



August 17, 2022

Via Electronic Form Submission only

Chelsea Morris, Permit Writer
Washington State Department of Ecology
PO Box 47696
Olympia, WA 98504-7696

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.¹ 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.² 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.

¹ 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).

² 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 (CO₂), but they are much more potent: methane has a Global Warming Potential (GWP) 84-87 times that of CO₂ over 20 years, and nitrous oxide has a GWP of 264-268 times that of CO₂ for the same period.³ 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 2008.⁴

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

³ 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/>.

⁴ 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.⁵

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-

⁵ 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.

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”)⁶ (“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.

⁶ 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. 4-16.⁷

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)

⁷ 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.”).⁸² In order to implement AKART, Ecology must

⁸² 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

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).⁹ 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

⁹ 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.*¹⁰ As the court in *American Paper* found,

¹⁰ 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”).¹¹ 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

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).

¹¹ Available at 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.

* * *

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.*¹² 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

¹² 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 Poulsom, 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.¹³ 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

¹³ 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 90.48.120.¹⁴ 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,¹⁵ 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

¹⁴ 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.”)

¹⁵ 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 NH₄ 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 NH₄, 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 . . .”).¹⁶

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.

¹⁶ 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.”¹⁷ 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

¹⁷ “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.¹⁸

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.

¹⁸ 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,¹⁹ 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,²⁰ 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

¹⁹ 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).

²⁰ “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.2.²¹ 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

²¹ 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 298.²² 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.²³ This scientifically-based standard provides the

²² *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.”).

²³ 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.²⁴ 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,

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.

²⁴ 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).²⁵ 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 (Ribaudo 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.

²⁵ <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 . . .”).²⁶ 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

²⁶ 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;

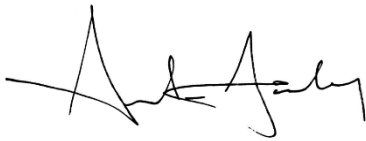
- b) The facility is no longer a CAFO that discharges manure, litter, or process wastewater to waters of the United States; or
- c) The entire discharge is permanently terminated by elimination of the flow or by connection to a publicly owned treatment works (POTW).

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.

Sincerely,



Andrew Hawley
Staff Attorney
Western Environmental Law Center
1402 3rd Avenue, Suite 1022
Seattle, WA 98101
(206) 487-7250
hawley@westernlaw.org

Jean Mendoza
Executive Director
Friends of Toppenish Creek

Margie Van Cleve
Conservation Chair
Washington State Sierra Club

Amy van Saun
Senior Attorney
Center for Food Safety

Alyssa Barton
Clean Water Program Director
Puget Soundkeeper Alliance

Kelly Hunter Foster
Senior Attorney
Waterkeeper Alliance

**HEADQUARTERS**

120 Shelton McMurphey Blvd.
Suite 340
Eugene, OR 97401
(541) 485-2471
info@westernlaw.org

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WESTERN ENVIRONMENTAL LAW CENTER

August 17, 2022

Via Electronic Submission

Chelsea Morris
Permit Writer
Washington State Department of Ecology
PO Box 47696
Olympia, WA 98504-7696

Re: Follow-up Comment Regarding Environmental Justice and Washington Concentrated Animal Feeding Operations Permitting

Friends of Toppenish Creek, Center for Food Safety, and Western Environmental Law Center, and their tens of thousands of members, supporters, and volunteers throughout the State of Washington, submit this letter during the Department of Ecology's (Ecology) comment period on the draft Concentrated Animal Feeding Operations (CAFO) General Permit (General Permit) and its related SEPA Determination of Nonsignificance (DNS). This comment is a follow up to our earlier comment regarding environmental justice and community engagement, submitted May 6, 2022.¹

In this comment, we discuss actions implemented by Ecology in support of the draft General Permit, and urge Ecology to do more. We also express concerns about the failure of the agency to publicize the SEPA process and the public's opportunity to comment on the SEPA DNS.

As we made clear in our initial letter, the agency is not operating in a vacuum. There are extensive resources available to support development of a coherent and effective plan for engagement rather than what still appears to be piecemeal actions, including the Washington State Environmental Justice Task Force Report and the state's Health Disparities Mapping Tool.² Indeed, as of July 1, 2022, Ecology has had a draft provisional community engagement plan as mandated by the Healthy Environment for All Act (HEAL Act) in place.³ Given these resources,

¹ We use the terms "impacted" and "affected" to refer to regions and people subject to harms from CAFO discharges ranging from lack of access to healthy drinking water to impacts on fish that are an important source of food. Because there is the tendency for CAFOs to be located in regions where people experience cumulative environmental burdens, these terms overlap with the "vulnerable populations" and "overburdened communities" identified in the HEAL Act. See RCW 70A.02.010.

² EJTF Report; Map. We referred to both of these in our initial letter.

³ Ecology, Draft Provisional Community Engagement Process Guide (July 1, 2022) (Community Engagement Guide).

we are baffled by Ecology’s failure to conduct outreach on the SEPA DNS. We are also disappointed that the agency did not take more steps toward ensuring meaningful engagement by affected community members on this draft permit. We suspect part of the problem is the failure to adequately staff the CAFO program in order to develop the outreach plan for the communities impacted by CAFOs.

We conclude expressing our concern that efforts to meaningfully engage members of impacted communities and the public on the draft permit and the DNS, seems overshadowed by Ecology’s efforts to work with the dairy industry. Ecology’s mandate is to protect the air and waters for current and future generations of all Washingtonians. To realize this mandate, Ecology must act on behalf of the people of the state, not the entities it is tasked with regulating.

In our initial letter, we identified Ecology’s moral and legal mandate to do better in its work with communities impacted by CAFOs. Ecology has acknowledged this moral and legal requirement.⁴ The agency’s outreach with respect to the draft General Permit is a start, but is still inadequate. Its near complete failure to provide outreach regarding the SEPA DNS is a grave disappointment.

We know the agency wants to do better. We are happy to support Ecology in these efforts. You may reach out to Jennifer Calkins at calkins@westernlaw.org or 206-607-9867 to talk further with us about these concerns.

I. Introduction

In our initial letter, we described the profoundly negative impacts of CAFOs on the health of workers and the people who live in surrounding communities, including through pollutant discharge into water.⁵ We also made clear that when Ecology permits these operations it must actively engage members of communities affected by CAFO discharge in a dialogue regarding (1) the impact of industrial dairy farms on their water, (2) the manner in which the agency implements the Clean Water Act (CWA) National Pollutant Discharge Elimination System (NPDES) and the state-specific requirements under the State Water Pollution Control Act (WPCA), (3) the scope of the general permit, and (4) the needs and wishes of the members of the local community regarding the regulation of these entities under federal and state clean water law. To do less is unacceptable in any case, but it is particularly disappointing here because the agency asserts its commitment to environmental justice.⁶

⁴ Most recently in its Community Engagement Guide at 2 (stating “We recognize the critical value of repairing relationships and building trust with these communities.”)

⁵ See, e.g., Grout et al., A Review of Potential Public Health Impacts Associated With the Global Dairy Sector, 4 GeoHealth 1 (January 30, 2020); Carrie Hribar, Understanding concentrated animal feeding operations and their impact on communities, National Association of Local Boards of Health at 7, 9 (2020) available at https://www.cdc.gov/nceh/ehs/docs/understanding_cafos_nalboh.pdf.

⁶ See e.g. Ecology, Environmental Justice <https://ecology.wa.gov/About-us/Who-we-are/Environmental-Justice> (last visited August 6, 2022).

II. Background

In January 2021, Ecology began the process of developing a new general permit to implement when the existing permit expired, on March 2, 2022.⁷ Ecology held two “listening sessions” early on to gather input from the public.⁸ On June 29, 2021, the Washington State Court of Appeals declared the existing permit unlawful.⁹ In response to this decision, Ecology held an additional two listening sessions, with Spanish translation, in the fall of 2021.¹⁰

In May 2022, we submitted a comment letter to Director Watson describing Ecology’s failure to engage members of impacted communities in the process of drafting the permit.¹¹ We incorporate the contents of that letter by reference. We received a response to our letter from Ecology on May 27, 2022.¹²

Ecology released the draft permit, Fact Sheet, DNS and SEPA checklist on June 22, 2022.¹³ Initially, Ecology requested comments from June 22 through August 4, 2022. Upon request, Ecology extended the comment period through August 17, 2022 for both the draft permit and DNS.¹⁴ **We submit this comment in response to the comment period for each of these actions, the draft CAFO permit and the DNS.**

III. Ecology’s Outreach

A. Outreach on the Draft General Permit

Ecology’s outreach on the Draft General Permit emerged in roughly three separate phases. These include initial outreach, outreach immediately following the Court of Appeals’ decision concluding the previous General Permit was unlawful, and outreach conducted in association with the release of the draft General Permit and the comment period. The Coalition Letter addressed our concerns arising from the initial outreach and the actions taken immediately following the court’s decision. Ecology has demonstrated some increased attention to outreach aimed at supporting engagement by those most impacted by the General Permit. However, Ecology has not provided adequate information about CAFOs or the General Permit, or sufficient opportunities for

⁷ Ecology, Concentrated Animal Feeding Operation <https://ecology.wa.gov/Regulations-Permits/Permits-certifications/Concentrated-animal-feeding-operation> (last visited August 9, 2022) (Ecology CAFO Website).

⁸ Ecology CAFO Website.

⁹ *Washington State Dairy Fed'n v. State*, 18 Wash. App. 2d 259, 304, 490 P.3d 290 (2021).

¹⁰ Ecology CAFO Website.

¹¹ Letter to Director Laura Watson re: Environmental Justice and Washington Concentrated Animal Feeding Operations Permitting (May 6, 2022) (Coalition Letter; see attached).

¹² Letter from Ecology in Response to Coalition Letter (May 27, 2022) (Response Letter).

¹³ See e.g. Ecology, DNS on Concentrated Animal Feeding Operation (CAFO) General Permits, (June 22, 2022) <https://apps.ecology.wa.gov/separ/Main/SEPA/Record.aspx?SEPANumber=202203141>.

¹⁴ Chelsea Morris, Email to Coalition Announcing Extension of Commenting Period (July 7, 2022); Chelsea Morris, Email Reply to Jennifer Calkins (July 7, 2022).

engagement, to satisfy its duty as the agency responsible for managing the state’s waters and implementing aspects of the Healthy Environment for All (HEAL) Act.¹⁵

1. Ecology’s Response Letter

Ecology’s Response Letter did not directly recognize or address our concerns. Instead it provided a list of what it planned to do to “ensure people are aware of the permits and how to comment.”¹⁶ Many of these actions are the things we recommended in our letter, including better outreach to channels in regions impacted by CAFOs and providing better information on the website. However, as we stated in our letter, our suggestions were “first steps.” We are concerned that Ecology’s failure to provide a response to the substance of our letter, and its implementation of a subset of the steps we recommended as “first steps” indicates that the agency does not recognize its fundamental duty to work directly with impacted communities.

