n]o permit may be 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); WAC 172-226-070(b)(2) (“Water quality-based effluent limitations must control all pollutants or pollutant parameters which the department determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion of state ground or surface water quality standards.”). Ecology effectively admits that it will not undertake the required reasonable potential analysis necessary to ensure it can develop WQBELs sufficient to comply with these mandates until years after permit coverage has been issued. This is inconsistent with state and federal law.

#### **E. Permit Administration**

All CAFOs seeking coverage under this permit, even those covered under the previous iteration of the CAFO general permit, must be required to apply, Section S2.A.1, must be updated to ensure that all CAFOs go through the critical steps of submitting an NOI requesting coverage, and providing the site-specific information in the required NMP that is then released for public review.



Given the importance of this permit and the need for meaningful public input on the site-specific measures each facility must implement to protect human health and the environment, Ecology should update Section S2.A.3. to identify the steps it will take to inform the public of every new application for coverage under the Permits. These steps should include, but are not limited to, maintaining a list of interested parties, posting the application material on Ecology's public notice websites, and actively soliciting comments from the community directly impacted by a potential permittee, such as close neighbors, those with drinking water supplies located near the facility, and those who live near surface waters downstream of the facility.

Ecology must revise section S2.A.4. to track the specific steps Ecology must take before issuing permit coverage. First, each permit application must include a proposed NMP that Ecology must release for public review and comment. As a result, there is no situation where permit coverage could begin automatically after the receipt of an application. Therefore, Ecology should delete S2.B.1. Second, Ecology must make an affirmative determination, after considering and responding to all public comments, that the Nutrient Management Plan is sufficient to ensure compliance with the terms of the permit. As a result, Ecology must delete S2.B.2. Finally, to obtain permit coverage, each CAFO must submit an NOI and a complete NMP, which must go through Ecology review, public notice and comment, and any necessary revisions before permit coverage attaches. Thus, Ecology must delete S2.B.3.

Instead, to ensure Ecology complies with the controlling regulations, and the order in *Washington Dairy Federation*, Ecology must make clear that it will take the following steps when reviewing applications for permit coverage. First, Ecology must review NOI and NMP for completeness. Ecology must allow sufficient time to request additional information from the CAFO owner or operator if additional information is necessary to complete the NOI and NMP or clarify, modify, or supplement previously submitted material. Second, once Ecology determines the NOI is complete, the NOI, NMP, and draft terms of the NMP to be incorporated into the permit must be made available for a thirty days public review and comment period. Ecology must establish the specific process for submitting comments. Ecology must then review and respond to comments received, and, if necessary, require the CAFO owner or operator to revise the NMP before obtaining permit coverage. Finally, once the NMP meets the permit's requirements and ensures compliance with the terms of the permit and the law, Ecology will notify the CAFO and the public in writing of its decision to grant permit coverage.

Ecology must revise Section S2.D.3 to ensure the provision is consistent with the requirements and process of 40 C.F.R. § 122.64 and that a permit may only be terminated at the behest of the permittee, if:

- a) Ecology determines in writing that the facility has ceased all operations, that all wastewater or manure storage structures have been closed correctly following Natural Resource Conservation Service (NRCS) Conservation Practice Standard No. 360, Closure of Waste Impoundments, and that all other remaining stockpiles of manure, litter, or process wastewater not contained in a wastewater or manure storage structure are disposed of properly;

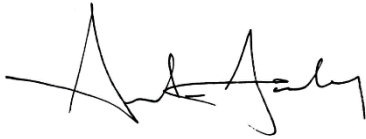
- b) The facility is no longer a CAFO that discharges manure, litter, or process wastewater to waters of the United States; or
- c) The entire discharge is permanently terminated by elimination of the flow or by connection to a publicly owned treatment works (POTW).

### **Conclusion**

After decades of opportunities to properly protect public health and the environment, and despite the insurmountable evidence that medium and large CAFOs are causing serious contamination of the state's ground and surface water resources, Ecology has drafted a permit that does not address the problem. The draft permit not only fails to meet minimum legal standards under state and federal law, but it fails to address the most basic underlying practices that have been proven to cause the contamination, and fails to remedy issues as mandated by the Court of Appeals. But there is still time to correct these shortcomings, chart a new course, and develop permits based on science and all applicable legal requirements that protect the communities who have been put directly in harm's way by ongoing under-regulated pollution from these facilities. We look forward to working with you in that process.

Should you have any questions or concerns for Commenters, please contact Andrew Hawley at 206-487-7250, or [hawley@westernlaw.org](mailto:hawley@westernlaw.org).

Sincerely,



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