Ecology recognizes that “systems cannot change without the direct involvement of the communities who have borne the weight of systemic disparities, and that such involvement has been rarely supported by Washington State’s government.”¹⁷ This is Ecology’s opportunity to move beyond words, repair past injuries, and work in collaboration with the people most impacted by its actions.

a. Ecology Provided a Goal that Falls Short of Meaningful Engagement and Environmental Justice

We agree that Ecology’s articulated goal is important. However, this goal is insufficient. Making people “aware” of the agency action and how to comment is the bare minimum of an agency’s duty towards the public it serves. It does not come close to realizing the sort of meaningful engagement that is required of the agency centrally responsible for planning and coordinating the management of Washington’s natural resources to ensure our waters and lands are protected and conserved and enhanced for current and future generations.¹⁸ Meaningful involvement in agency management of environmental resources means that members of an

¹⁵ We discuss these responsibilities more extensively in our Coalition Letter.

¹⁶ Response Letter.

¹⁷ Guidance Document at 2.

¹⁸ . See Guidance Document at 2 (stating A focus on trust-building in this context places skills like cultural humility and emotionally intelligent communication in the forefront, and we see more ties to community organizing and cultivating ongoing relationships than to conventional communications-oriented information sharing.) RCW 43.21A.010. Ecology, About Us <https://ecology.wa.gov/About-us> (last visited August 6, 2022).

impacted community have access to the agency, foundational information about the proposed action, and can trust that their input will be heard and respectfully considered by the agency.¹⁹

b. Ecology Failed to Engage our Concerns in its Letter

In its Response Letter to the Coalition Letter, Ecology summarized its outreach prior to release of the draft General Permit but failed to engage our concerns about this outreach. We discuss the improvements Ecology has made in actions subsequent to the Response Letter below. But, because Ecology continues to fall short of providing for meaningful engagement, we highlight the Response Letter's absence of substantive response to the issues we raised here.

First, the Response Letter did not directly respond to the relationship between CAFOs and environmental injustice nor did it provide any recognition of the concept of meaningful engagement. We believe that the continued failure to provide for meaningful engagement stems from the CAFO group's failure to directly recognize the need for environmental justice in the implementation of the CWA and WPCA when it regulates the state's CAFOs. This failure might be more adequately addressed if the agency staffed the CAFO program, including the outreach components, more fully. Regardless, until the CAFO program recognizes that engaging impacted communities requires a more comprehensive effort than simply providing notice of an action and how to comment, the agency will continue to fail in its duties.

Second, our concern centered on Ecology's efforts related to the General Permit process. Ecology, in response, assured us that their public engagement is not limited to the general permit because people can review and comment on a facility's site-specific actions if they apply for new or modified coverage.²⁰ Certainly, it is essential that the public have access to this information for new and/or modified CAFO permit coverage. Indeed, we call the agency to do more than just provide access to this information but to **meaningfully engage** the communities directly impacted by a particular facility's new or modified operations. However, this is a separate process **and does not substitute for meaningful engagement on the General Permit**. The General Permit **sets the conditions both for existing and for future permits. Therefore, providing site-specific comment periods after the general permit is issued is irrelevant to the issue of whether the agency sufficiently empowered the people most impacted by the currently-covered CAFO facilities.**

¹⁹ See, e.g. Draft Provisional Community Engagement Process Guide; Washington State Environmental Justice Task Force Final Report (Fall 2020).

²⁰ Response Letter.

2. Implemented Outreach

In the Response Letter, Ecology stated that it planned to use the following methods to make sure people received information about the permit and how to comment: issuing a press release, drafting a general information focus sheet, providing website information in English and Spanish and announcing the draft permit, webinars and opportunity to comment on Spanish-language radio, in newspapers and in Facebook advertisements.²¹ Ecology did follow through on these plans, taking basic steps in terms of notice and comment. However, as we noted in our letter, these are “first steps,” and serve to provide broader access to notice. But notice is not enough for meaningful engagement.

Ecology added some pertinent information in Spanish on the website and issued a focus sheet translated into Spanish.²² People seeking information in other languages still need to request translation from the agency.²³ Ecology did not provide public access to a translation of the permit or Fact Sheet.

Ecology also issued a press release upon release of the draft permit, with notification regarding the draft permit, information about the opportunity to comment on the draft, and dates and times of the two hearings.²⁴ Ecology notified people who signed up for updates on their website of the draft permit, the public hearing dates and the timelines. Ecology used the following additional channels to alert people of the public hearing dates for the draft permit: “email notices of the hearing via our water quality distribution lists and news media to about 2,000 people” and Facebook advertisements in Spanish with dates and times of the hearings and the links to the webinars posted from July 11 to July 28.²⁵ Ecology also published advertisements with the hearing dates, the permit website, and the comment period deadline in Spanish and English in the Lynden Tribune, The Ferndale Record, Country Life, El Periodico, Yakima Herald, and El Sol de Yakima.²⁶ Finally, they published the ad in the Lynden Tribune website.²⁷

We are pleased that Ecology made an effort to provide access to information and notice across a variety of channels, in both English and Spanish. We hope the agency continues to do so. To move towards meaningful involvement, however, the agency must make all the relevant information it provides more accessible to Spanish-speaking residents. Furthermore, the

²¹ Response Letter.

²² Ecology, Hoja de Enfoque: Permiso de Operación de Alimentación de Animales Confinadosm Publicación 17-10-002 (Abril 2022) available at <https://apps.ecology.wa.gov/publications/parts/1710002part1.pdf>.

²³ Ecology CAFO Website.

²⁴ Ecology CAFO Website. We discuss the hearings below.

²⁵ Email Chelsea Morris to Jennifer Calkins

²⁶ Email Chelsea Morris to Jennifer Calkins

²⁷ Email Chelsea Morris to Jennifer Calkins

information it provides must not be solely targeting the CAFO owner, which the focus sheet seems to do. In particular, we suggest providing Spanish language translations of the permit and the Fact Sheet (as well as the DNS and SEPA Checklist, see below). At a minimum, we recommend the agency develop more in-depth materials for the public, not just for CAFO owner/operators. More broadly, however, Ecology must do more to engage the public than provide notice of the comment period and draft General Permit release along with a document briefly describing the CAFO permit in Spanish, without more substantive information.

C. Lack of Outreach on the SEPA DNS

While Ecology made some effort towards providing notice of the draft General Permit to those impacted by CAFOs, the agency appears to have broadly failed to provide notice of the DNS and the comment period. Further, the agency failed to provide any information about these SEPA documents or the process in Spanish or any other language, and did not advertise that oral testimony on the DNS was to be collected at the two hearings.

The legislature enacted SEPA with the recognition that “each person has a fundamental and inalienable right to a healthful environment.”²⁸ Accordingly, under SEPA, Ecology must consider SEPA across its actions and work towards fulfilling “the responsibilities of each generation as trustee of the environment for succeeding generations”, assuring “for all people of Washington safe, healthful, productive, and aesthetically and culturally pleasing surroundings”, maintaining “wherever possible, an environment which supports diversity and variety of individual choice”, and achieving “a balance between population and resource use which will permit high standards of living and a wide sharing of life's amenities.”²⁹ Ecology’s failure to complete its basic duty to provide sufficient notice of the DNS and the opportunity for comment makes a mockery of its mandate under SEPA. It ensures that the agency will likely not have a full sense of the potential for environmental impacts it missed in its DNS. As a result, the agency does not have this information to reconsider its DNS, consider the relevant information, and withdraw the DNS and remedy the violation.

It also risks impeding the ability of the people to ensure SEPA violations are addressed judicially. Appeals to the Pollution Control Hearings Board include a discovery process, and SEPA appeals hearings are generally open record. However, failure to comment on a threshold determination when the opportunity is provided has been used to impede access to justice in SEPA appeals. Failure therefore on Ecology’s part to ensure that the public has full notification of the opportunity to comment on the SEPA DNS may hamper the peoples’ access to justice, particularly if the agency then uses the failure to comment as a basis for a motion to dismiss on threshold issues on appeal.

²⁸ RCW 43.21C.020(3).

²⁹ RCW 43.21C.020(2)a,b,e,f.

D. Ecology's Outreach via Workshops and Hearings

Ecology provided two workshops focused on the draft General Permit and two opportunities to provide oral testimony on both the permit and the DNS. We appreciate the agency's use of Zoom, a more accessible platform for attendees, as well as the simultaneous Spanish interpretation. These workshops are the minimum of what is expected of an agency satisfying the most basic notice and comment requirements of the draft permit. However, the agency gave no information regarding the DNS, so these events did not provide the most basic notice or support for commenting on the SEPA process.

Ecology scheduled two workshops/hearings for July 26 and 28, 2022.³⁰ Initially, these dates fell a week or less before the comment due date on August 3, 2022, which would have given commenters an unreasonably short period of time after the session to submit their comments. Subsequently, Ecology granted a request for an extension of the comment period.³¹ At these events, Ecology provided Spanish language interpretation services, and paused the July 26, 2022 hearing to fix technical issues and ensure that the interpreter could be heard. These hearings were on Zoom, which allowed people to see one another and provided more of a sense of it being a public forum than those held immediately after the court opinion was released.³² Ecology also attempted to at least engage all the questions that were raised.

During the initial hearing, Ecology only allowed three minutes per issue (draft permit and DNS) for testimony.³³ Despite the fact that we raised concerns about the failure to provide adequate time, particularly in light of the few comments (testimony was completed within 25 minutes), Ecology refused to extend the time for commenting. Upon reviewing their internal policies, however, Ecology recognized that it had arbitrarily prohibited people from providing additional testimony and allowed people to provide additional three minute testimony on July 28, 2022, once all individuals wishing to provide testimony had done so.³⁴ At the July 28, 2022 hearing, however, Ecology did not make clear that the SEPA DNS was a separate action from the draft General Permit, and that each commenter could take three minutes at a time per action.

During each one hour workshop, Ecology presented a very general overview of CAFO discharges and the legal framework governing the permit and then walked through how the permit has been updated in response to the court of appeals opinion that was filed in June 22,

³⁰ Ecology CAFO Website

³¹ Ecology CAFO Website

³² See Coalition Letter for more information.

³³ Ecology only clarified that participants could take three minutes **per action** after the question was raised. The agency did not establish at the outset that the DNS and the issuance of the draft General Permit were separate actions subject separate comment processes.

³⁴ Chelsea Morris also contacted Jennifer Calkins who had raised the concern about time and who was expecting to be unable to provide testimony on Thursday to attempt to provide process for Dr. Calkins to testify further. Phone Call Chelsea Morris to Jennifer Calkins July 26, 2022.

2022. Some of the information presented was inconsistent with our understanding of the permit. For example, in answering whether or not the permit requires testing of effluent from tile drains, Ecology answered that it did, both the quality and quantity of discharge from tile drains. We do not understand this to be the case. Additionally, in answer to the question of whether there are only two conditions in the draft permit that trigger the requirement for monitoring wells, Special Condition S4.L and Special Condition S7.C, Ecology stated that no, there are additional triggers to well monitoring. These include triggers that may be in place such as land application fields (as part of adaptive management), or when testing for compliance with storage locations for the production area. We are also concerned this is a misleading statement.

Ecology provided **no information about SEPA or the DNS in either presentation, nor did it discuss climate change.**³⁵ At no point did Ecology address the rapidly changing hydrological cycles and weather patterns the state is experiencing and will continue to experience in the wake of climate change. Ecology failed to provide any information about how the permit provided essential adaptation to increased flooding intensity, decreased average annual rainfall, changes in peak stream flow, reduction in snowpack, increased surface water temperature and reduction in water tables, all of which interact with CAFO discharges in ways that increase the risk to people and the environment.

These are the only public spaces we know of where Ecology is engaging the public. They were only minimally sufficient in terms of providing basic and generally accurate (although not always) information about the draft permit and a space by which people could orally comment. The failure to address climate change, and to discuss the SEPA DNS, however, leaves the audience with a lopsided view of Ecology's actions and their implications.

IV. Ecology's Outreach and Analysis Disenfranchises Small Farmers

Ecology's efforts to meaningfully engage members of impacted communities falls short here. This impacted community includes small farmers.

Ecology has failed to provide information to the public that clearly identifies what CAFOs will be impacted. In reviewing comments received to this point, we notice that many people seem to believe the General Permit affects small farmers and even people with backyard chickens. The only beneficiaries of this lack of clarity are the discharging operators and the dairy industry more generally who are arousing outrage based upon the false narrative that this permit adversely impacts small farmers.

This narrative bias in favor of the larger entities is clear upon reviewing Ecology's Small Business Economic Impact Analysis (SBEIA) of the new CAFO NPDES Combined Permit and the CAFO State Waste Discharge Permit illustrates how the agency appears to privilege the concerns of industry while ignoring concerns of the impacted community, as well as small farmers.³⁶ For this analysis to be meaningful, the category of CAFOs considered "small businesses" must be based on some sort of objective metric—whether it is statutory definition of small businesses under RCW 19.85.020, or the agency's definition of a small CAFO. Yet, the

³⁵ At the July 26, 2022 workshop, in response to the question of whether it had considered climate change, Ecology stated, consistent with SEPA, it had addressed the climate impact of CAFO emissions of nitrous oxide off of fields. Ecology did not raise this at the July 28, 2022 workshop.

³⁶ Shon Kraley, Ph.D., *Small Business Economic Impact Analysis*, Ecology 22-10-008 (Apr. 2022), <https://apps.ecology.wa.gov/publications/documents/2210008.pdf>.

entities included in the analysis as “small businesses” do not meet the statutory definition and many of them are classified as medium or large CAFOs.

RCW 19.85.020 defines a small business as “any business entity, including a sole proprietorship, corporation, partnership, or other legal entity, that is *owned and operated independently from all other businesses*, **and** that has *fifty or fewer employees*.”³⁷ Ecology reads out the first half of the definition, and ignores the fact that many of these “small businesses” share ownership and/or management. For example, Top En Twel, LLC shares the same officers and location as at least six dairies.³⁸ DB Dairy LLC and Noteboom Farm LLC share the same Governor and same registered agent.³⁹ DBD Washington LLC, SMD LLC, Washington Agri Investments, LLC, and Washington Dairy Holdings, LLC, also all share the same Governor.⁴⁰

Further, the analysis compares two different cost structures associated with operating medium and large CAFOs based solely on the number of employees at each facility, rather than including a more comprehensive analysis of operations.⁴¹ The comparison shows that it costs “large businesses” one-fourth the amount, per employee, to operate.⁴² It is unclear how these costs were calculated, or how CAFOs with equal animal numbers can have such starkly different operating costs. As a result of this analysis, the agency concludes that the “general permit likely imposes disproportionate costs on small businesses” and therefore must “reduce small business compliance burden.”⁴³ This conclusion disenfranchises small farmers as well as the impacted public.⁴⁴

³⁷ Wash. Rev. Code § 19.85.020(4) (emphasis added).

³⁸ OpenGovWA, *Top en Twel, LLC*, WA Secretary of State, <https://opengovwa.com/corporation/603411243#entity-overview> (last visited Aug. 14, 2022).

³⁹ WA Secretary of State, *Corporation and Charities Business Search*, <https://ccfs.sos.wa.gov/#/BusinessSearch/BusinessInformation> (follow the “Advanced Business Search” hyperlink; then search “Daniel Noteboom” in the “Governor” search bar) (last visited Aug. 14, 2022).

⁴⁰ *Id.* (follow the “Advanced Business Search” hyperlink; then search “Wayne Cummings” in the “Governor” search bar).

⁴¹ Kraley, *supra* note 44 at 34-35.

⁴² *Id.*

⁴³ *Id.* (We note that Ecology seems disproportionately concerned with the idea of “encouraging” compliance by CAFOs. Thus, to some extent, it is not surprising to see the language pop up in these analyses. However, this ongoing concern about the regulated entities’ comfort fails the people of the state and is inconsistent with the legislature’s intent when it created the agency to help “plan, coordinate, restore and regulate the utilization of our natural resources in a manner that will protect and conserve our clean air, our pure and abundant waters, and the natural beauty of the state.” RCW 43.21A.010).

⁴⁴ Lest anyone suggest that larger CAFOs are actually struggling, it is worth noting that federal farm subsidies also benefit these large CAFOs, while the vast majority of small operations receive no benefits. *See* EWG, *Farm Subsidy Primer*, <https://farm.ewg.org/subsidyprimer.php> (last visited Aug. 14, 2022). Indeed, over the last thirty years, large CAFOs in the Yakima Valley have received millions in federal farm subsidies, only resulting in further consolidation and industrialization of the industry, while small family farms drop like flies and the pervasive presence of mega dairies create greater and greater harm. *See* EWG, *USDA subsidy information for George Deruyter and Son Dairy LLC*, <https://farm.ewg.org/persondetail.php?custnumber=B06248499> (last visited Aug. 14, 2022); *see also* EWG, *Coronavirus Food Assistance Program in Yakima County, Washington, 2020*, [s](#) (last visited Aug. 14, 2022).

We are concerned both with the failure to adequately inform farmers of the implications of the permit and the analysis that appears to conflate small operations with their larger counterparts. As a part of its efforts towards meaningful engagement, we urge Ecology to make efforts towards ensuring that small farmers are informed about, and can participate in, the permitting and SEPA processes. We also urge Ecology to revise its SBEIA so that it reflects the actual impact of the permit on small business.

V. Conclusion

Ecology is our bulwark agency tasked with protecting against polluted air and waters for current and future generations of Washingtonians. CAFOs cause enormous environmental harm, and much of it falls directly on the people who are already the most burdened by past and ongoing discriminatory agency decision-making. Ecology has the information it needs to start taking action to meaningfully engage these communities in its regulation of CAFOs.

Ecology did more towards engaging impacted communities in the issuance of this draft permit, although it failed to do so with respect to the DNS. Ecology needs to do more. The agency must allocate sufficient staff and resources to CAFO outreach to the public to ensure that Ecology brings the most impacted Washington residents to the table. These are the people with the expertise the agency desperately needs to understand the actual impacts of the CAFOs on communities. Further, continued insufficient actions to meaningfully engage members of impacted communities continues Washington's historical and ongoing injuries to the people of this state most impacted by structural discrimination on the basis of class, race, nationality, language, education-level, income-level, ability, and age, among other things.⁴⁵

We believe Ecology wants to do better. We are happy to continue to work with the agency in its efforts to repair its past and ongoing harms and to build real partnerships with the Washingtonians for whom it owes a fundamental duty to protect the waters and air of the state.

We look forward to supporting Ecology in these efforts. If you have questions or would like to talk with us further please feel free to reach out to Jennifer Calkins, at calkins@westernlaw.org or (206) 607-9867.

Sincerely,

Jennifer D. Calkins, Ph.D., J.D.
Attorney and Diehl Fellow
Western Environmental Law Center
1402 3rd Avenue, Suite 1022
Seattle, WA 98101
(206) 487-7207, ext. 144
(206) 607-9867
calkins@westernlaw.org

Jean Mendoza
Executive Director
Friends of Toppenish Creek

Amy van Saun
Senior Attorney
Center for Food Safety

⁴⁵ Letter to Director Laura Watson re: Environmental Justice and Washington Concentrated Animal Feeding Operations Permitting (May 6, 2022) (Coalition Letter; see attached).

May 6, 2022

Via First Class and Electronic Mail

Laura Watson, Director
Washington State Department of Ecology
P.O. Box 47600
Olympia, WA 98504-7600

Re: Environmental Justice and Washington Concentrated Animal Feeding Operations Permitting

Dear Director Watson,

Puget Soundkeeper Alliance, Friends of Toppenish Creek, Sierra Club, Waterkeeper Alliance, Center for Food Safety, and Western Environmental Law Center, and their tens of thousands of members, supporters, and volunteers throughout the State of Washington, are writing to express our concern with the Department of Ecology's (Ecology) failure to engage with communities impacted by discharge from Concentrated Animal Feeding Operations (CAFO) while drafting its general NPDES permit.¹

Introduction

As we have made clear in our advocacy during the CAFO permitting process, Ecology must engage with the communities impacted by its regulatory decisions, particularly those already overburdened by past and ongoing environmental discrimination. Because Ecology is the state agency charged with protecting our air and water, this engagement is not only a moral imperative but also a legal requirement.

Ecology acknowledges this moral and legal requirement. Yet, in its efforts to develop a general NPDES permit for CAFOs, Ecology is failing to engage with the people directly harmed by pollution from these operations. Because of this, the agency is uninformed of the true impacts and interests of the people working and living in and around CAFOs, and is at risk of producing yet another inadequate and unprotective general permit.

CAFOs have profoundly negative impacts on the health of workers and the people who live in surrounding communities, including through pollutant discharge into water.² As a result,

¹ We use the terms "impacted" and "affected" to refer to regions and people subject to harms from CAFO discharges ranging from lack of access to healthy drinking water to impacts on fish that are an important source of food. Because there is the tendency for CAFOs to be located in regions where people experience cumulative environmental burdens, these terms overlap with the "vulnerable populations" and "overburdened communities" identified in the HEAL Act. *See* RCW 70A.02.010.

² *See, e.g.,* Grout et al., A Review of Potential Public Health Impacts Associated With the Global Dairy Sector, 4 *GeoHealth* 1 (January 30, 2020); Carrie Hribar, Understanding concentrated animal feeding operations and their impact on communities, National Association of Local Boards of Health at 7, 9 (2020) available at https://www.cdc.gov/nceh/ehs/docs/understanding_cafos_nalboh.pdf.

Ecology must actively engage members of communities affected by CAFO discharge in a dialogue regarding the impact of industrial dairy farms on their water, the legal requirements mandating NPDES permitting of these operations, the scope of the general permit, and the needs and wishes of the members of the local community regarding the regulation of these entities under federal and state clean water law. To do less is unacceptable in any case, but is particularly egregious here given the agency's professed commitment to environmental justice.

I. Ecology's mission and duties mandate attention, consultation, and engagement with people affected by CAFO discharge

Ecology's mission is to “[p]rotect, preserve and enhance Washington’s land, air and water for current and future generations.”³ This mandate to protect our natural resources is broad, and is based on the “fundamental and inalienable right of the people of the state of Washington to live in a healthful and pleasant environment and to benefit from the proper development and use of its natural resources.”⁴ To carry out this mission effectively, Ecology, “in consultation with affected constituent groups, [must] continue appropriate public involvement and outreach mechanisms designed to provide cost-effective public input on their programs and policies.”⁵

While the duty to consult with communities affected by pollution is not new, it is now informed by the specific duties of the HEAL Act, passed in 2021, requiring the agency to act towards realizing environmental justice for overburdened communities and vulnerable populations.⁶ Ecology reaffirms this duty by stating that it is “committed to making decisions that do not place disproportionate environmental burdens” on communities in Washington State.⁷ Further, the agency recognizes that full participation by impacted communities in decision-making is an essential step toward environmental justice.⁸ This is consistent with the HEAL Act's requirement that Ecology adopts and implements a plan to engage overburdened communities and vulnerable populations by July 1, 2022.⁹

Because Ecology failed to draft a general permit that met the mandates under state and federal law, CAFOs in Washington State now operate under a permit that expired in March 2022.¹⁰ Ecology's current timeline indicates it plans to release a draft general permit by late

³ Ecology, About Us <https://ecology.wa.gov/About-us> (last visited April 8, 2022).

⁴ RCW 43.21A.010.

⁵ RCW 43.20A.005.

⁶ Engrossed Second Substitute Senate Bill 5141 67th Leg. 2021 Reg. Session (HEAL Act).

⁷ Ecology, Environmental Justice <https://ecology.wa.gov/About-us/Who-we-are/Environmental-Justice> (last visited May 2, 2022).

⁸ *Id.*

⁹ RCW 70A.02.050(1).

¹⁰ Ecology, Concentrated Animal Feeding Operation <https://ecology.wa.gov/Regulations-Permits/Permits-certifications/Concentrated-animal-feeding-operation> (last visited May 4, 2022); *Washington State Dairy Fed'n v. State*, 18 Wash. App. 2d 259, 304, 490 P.3d 290 (2021).

spring 2022 for public comment.¹¹ This means the first stage of drafting will be complete before the July 1 date by which the HEAL Act requires Ecology to adopt its engagement plan. However, any attempt by Ecology to suggest it has some grace period not to engage because its plan is not required at the time the draft permit is released is contrary to stated policy and statutory mandates.

First, as discussed above, Ecology itself states that it is “committed to providing environmental justice to our most vulnerable communities.”¹² It claims that environmental justice “is a priority in our efforts to restore and protect land, air, and water.”¹³ The agency does not tie this commitment to a timeline but indicates it is working towards environmental justice now. Second, under RCW 43.20A.005, the agency has a statutory duty predating the HEAL Act to make at least some effort toward facilitating public engagement.¹⁴ Third, the Clean Water Act requires “[p]ublic participation in the development, revision, and enforcement of any regulation, standard, effluent limitation, plan, or program established by the Administrator or any State.”¹⁵ This was one of the legal mandates that Ecology violated in its last iteration of the permit according to the Washington State Court of Appeals.¹⁶

Finally, apart from policy declarations and statutory duties, any suggestion by Ecology that it is not prepared to effectively engage in outreach is belied by the fact that it already has started outreach efforts under the Climate Commitment Act.¹⁷ Through this program, it is seeking input **from some of the very same communities most impacted by CAFOs**. Despite this overlap, Ecology is not coordinating these efforts.¹⁸ Additionally, Ecology can look to the Environmental Justice Task Force Final Report, produced nearly two years ago, for detailed information about approaches for effectively facilitating community engagement.¹⁹

¹¹ Ecology, Concentrated Animal Feeding Operation <https://ecology.wa.gov/Regulations-Permits/Permits-certifications/Concentrated-animal-feeding-operation> (last visited May 4, 2022).

¹² Ecology, Prioritizing EJ <https://ecology.wa.gov/About-us/Who-we-are/Environmental-Justice/Prioritizing-EJ> (last visited April 12, 2022).

¹³ *Id.*

¹⁴ RCW 43.20A.005.

¹⁵ 33 U.S.C. § 1251(e).

¹⁶ *Washington State Dairy Fed'n v. State*, 18 Wash. App. 2d 259, 304, 490 P.3d 290 (2021).

¹⁷ See Ecology, Improving Air Quality in Overburdened Communities <https://storymaps.arcgis.com/stories/1409205ca61847faa4194072330709cd> (last visited May 4, 2022); See also Ecology, Overburdened communities <https://ecology.wa.gov/Air-Climate/Climate-change/Reducing-greenhouse-gases/Climate-Commitment-Act/Overburdened-communities> (last visited April 12, 2022).

¹⁸ *Id.*

¹⁹ Washington State Environmental Justice Task Force Final Report (Fall 2020).

II. To comply with its own policy goals and its legal duty to realize environmental justice, Ecology must engage those members of overburdened communities and vulnerable populations affected by CAFO discharge²⁰

Environmental justice is an effort to redress the impacts of historical and ongoing racism and poverty on the distribution of environmental benefits and harms and resulting health outcomes. Currently, the pattern seen across the United States and within Washington State is the inequitable distribution of environmental burdens and benefits, where the cumulative harms of pollutants and other environmental risk factors fall hardest on people of color, Indigenous and Tribal people, and low-income residents, among others.²¹ These disparate environmental impacts result in clear patterns of higher mortality rates and worse general health outcomes for people with historically marginalized identities.²² The discrimination driving the decision-making by governmental entities that lead to these patterns is directly related to failures to ensure that people with historically marginalized identities have a voice and power in decisions directly affecting them. Thus, a governmental entity, such as Ecology, in working towards repairing its and other entities' legacies of discrimination must ensure the right of individuals most impacted by environmental decisions to "participate as equal partners at every level of decision-making, including during needs assessment, planning, implementation, enforcement, and evaluation."²³ Waiting until decision-making processes have already reached draft form is too late because, at this point, members of these communities have already been stripped of the power to drive the shape and parameters of the governmental action.

In Washington State, many CAFOs regulated under Ecology's general permit occur in regions, such as Yakima County, with a higher proportion of low-income and Indigenous people,

²⁰ The HEAL Act defines an "overburdened community" as "a geographic area where vulnerable populations face combined, multiple environmental harms and health impacts, and includes, but is not limited to, highly impacted communities as defined in RCW [19.405.020](#)." RCW 70A.02.010(11). It defines "vulnerable populations" as

population groups that are more likely to be at higher risk for poor health outcomes in response to environmental harms, due to: (i) Adverse socioeconomic factors, such as unemployment, high housing and transportation costs relative to income, limited access to nutritious food and adequate health care, linguistic isolation, and other factors that negatively affect health outcomes and increase vulnerability to the effects of environmental harms; and (ii) sensitivity factors, such as low birth weight and higher rates of hospitalization.

RCW 70A.02.010(14)(a).

The Heal Act states that the term "vulnerable populations" "includes, but is not limited to: (i) Racial or ethnic minorities; (ii) Low-income populations; (iii) Populations disproportionately impacted by environmental harms; and (iv) Populations of workers experiencing environmental harms." *Id.*

²¹ See, e.g., Julie Sze, *Environmental Justice in a Moment of Danger* (2020); Clifford Villa et al., *Environmental Justice: Law, Policy & Regulation*, Third Edition (2020).

²² See, e.g., Rachel Morello-Frosch et al., *Understanding the Cumulative Impacts of Inequalities in Environmental Health: Implications for Policy*, 30 *Health Affairs* 879 (May 2011).

²³ See First National People of Color Environmental Leadership Summit, *Principles of Environmental Justice* (1991), available at <https://www.ejnet.org/ej/principles.html>.

people of color, and Tribal members living and working in the area.²⁴ People with these historically marginalized identities who live and work in the regions where CAFOs tend to be clustered experience elevated environmental burdens where community members suffer worse health outcomes as a result of air and water pollution, including higher rates of asthma, lower birth rates, and shorter life-spans.²⁵

Ecology's current regulatory approach for addressing the environmental damage of CAFOs is through its NPDES general permitting program. Under federal law, as reiterated and reaffirmed by the Washington State Court of Appeals in June 2021, Ecology must provide a means for the public to comment on the draft NPDES permit for regulating CAFO discharge. Under state law, Ecology must work to engage and consult with impacted communities. Finally, Ecology's commitment to equity and environmental justice makes it imperative that it ensure the full participation of local communities in the process.

III. Ecology's public outreach to date has been inadequate

So far, unfortunately, Ecology has failed to engage impacted communities sufficiently.²⁶ In contrast, the agency has reached out to and visited the *regulated* community.²⁷ Fortunately, there is still time for Ecology to take the necessary steps to engage the public before finalizing the draft permit.

As Ecology is well aware, the permitting process is complex. Fundamental, therefore, to enfranchising people who are not experts in the technical or legal field, but are experts in their own lived experience, is effectively communicating to the public the impacts of CAFOs on water, the function of NPDES permitting to address these impacts, the process by which Ecology goes about developing these permits, and how affected individuals can be involved in the process. Ecology's website is one obvious place where the agency should host this information.

²⁴ U. S. Census, Quickfacts Washington State <https://www.census.gov/quickfacts/fact/map/WA,US/PST045221> (last visited April 28, 2022).

²⁵ See, e.g., E. Min, Quantifying the Distribution of Environmental Health Threats and Hazards in Washington State Using a Cumulative Environmental Inequality Index, 14 Environmental Justice 298 (2021) (determining that pollution burdens in general, are significantly higher for people of color and those living in poverty in Washington State); Esmey Jimenez, New Map Shows Hotspots Of Environmental Health Hazards For Washington Neighborhoods, Northwest Public Broadcasting (January 10, 2019) (describing Yakima County's reduced health outcomes as appearing like "a big, red blemish" on the Washington State Health Disparities Map) available at <https://www.nwpb.org/2019/01/10/new-map-shows-hotspots-of-environmental-health-hazards-for-washington-neighborhoods/>; Jacques Colon, The Disproportionate Burden of Fossil Fuel Air Pollution on Communities of Color in Washington State, Front and Centered Report (June 15, 2016) (describing shorter life-spans on average resulting from community exposure to cumulative environmental harms).

²⁶ Chelsea Morris mentioned that she was sending information to one community group at our meeting with her on January 7, 2022.

²⁷ Statements by Chelsea Morris during the September 21, 2021 meeting between Ecology's Chelsea Morris, Jeff Killelea, Nathan Lubliner, and members of Center for Food Safety, Friends of Toppenish Creek, and Puget Soundkeeper Alliance.

Currently, Ecology’s website does not provide this information. In particular, it does not explain the permitting process, discuss why permitting is needed for CAFOs, or describe exactly how the agency develops the CAFO permit.²⁸ Instead, the website briefly mentions the current development of the general permit as a direct response to the June 2021 court opinion, with little further information, and no indication of how public input functions as part of what it is considering.

Further, the website’s information about opportunities to comment is stale, as it is limited to links for the two “listening sessions” held in October 2021 and a link to an “online comment form” that closed on Sunday, October 24, 2021.²⁹ Information such as the “Detailed Explanation of the Permits” discusses the previous iteration of the permit and is long and dense rather than user-friendly.³⁰

Ecology has provided a Spanish-language focus sheet discussing the NPDES permit regulation of CAFOs, including a description of the potential for the operations to pollute drinking water, and instructions for reporting contamination.³¹ This sheet provides one possible starting point for developing more information on the website itself. However, it does not provide a discussion of the current permitting process, nor does it invite input.³² So it does not solve the website’s fundamental lack of information regarding the permitting process.

Another approach to outreach is public forums, including listening sessions. Ecology had two virtual listening sessions in October 2021. Unfortunately, these listening sessions did not represent effective forums for communication. They did not provide clear information but rather meandered through the dense technical weeds of the court opinion and Ecology's concerns.

²⁸ The site links to a fact sheet in Spanish that at least provides some basic explanation of the problem. Translating some of this fact sheet back to English, particularly in the discussion of the impact of CAFO discharge on drinking water could be one, of many, ways Ecology could update the landing site to make it more relevant and useful to people affected by CAFO discharge in their region. *See*, Ecology, Hoja de Enfoque: Permiso de Operación de Alimentación de Animales Confinados (April 2022) available at <https://apps.ecology.wa.gov/publications/parts/1710002part1.pdf>.

²⁹ As we communicated to Ecology during the January 7, 2022 meeting, those “listening sessions” were deeply flawed.

³⁰ Ecology, Fact Sheet for the Concentrated Animal Feeding Operation National Pollutant Discharge Elimination System and State Waste Discharge General Permit and Concentrated Animal Feeding Operation State Waste Discharge General Permit (June 15, 2016) available at <https://ecology.wa.gov/DOE/files/a3/a36ceb3d-7767-4a21-a354-d4b7c1965c95.pdf>.

³¹ Ecology, Hoja de Enfoque: Permiso de Operación de Alimentación de Animales Confinados (April 2022) available at <https://apps.ecology.wa.gov/publications/parts/1710002part1.pdf>. The opportunity to report violations is not currently an effective way for people in the community to protect their waters given apparent failures in agency response to these reports. This is, in part, the result of the 2011 Memorandum of Understanding between Ecology and the Washington State Department of Agriculture, which has led to holes between permitting under state and federal clean water law and enforcement in situations where dairies are violating the law.

³² It is a positive step that Ecology provides the possibility of translated materials via contacting Chelsea Morris or Ecology’s Language Access Team. But this service still requires a member of the community know what information it is he/she/they seek, take the step of asking for that information to be translated, and be prepared to wait however long it takes the agency to return the translated materials.

Further, the information provided was not always accurate. The webinars were hosted on a platform that disenfranchised participants because people could not see each other, and the webinars were not moderated in any way to facilitate comments by those not part of the regulated community. Finally, when people, for example from the regulated community, spoke the agency did not provide information about these speakers and their involvement and interests in the process or correct the misinformation that was provided.

Providing clarity of process and a sense that input is valued and can impact agency decision-making is essential to effective engagement. Unfortunately, as described above, Ecology does not explain how it will use public input in its permit development process. And by stating on its website that it “will not create a formal response to verbal or written comments during [its] listening session comment period”³³ it gives the appearance of relieving itself of any duty to consider the comments.

This opacity of process, apparent lack of interest in community dialogue, and failure to even do the minimum on its website or in forums to reduce barriers to access for members of the impacted community is unacceptable. We know Ecology can do better.

V. **Ecology must engage in far more effective outreach as it develops the draft and final CAFO general permit**

As mentioned above, Ecology has the internal knowledge, connections, and resources to far more effectively engage and empower members of impacted communities in the process of CAFO permit development than it has done so far. Given the legal and policy landscape under which it is undertaking this process, the agency does not have a choice. It must do a better job. Although ultimately, it is the agency's role to develop an engagement plan, we provide some basic expectations below for how the agency might improve its outreach and engagement with impacted communities moving forward.

These expectations arise out of our recognition of the barriers to engagement experienced by members of impacted communities resulting from the systems of oppression, including White supremacy, settler colonialism, capitalist hegemony, patriarchy, and Christian hegemony threaded through agency culture and structure.³⁴ These barriers include lack of access and information, failure of effective communication, apathy and a sense of burden, lack of clear and transparent process, lack of resources, lack of a sense of potential for influence, lack of trust, and a failure to recognize different types of knowledge.³⁵ Many of these barriers result from Ecology's fundamental failure to recognize its role as the steward of the state's clean water, and the expertise people in communities impacted by CAFOs have regarding their own life experiences. Realizing environmental justice requires Ecology to approach these communities with humility, an interest

³³ Ecology, Concentrated animal feeding operations, <https://ecology.wa.gov/Regulations-Permits/Permits-certifications/Concentrated-animal-feeding-operation> (last visited May 4, 2022).

³⁴ Washington State Environmental Justice Task Force Final Report at Appendix C (Fall 2020).

³⁵ *Id.* at 64, Appendix C.

in what people can tell them about their experience, and a willingness to allow that information to impact its decision-making.

We recognize that the agency will continue to work through the more fundamental structural and cultural barriers to achieving environmental justice. Related to this, however, Ecology must do a much better job of reaching out to the communities most impacted by pollution from CAFOs. Below are some of the first steps we expect to see from Ecology as it develops the CAFO general permits.

A. Provide better information.

As described above, Ecology has not provided easy access to or effective communication of information about the CAFO permitting process, including how Ecology will consider comments from community members. **Ecology should improve the website, as described above, and host community events, whether virtual or in-person, to provide basic, jargon-free information about the problem, process, and potential for engagement.** Optimally, this information would be provided in English and languages other than English, and delivered through a variety of media, recognizing that providing information only through the written word often presents a barrier in and of itself.

B. Use a variety of platforms and media to communicate information.

Currently, Ecology's failure to widely distribute information across different platforms disenfranchises members of the impacted community. **Ecology must distribute information about CAFOs, their impact, the permits, the permitting process, and opportunities to engage, both online and via meetings, across platforms, to those individuals in regions affected by the permits through electronic and other means (such through churches, colleges, community centers, groceries, food banks, feed stores, hardware stores, the Yakima Herald Republic, Cascadia Weekly, and Radio KDNA).**

C. Coordinate internally to identify groups and individuals in the communities impacted by CAFOs to invite them into the conversations about the CAFO permitting process.

As discussed above, Ecology is already conducting outreach and listening sessions consistent with the Climate Commitment Act in regions also affected by entities covered by the CAFO general NPDES permit. By failing to coordinate internally, the agency disenfranchises members of the communities by failing to make a reasonable effort to reach out to them about CAFO impacts and additionally burdening the local communities with trying to understand the agency's role in the region. **Ecology should therefore coordinate with those agency employees developing the Air Quality in Overburdened Communities Initiative to identify common regions of concern and reach out to people already engaged with the agency in these areas.**³⁶

³⁶ For example, the agency now has a list with addresses and phone numbers of individuals who had expressed concerns about Yakima air quality over the years as a result of efforts on the part of Friends of Toppenish Creek. This is exactly the sort of resource that should be shared within the agency. It is an obvious first step to mail information about the CAFO permitting process, in multiple languages, to these people.

D. Convene organizations and individuals to gather input on how best to reach out to and communicate with those directly impacted by CAFOs

People and organizations in Whatcom County and Yakima are experts in their experience of the impact of CAFOs. They are also knowledgeable about each other and how to communicate with people living and working in these regions. Yet, Ecology has not made an effort to gather input on outreach from these groups and individuals. Instead, it expects the communities and individuals to do the outreach that it should be doing. This further burdens groups and individuals already stretched thin by multiple overlapping crises³⁷ and ensures that barriers to access are strengthened rather than dismantled. **Given the wealth of expertise available and recognizing the burdens already faced by organizations and individuals, Ecology should convene these groups and individuals and collect information from them regarding how best to conduct outreach. These meetings should follow best practices in recognizing barriers to participation in meetings and Ecology should communicate how it intends to use the information. It should also provide follow-up demonstrating that it relied on the information as a way to establish the value of the input of these organizations and individuals.**

E. Host more frequent and more accessible meetings that empower members of the community.

Ecology's approach to meetings creates barriers to access. **Ecology should provide more opportunities for the impacted community to discuss their lived experience of CAFOs with the agency.** Optimally, these opportunities would be in person, although we recognize that the pandemic continues to make this difficult. Regardless, these events must be organized to ensure that people feel empowered rather than excluded. **At a minimum, Ecology must provide the information participants need to feel comfortable speaking up in such a space. Further, participants must be able to see one another, the discussion must be sensitive to different abilities and languages, and Ecology should make sure that, when members of the regulated community provide inaccurate information, that information is challenged.**

VI. Conclusion

Ecology has a moral and a legal duty to engage people impacted by the entities they regulate, particularly members of those communities harmed by a history of discriminatory environmental decision-making. Yet, in the process of developing its general CAFO NPDES permit, the agency has, time and again, failed to make even the most basic attempt to include impacted community members. We urge Ecology to comply with law and policy as it moves forward in the process.

³⁷ Isabel Carrera Zamanill, Covid-19 Gap Analysis, Front & Centered Report (February 2021) available at <https://frontandcentered.org/wp-content/uploads/2021/02/FC-COVID-19-Gap-Analysis.pdf>; Alison Saldanha and Elise Takahama, Graphics tell story of COVID's unequal toll across WA, Seattle Times (April 12, 2022) available at <https://www.seattletimes.com/seattle-news/health/tracking-covids-unequal-unpredictable-toll-across-washington/>; Brandi Fullwood and Libby Denkmann, Whatcom County in Recovery Braces for More Floods, KUOW (February 3, 2022) available at <https://www.kuow.org/stories/whatcom-county-in-recovery-braces-for-more-floods>.

People most impacted by CAFOs in the state are themselves currently dealing with ongoing emergent situations ranging from the COVID-19 pandemic to flooding.³⁸ Indeed, COVID-19 has had a particularly harmful impact on the lives of people in Yakima Valley.³⁹ These multiplying crises mean that, rather than using COVID-19 as an excuse for its failure to engage the people impacted by CAFOS, the agency must redouble its efforts to protect these communities and empower their members in the process of permit development.

We look forward to supporting Ecology in these efforts. If you have questions or would like to talk with us further please feel free to reach out to Jennifer Calkins, at calkins@westernlaw.org or (206) 607-9867.

Sincerely,



Jennifer D. Calkins, Ph.D., J.D.
Attorney and Diehl Fellow
Western Environmental Law Center
1402 3rd Avenue, Suite 1022
Seattle, WA 98101
(206) 487-7207, ext. 144
(206) 607-9867 direct
calkins@westernlaw.org

Jean Mendoza
Executive Director
Friends of Toppenish Creek

Margie Van Cleve
Conservation Chair
Washington State Sierra Club

Amy van Saun
Senior Attorney
Center for Food Safety

Alyssa Barton
Policy Manager
Puget Soundkeeper Alliance

Kelly Hunter Foster
Senior Attorney
Waterkeeper Alliance

³⁸ Isabel Carrera Zamanill, Covid-19 Gap Analysis, Front & Centered Report (February 2021) available at <https://frontandcentered.org/wp-content/uploads/2021/02/FC-COVID-19-Gap-Analysis.pdf>; Alison Saldanha and Elise Takahama, Graphics tell story of COVID’s unequal toll across WA, Seattle Times (April 12, 2022) available at <https://www.seattletimes.com/seattle-news/health/tracking-covids-unequal-unpredictable-toll-across-washington/>; Brandi Fullwood and Libby Denkmann, Whatcom County in Recovery Braces for More Floods, KUOW (February 3, 2022) available at <https://www.kuow.org/stories/whatcom-county-in-recovery-braces-for-more-floods>.

³⁹ Isabel Carrera Zamanill, Covid-19 Gap Analysis, Front & Centered Report (February 2021) available at <https://frontandcentered.org/wp-content/uploads/2021/02/FC-COVID-19-Gap-Analysis.pdf>; Alison Saldanha and Elise Takahama, Graphics tell story of COVID’s unequal toll across WA, Seattle Times (April 12, 2022) available at <https://www.seattletimes.com/seattle-news/health/tracking-covids-unequal-unpredictable-toll-across-washington/>.

**HEADQUARTERS**

120 Shelton McMurphey Blvd.
Suite 340
Eugene, OR 97401
(541) 485-2471
info@westernlaw.org

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WESTERN ENVIRONMENTAL LAW CENTER

August 17, 2022

Via Electronic Submission

Chelsea Morris
Permit Writer
Washington State Department of Ecology
PO Box 47696
Olympia, WA 98504-7696

Re: Comments on SEPA Implications of Ecology’s Proposed General Permit for CAFOs and DNS

Friends of Toppenish Creek, Puget Soundkeeper Alliance, Sierra Club, Center for Food Safety, and Western Environmental Law Center, and their tens of thousands of members, supporters, and volunteers throughout the State of Washington, submit this letter during the Department of Ecology’s (Ecology) comment period on the draft Concentrated Animal Feeding Operations (CAFO) General Permit (General Permit) and its related SEPA Determination of Nonsignificance (DNS).

On June 22, 2022, the Washington Department of Ecology (Ecology) issued its draft Concentrated Animal Feeding Operation NPDES and State Waste Discharge General Permits (General Permit) authorizing discharges of wastewater to Washington State’s surface and ground waters. On the same day, the Department issued a Determination of Nonsignificance (DNS) under SEPA and published its environmental checklist.¹ The DNS provides for a comment period that corresponds to the draft CAFO Permit comment period. Ecology extended the close of the comment period to August 17, 2022. This extension applied to comments on the draft permit and the SEPA DNS.²

We submit this comment to address Ecology’s failure to comply with SEPA. In particular, while Ecology considered some aspects of climate change in the draft General Permit, it failed to consider the impact of climate change on the environment and to create a permit that is adaptive in the face of disrupted weather and water cycles. Further, in

¹ Ecology, SEPA Checklist for CAFO General Permits (June 22, 2022) (SEPA Checklist)

² C. Morris email to J. Calkins.

issuing a DNS that does not rely on reasonably sufficient information, in the face of the General Permit’s known significant adverse impacts on the environment, Ecology violated SEPA.

Ecology must revise the General Permit to embed adaptation to the climate crisis, as well more completely address mitigation in the permit. Further, Ecology must withdraw the DNS, issue a Determination of Significance, and initiate the process of scoping in anticipation of preparing an Environmental Impact Statement on the General Permit.

The State Environmental Policy

SEPA imposes broad duties across agency actions and more specific duties when agencies contemplate major actions. Ecology’s issuance of the General Permit implicates both of these duties.

I. SEPA’s Broad Duties Require Ecology to Consider Climate Change When Regulating CAFOs

The Washington State Legislature, when it enacted the State Environmental Policy Act (SEPA), recognized that “each person has a fundamental and inalienable right to a healthful environment and that each person has a responsibility to contribute to the preservation and enhancement of the environment.”³ Consistent with this, SEPA states that agencies, including Ecology, have the responsibility “to use all practicable means” so that the state and its people may:

- (a) Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
- (b) Assure for all people of Washington safe, healthful, productive, and aesthetically and culturally pleasing surroundings;
- (c) Attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences;
- (d) Preserve important historic, cultural, and natural aspects of our national heritage;
- (e) Maintain, wherever possible, an environment which supports diversity and variety of individual choice;
- (f) Achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life's amenities; and
- (g) Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.⁴

³ RCW 43.21C.020(3).

⁴ RCW 43.21C.020(2).

To realize these responsibilities, under SEPA,

(1) The policies, regulations, and laws of the state of Washington shall be interpreted and administered in accordance with the policies set forth in this chapter, and (2) all branches of government of this state, including state agencies, municipal and public corporations, and counties shall: (a) Utilize a systematic, interdisciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts in planning and in decision making which may have an impact on the environment . . . (d) Preserve important historic, cultural, and natural aspects of our national heritage; [and] (h) Initiate and utilize ecological information in the planning and development of natural resource-oriented projects.⁵

This means that SEPA’s substantive and procedural mandates overlay all regulatory and nonregulatory activities of Washington’s governmental entities, including its agencies.⁶

These mandates touch on all aspects of the environment. To comply with SEPA broadly, Ecology must regulate CAFOs recognizing that right to a healthful environment embedded in the statute. This right attaches to all aspects of the environment, but in this case it attaches most particularly to those elements, the air and water, entrusted to Ecology’s care.⁷

II. SEPA Provides the Connective Tissue Across Ecology’s Duties to Address the Climate Crisis

SEPA’s broad duties, when viewed in concert with Ecology’s implementing statute and interlocking duties over the air and waters of the state, mandate that the agency attend to climate change across all of its actions as articulated by the Washington Court of Appeals in its June 2021 opinion.⁸

To provide capacity to regulate, conserve and restore air, water and the state’s natural beauty, the legislature created Ecology and gave it the “authority to manage and develop our air and water resources in an orderly, efficient, and effective manner and to carry out a coordinated program of pollution control involving these and related land resources.”⁹

Ecology’s broad duties under its organic statute and SEPA, as well as the delegation of specific regulatory duties under the Clean Water Act, the State Water Pollution Control Act, the Clean Air Act and the Climate Commitment Act, require that it “consider climate

⁵ RCW 43.21C.030.

⁶ Richard L. Settle, Preface, Washington State Environmental Policy Act (2020).

⁷ RCW 43.21A.020;

⁸ *Washington State Dairy Fed'n v. State*, 18 Wn. App. 2d 259, 309, 490 P.3d. 290(2021).

⁹RCW 43.21A.020;

change”¹⁰ both in terms of mitigation and in terms of adaptation, in the context of its duty to “protect and conserve our clean air, our pure and abundant waters, and the natural beauty of the state.”¹¹ Because of the central role CAFOs play in the state’s contribution to the climate crisis, these intertwining duties mandate action toward mitigation in Ecology’s regulation of CAFOs. And because climate change has profound effects on hydrological and weather cycles, and therefore on how CAFOs function and how their pollutants impact the environment, Ecology must embed adaptation to climate change in its regulation of these entities.

A. CAFOs Contribute to the Climate Crisis

Three of the most abundant greenhouse gases, (GHGs) arising from human activities, including CAFOs, are carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O). Each of these GHGs has a different impact on global climate change.¹² They differ in how long they remain in the atmosphere, in their “lifetimes.”¹³ And they differ in their “radiative efficiency,” or their ability to absorb energy.¹⁴ A standardized measure for GHGs that allows for comparison across these difference molecules is the Global Warming Potential (GWP) defined as the amount of energy the emission of one ton of a particular GHG will absorb over a particular period of time relative to the emission of one ton of CO₂.¹⁵ The GWP approach relies on CO₂ as the standard by which other GHGs are measured, so its GWP is one.¹⁶ It has a fairly long lifetime as it remains in the atmosphere on average from 300 to 1000 years.¹⁷ Nitrous oxide is significantly more potent than CO₂ with a GWP over 100 years of 265-298 times that of CO₂.¹⁸ Its lifetime is up to 121 years.¹⁹ Finally, CH₄ has a much higher potency of CO₂ with a GWP over 100 years of 28-36.²⁰ It

¹⁰ Washington State Dairy Fed’n, 18 Wn. App at 308-310.

¹¹ RCW 43.21A.010.020.

¹² EPA, *Understanding Global Warming Potentials*, (May 5, 2022), <https://www.epa.gov/ghgemissions/understanding-global-warming-potentials>.

¹³ *Id.*

¹⁴ *Id.*

¹⁵ *Id.*

¹⁶ See Alan Buis, *The Atmosphere: Getting a Handle on Carbon Dioxide*, NASA (Oct. 9, 2019), <https://climate.nasa.gov/news/2915/the-atmosphere-getting-a-handle-on-carbon-dioxide/>; see also Susan Solomon, et al., *Irreversible climate change due to carbon dioxide emissions*, PNAS 106 (6) 1704-09 (Feb. 10, 2009), <https://www.pnas.org/doi/10.1073/pnas.0812721106>.

¹⁷ *Id.*

¹⁸ D.R. Chadwick, et al., *The contribution of cattle urine and dung to nitrous oxide emissions: Quantification of country specific emission factors and implications for national inventories*, 635 Sci Total Environ. 607-17 (Sept. 1, 2018), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6024564/>.

¹⁹ *Id.*

²⁰ Josie Garthwaite, *Methane and climate change*, Stanford Earth Matters (Nov. 2, 2021), <https://earth.stanford.edu/news/methane-and-climate-change#gs.v8sglf>.

lasts up to 12.4 years in the atmosphere,²¹ and in the first two decades it is emitted, it is more than 80 times more potent than CO₂ during that same amount of time.²²

Many mitigation strategies focus on CO₂ because it is the most prevalent GHG. But stopping the crisis necessitates curtailing the more potent GHGs as well. Reducing CH₄ emissions is particularly important because its shorter lifetime allows for the impact of reductions to occur sooner and its relatively high potency means those effects will be more pronounced.²³ As a result, reducing CH₄ is key to shifting our current warming trajectory and protecting the climate from triggering additional positive feedback loops.²⁴

1. Emissions of these GHGs Continue to Rise as a Result of Human Activities Including CAFOs

Scientists have warned governments for decades that the world must transition away from activities that emit GHGs, and shore up sequestration capacity, to avoid catastrophe.²⁵ Yet, the latest World Meteorological Organization's (WMO) report on atmospheric GHG concentration indicated that in 2020 they reached a new high above pre-industrial levels in 1750.²⁶ Nitrous oxide emissions "have ballooned" over the past several decades.²⁷ And CH₄ concentrations reached an all-time high in 2021.²⁸

²¹ *Id.*

²² *Id.*

²³ See Raymond Zhong, *Methane Emissions Soared to a Record in 2021, Scientists Say*, New York Times (Apr. 7, 2022), https://www.nytimes.com/2022/04/07/climate/methane-emissions-record.html?action=click&pgtype=Article&state=default&module=style-climate&variant=show®ion=MAIN_CONTENT_3&block=storyline_levelup_swipe_recirc; see also Kristoffer Tigue, *Methane Emissions Hit Another Record High. That's a Big Deal*, Inside Climate News (Apr. 8, 2022), https://insideclimatenews.org/todaysclimate/methane-emissions-hit-another-record-high-thats-a-big-deal/?utm_source=InsideClimate+News&utm_campaign=4ccaa96ab8-&utm_medium=email&utm_term=0_29c928ffb5-4ccaa96ab8-328380420.

²⁴ See Raymond Zhong, *Methane Emissions Soared to a Record in 2021, Scientists Say*, New York Times (Apr. 7, 2022), https://www.nytimes.com/2022/04/07/climate/methane-emissions-record.html?action=click&pgtype=Article&state=default&module=style-climate&variant=show®ion=MAIN_CONTENT_3&block=storyline_levelup_swipe_recirc. Currently, positive feedback loops involving water vapor and albedo reduction are already underway, see e.g., Qinlong You, et al., *Warming amplification over the Arctic Pole and Third Pole: Trends, mechanisms and consequences.*, Earth-Science Reviews 217 (2021);.

²⁵ Alice Bell, *Sixty years of climate change warnings: the signs that were missed (and ignored)*, The Guardian (July 5, 2021), <https://www.theguardian.com/science/2021/jul/05/sixty-years-of-climate-change-warnings-the-signs-that-were-missed-and-ignored>.

²⁶ World Meteorological Org., *Greenhouse Gas Bulletin: Another Year Another Record*, Press Release No. 25102021 (Oct. 25, 2021), <https://public.wmo.int/en/media/press-release/greenhouse-gas-bulletin-another-year-another-record> (reporting that the concentration of carbon dioxide (CO₂) was at 413.2 parts per million in 2020, 149% that of the levels in 1750. Methane (CH₄) was 262% higher and nitrous oxide (N₂O) was 123% higher than 1750 levels).

²⁷ Josie Garthwaite, *Stanford expert explains why laughing gas is a growing climate problem*, Stanford News (Oct. 7, 2020), <https://news.stanford.edu/2020/10/07/laughing-gas-growing-climate-problem/>.

²⁸ Kristoffer Tigue, *Methane Emissions Hit Another Record High. That's a Big Deal*, Inside Climate News (Apr. 8, 2022), https://insideclimatenews.org/todaysclimate/methane-emissions-hit-another-record-high-thats-a-big-deal/?utm_source=InsideClimate+News&utm_campaign=4ccaa96ab8-

The U.S. bears an outside responsibility for the climate crisis as most of the molecules of GHG currently in the atmosphere are the legacy of U.S. activities over the past two centuries.²⁹ Currently, the U.S. emits more than 10% of the world's total carbon emissions annually and is second only to China in proportional global contribution of GHG emissions.³⁰ While the country recently committed to reducing net GHG emissions to 50-52% below 2005 levels by 2040, that target is not ambitious enough to support the global reduction necessary to keep the temperature increase to 1.5°C by the end of the century agreed to in the Paris Agreement.³¹ Further, although Congress finally passed legislation to address the crisis, this action alone will be insufficient to prevent warming from surpassing 2.0°C by the end of the century.³² To keep the temperature increase to 1.5°C, the global community needs state and local governments to step up as well.

Transportation and industrial practices drive most of the nation's emissions of CO₂.³³ However, agricultural practices, including dairy CAFOs, also emit CO₂, and are responsible for a substantial proportion of the global share of the more potential GHGs, such as CH₄ and N₂O.³⁴ Eighty percent of the global N₂O emissions in 2019 were from

[&utm_medium=email&utm_term=0_29c928ffb5-4ccaa96ab8-328380420](#); see also Josie Garthwaite, *Stanford expert explains why laughing gas is a growing climate problem*, Stanford News (Oct. 7, 2020), <https://news.stanford.edu/2020/10/07/laughing-gas-growing-climate-problem/> (noting that methane emissions soared between 2000 and 2017 from “fossil fuel sources and cows.”).

²⁹ Simon Evans, *Analysis: Which countries are historically responsible for climate change?*, CarbonBrief (Oct. 5, 2021), <https://www.carbonbrief.org/analysis-which-countries-are-historically-responsible-for-climate-change/>.

³⁰ See Hannah Ritchie & Max Roser, *United States: CO₂ Country Profile*, Our World in Data (2020), <https://ourworldindata.org/co2/country/united-states?country=~USA#what-share-of-global-co2-emissions-are-emitted-by-the-country>; see also Global Carbon Atlas, Fondation BNP Paribas (2020), <http://www.globalcarbonatlas.org/en/CO2-emissions>.

³¹ John Kerry & Gina McCarthy, *The Long-Term Strategy of the United States: Pathways to Net-Zero Emissions by 2050*, United States Department of State and the United States Executive Office of the President 4 (Nov. 2021), <https://www.whitehouse.gov/wp-content/uploads/2021/10/US-Long-Term-Strategy.pdf>; Climate Action Tracker, *USA*, (July 6, 2022), <https://climateactiontracker.org/countries/usa/>.

³² The passage of the Inflation Reduction Act means that federal action no longer impedes the potential for the U.S. to meet its nationally determined contribution (NDC) under the Paris Agreement (see e.g., Erik Stokstad, *Surprise climate bill will meet ambitious goal of 40% cut in U.S. emissions, energy model predicts*, Science (Aug. 1, 2022), <https://www.science.org/content/article/surprise-climate-bill-will-meet-ambitious-goal-40-cut-us-emissions-energy-models>). State action in concert with the federal mandate and incentives in the bill is essential, however, to securing this progress. Further, even if all of the nations on earth meet their NDCs, the global population can still expect severe and accelerating climate impacts (see e.g., Luke Kemp, et al., *Climate Endgame: Exploring catastrophic climate scenarios*, PNAS 119 (34) e2108146119 (Aug. 1, 2022), <https://www.pnas.org/doi/10.1073/pnas.2108146119>). For this reason, federal action does not excuse state action. Instead action by the federal government provides a bit more of a window of opportunity for early and aggressive state action to make a difference in the climate outlook for current and future generations.

³³ EPA, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2020*, U.S. Environmental Protection Agency ES-8 (Apr. 14, 2022), <https://www.epa.gov/system/files/documents/2022-04/us-ghg-inventory-2022-main-text.pdf>.

³⁴ John Kerry & Gina McCarthy, *The Long-Term Strategy of the United States: Pathways to Net-Zero Emissions by 2050*, United States Department of State and the United States Executive Office of the

agricultural sources.³⁵ As Ecology itself notes, “[a]griculture, in general, has an opportunity to play a significant role in reducing climate warming gas nitrous oxide.”³⁶ Further, at least a third of the CH₄ released globally now comes from agricultural sources.³⁷ According to the Food and Agricultural Organization, future increase in human-caused CH₄ emissions is likely to come from the agricultural sector.³⁸

The routes by which dairy CAFOs emit GHGs include manure decomposition, enteric fermentation, transportation and mechanization. Decomposing urine and manure release N₂O.³⁹ Further, the re-deposition of ammonia gas emitted from urine and manure adds to the total N₂O released.⁴⁰ Both anaerobic decomposition of ruminant manure and enteric fermentation emit CH₄ emissions.⁴¹ Finally, CAFOs emit CO₂ through fossil fuel combustion in processes such as milking, grain drying, field operations, feed production, and transport as well as the transport and processing of dairy products.⁴²

2. Washington State’s CAFOs Contribute CH₄, N₂O and CO₂ to the Atmosphere

The current inventory and reporting data make clear that agriculture, including dairy CAFOs, contributes a substantial proportion of Washington State’s emissions. These data are estimates and are incomplete, so the impacts of agriculture are undoubtedly greater than represented by the reporting data, and may be larger than represented by the inventory data as well. However, even this patchwork of data establishes the fact that Ecology’s failure to effectively regulate and account for CAFO emissions leaves a hole both in climate mitigation and in the agency’s approach to regulating discharges in a warming climate.

President 4 (Nov. 2021), <https://www.whitehouse.gov/wp-content/uploads/2021/10/US-Long-Term-Strategy.pdf>

³⁵ FAO, *The share of food systems in total greenhouse gas emissions. Global, regional and country trends, 1990–2019*, FAOSTAT Analytical Brief Series No. 31. (2021), <https://www.fao.org/3/cb7514en/cb7514en.pdf>.

³⁶ Fact Sheet at 25.

³⁷ See X. Lan, et al., *Improved Constraints on Global Methane Emissions and Sinks Using $\delta^{13}\text{C}-\text{CH}_4$* , 35 *Global Biogeochemical Cycles* (May 8, 2021), <https://agupubs.onlinelibrary.wiley.com/doi/10.1029/2021GB007000> (concluding fossil fuels are not driving the post 2006 increase in methane); see also Tiy Chung, *Methane emissions are driving climate change. Here’s how to reduce them.*, U Env Pro (Aug. 20, 2021), <https://www.unep.org/news-and-stories/story/methane-emissions-are-driving-climate-change-heres-how-reduce-them>.

³⁸ FAO, *Climate Change and the Global Dairy Cattle Sector*, FAO & Global Dairy Platform Inc. 22 (2019), <https://www.fao.org/3/CA2929EN/ca2929en.pdf>.

³⁹ FAO, *Climate Change and the Global Dairy Cattle Sector*, FAO & Global Dairy Platform Inc. 22 (2019), <https://www.fao.org/3/CA2929EN/ca2929en.pdf>.

⁴⁰ A.N. Hristov, et al., *Ammonia emissions from dairy farms and beef feedlots*, *Canadian Journal of Animal Science* (Jan. 1, 2011).

⁴¹ FAO, *Climate Change and the Global Dairy Cattle Sector*, FAO & Global Dairy Platform Inc. 22 (2019), <https://www.fao.org/3/CA2929EN/ca2929en.pdf>.

⁴² *Id.*

As we made clear above, we are in this crisis because of the failure of our governmental entities to adequately respond over the past several decades. Had the people tasked with caretaking our air and water engaged climate change mitigation with the seriousness it required in the 1970s, 1980s, 1990s or even early 2000s, we would have flexibility now. But we do not. It may already be too late to keep warming to 1.5; **but the small chance that we can still slow warming sufficiently to prevent the worst from happening requires regulating entities to account for every possible source of GHGs, as well as current and future near-certain environmental impacts from the climate crisis in permitting and all other actions.**⁴³

The federal government and the state gather data on Washington State's GHG contribution to global emissions. These data generally fall into two incomplete categories—emissions inventory data and reporting data mandated by statute.

a. Emissions Inventory Data for Washington State

First, EPA's federal emissions inventory, created using internationally recognized methodologies,⁴⁴ provides some information about emissions contributions from different sectors.⁴⁵ These data indicate that in Washington State in 2019, agriculture made up 8.3% of the state's total GHG emissions.⁴⁶ According to these data, of the total agricultural emissions for that year, enteric fermentation contributed 30.5% and manure management 17.5%.⁴⁷ Agriculture contributed the highest proportion of methane, 48.5% of the state's methane emissions in 2019.⁴⁸ Waste contributed the second highest proportion at 29.3%.⁴⁹ That same year, Washington's agriculture industry contributed 66.5% of the state's N₂O.⁵⁰ The next highest was the energy sector at 12.1%.⁵¹ Ecology's estimates mirrors this inventory because it uses EPA's data to publish emissions data for Washington State.⁵²

⁴³ IPCC, *Global Warming of 1.5°C*, <https://www.ipcc.ch/sr15/>.

⁴⁴ See EPA, EPA, *Greenhouse Gas Inventory Data Explorer*, <https://cfpub.epa.gov/ghgdata/inventoryexplorer/>. (Specifically, EPA uses the 2006 Intergovernmental Panel on Climate Change's methodologies, as recommended by the United Nations Framework Convention on Climate Change, available at <https://unfccc.int/process-and-meetings/transparency-and-reporting/reporting-and-review-under-the-convention/greenhouse-gas-inventories-annex-i-parties/reporting-requirements>); see, also Homgmin Dong, et al., *Emissions From Livestock and Manure Management*, 4 Agriculture, Forestry and Other Land Use (2006), https://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/4_Volume4/V4_10_Ch10_Livestock.pdf (IPCC guidance on livestock emissions inventory).

⁴⁵ EPA, *Greenhouse Gas Inventory Data Explorer*, <https://cfpub.epa.gov/ghgdata/inventoryexplorer/>.

⁴⁶ *Id.*

⁴⁷ *Id.*

⁴⁸ *Id.*

⁴⁹ *Id.*

⁵⁰ *Id.*

⁵¹ *Id.*

⁵² Ecology, *Washington State Greenhouse Gas Emissions Inventory: 1990-2018*, WA State Dept. of Ecology Pub. 20-02-020 (Jan. 2021), <https://apps.ecology.wa.gov/publications/documents/2002020.pdf> (see p.10 for an explanation of Ecology's methodological approach).

b. Emissions Reporting Data for Washington State

Ecology also collects data via mandated reporting from entities meeting certain emissions thresholds at the state level.⁵³ These data provide some information about the contribution of unusually large emitters in the state but fail to capture emissions data for the vast majority of CAFOs in the state. They therefore underestimate total and likely proportional contributions by CAFOs to total Washington State emissions.

Ecology imposes a reporting requirement for entities within the state emitting 10,000 metric tons of CO₂e or more per year.⁵⁴ This threshold is plainly inadequate, however. Recent reporting data for CAFOs are submitted by five CAFOs subject to the requirement.⁵⁵ Therefore, these data fail to capture most of the CH₄ and NO₂ emissions from CAFOs that reach the atmosphere and exacerbate global climate change.⁵⁶

Even without most CAFOs reporting, however, the data indicate that in 2019 livestock make up over 25% of the state's N₂O emissions, releasing 93,634 metric tons CO₂e of the molecule that year alone.⁵⁷ The data also indicate these five facilities combined released 106,448 metric tons CO₂e in 2019. They released 5,032 metric tons CO₂ and 0.01% of the state's carbon dioxide emissions. Finally, these five CAFOs alone released a sizeable amount of CH₄ at 7,781 metric tons CO₂e.

Because only five entities are represented, these data provide information covering a fraction of the total actual agricultural emissions across the state. This is a symptom of the general problem with NPDES coverage. Despite the requirement that all discharging CAFOs be covered under permit,⁵⁸ Ecology's permitting program only

⁵³ See 40 C.F.R. §§ 98.2(a)(1), Table A-3, 98.360, Subpart JJ (EPA's regulations require "manure management systems with combined CH₄ and N₂O emissions in amounts equivalent to 25,000 metric tons CO₂e or more per year" to report such emissions to the agency.. However, almost immediately after EPA imposed this requirement, Congress nullified it by exempting these operations from reporting requirements.), <https://www.epa.gov/ghgreporting/subpart-jj-manure-management>; see also McAfee & Taft, *Tracking EPA's enforcement of the CAFO Mandatory Greenhouse Gas Reporting Rule*, McAfee & Taft AgLINC (Dec. 1, 2010), <https://www.mcafeetaft.com/tracking-epas-enforcement-of-the-cafo-mandatorygreenhousegasreportingrule/>.

⁵⁴ WAC173-441-030(1)(a).

⁵⁵ Ecology, *GHG Reporting Program Pie by Sector*, WA State Greenhouse Gas Emissions Inventory (Feb. 7, 2022), <https://data.wa.gov/Natural-Resources-Environment/GHG-Reporting-Program-Pie-by-Sector/9zjz-tfi5> (Of these five, only a handful are covered by NPDES or other water quality permits. These operations are DH Feeders, El Oro Cattle Feeders, Horse Heaven Cattle Feeders, Riverside Feeders, and Simplot Feeders. Notably, three of these five facilities do not have any NPDES permits on record.).

⁵⁶ Ecology's estimate of the contribution of CAFOs to emissions in its fact sheet relies on these data and so *underestimates* CAFO contribution to the crisis. Ecology, Fact Sheet for the Draft Concentrated Animal Feeding Operation General Permits at 25 (June 2022) (Fact Sheet).

⁵⁷ See Ecology, *GHG Reporting Program Pie by Sector*, WA State Greenhouse Gas Emissions Inventory (Feb. 7, 2022), <https://data.wa.gov/Natural-Resources-Environment/GHG-Reporting-Program-Pie-by-Sector/9zjz-tfi5> The data are "in units of metric tons of carbon dioxide equivalents using AR4 global warming potentials as specified in WAC 173-441."); see also Ecology, *GHG Reporting Program Publication*, (Jan. 12, 2022), <https://data.wa.gov/Natural-Resources-Environment/GHG-Reporting-Program-Publication/idhm-59de>.

⁵⁸ RCW 90.48.160.

reached 13% of all CAFOs in Washington in 2021.⁵⁹ Without analysis showing otherwise, we do not believe that the highest emitting operations in the state do not discharge. Yet, implausibly, this is what the public is asked to accept under the current reporting and permitting regimes. While permits map imperfectly against emissions data, it is clear that both streams of data fail to capture the profound environmental impacts of CAFOs. On top of the fact that NPDES permits were created to allow different industries to pollute our waters, Ecology fails to adequately regulate CAFOs using these very permits.

This failure to mandate reporting by most of the state’s CAFOs results from underreporting and a poorly calibrated threshold. As such, the reporting data are – as with the inventory data – a limited tool for understanding the complete contribution of agricultural emissions within the state. Because of the incomplete nature of these data, they *underestimate* total and likely also proportional contributions of Washington State CAFOs to total GHG emissions reaching the atmosphere and driving up global mean temperature. Even with this spotty and incomplete data, however, it is clear that CAFOs are some of the state’s highest contributors of potent GHGs to the global atmosphere. Therefore, it is impossible to fully account for Washington’s emissions and impossible to fully mitigate the crisis without accounting for and regulating CAFOs. This accounting must be undertaken without incorporating magical thinking around offsets such as manure digesters.⁶⁰ The urgency of the climate crisis means that Ecology must consider CAFO’s role in driving the climate crisis across all policies and practices touching on these operations.

B. The Climate Crisis Exacerbates CAFO Impacts on the Environment

The increase in temperature has already disrupted weather and water cycles across the globe. Because GHGs remain in the atmosphere for a decade to a thousand years, halting emissions today would still not be sufficient to protect against further harms.⁶¹ Therefore, the longer the world waits to address the issue, the harder it will be to solve.⁶²

Climate change causes extremes of temperature on both ends of the spectrum, including heatwaves such as the high temperature event of June 2021, and increasing scope

⁵⁹ See WSDA, *Public Disclosure*, (June 2022), <https://agr.wa.gov/contact-us/public-disclosure>; see also WSDA, *Licensed Certified Feedlots – Public Markets*, (June 2022), <https://agr.wa.gov/departments/animals-livestock-and-pets/livestock/licensed-certified-feedlots-public-markets>; see Ecology, *Water Quality Permitting and Reporting Information*, (June 2022), <https://apps.ecology.wa.gov/paris/PermitLookup.aspx> (enter “CAFO” into the “Look up a permit” search bar); but see EPA, *National Summary, Endyear 2020, completed 05/11/21*, (June 2022), https://www.epa.gov/sites/default/files/2021-05/documents/cafo_status_report_2020.pdf. Specifically, 26 out of 196 CAFOs in Washington State are covered by NPDES permits.

⁶⁰ Currently there are too few anaerobic digesters in Washington State, and their current and near-future impact on emissions is too speculative for Ecology to rely upon this technology in its analysis of the climate impacts of CAFOs.

⁶¹ Jake Ellison, *UW authors in IPCC report emphasize threats to human health and well-being*, UW News (Feb. 28, 2022), <https://www.washington.edu/news/2022/02/28/uw-authors-in-ipcc-report-emphasize-threats-to-human-health-and-well-being/>.

⁶² *Id.*

of extremely low temperatures through impacting of the polar vortex.⁶³ It also disrupts hydrogeological systems, impacting surface water flow, temperature and quality, and quantity and quality of groundwater, and contributes to more frequent and intense weather events (hurricane, drought, and flooding) and other disasters, such as massive forest fires.⁶⁴ The risk to the world's population from these global shifts in weather range from temperature-related mortality, extraordinary disruption from massive storms, and the loss of homeland.⁶⁵

The physical impacts of climate change touch every species on the planet, exacerbating what is already a sixth mass extinction event by driving changes in distribution, abundance and behavior as organisms react to more extreme weather events, and shifts in the timing of seasons.⁶⁶ It drives ocean acidification, which prevents marine species, such as corals, from calcifying exoskeletons and support structures and, in turn, increases the likelihood of ecosystem collapse.⁶⁷ Warming water, changing wind conditions, and alteration in solar radiation increases the risk of eutrophication which threatens a variety of aquatic animals by limiting dissolved oxygen, creating anoxic dead zones, and increasing the risk of harmful algae blooms.⁶⁸ At some point, repeated, and ongoing eutrophication may drive new stable states where the system is "permanently" eutrophic.⁶⁹ Finally, climate change's physical and biological impacts intersect with

⁶³ UC Davis, *Polar Vortex*, (2019), <https://climatechange.ucdavis.edu/climate/definitions/what-is-the-polar-vortex>.

⁶⁴ See, e.g., Wu Wen-Ying, et al., *Divergent effects of climate change on future groundwater availability in key mid-latitude aquifers*, *Nature Communications* (2020), <https://www.nature.com/articles/s41467-020-17581-y.pdf>;

⁶⁵ Satchit Balsari, et al., *Climate Change, Migration, and Civil Strife*, 7 *Curr. Envir. Health Rpt.* 404 (2020), <https://link.springer.com/article/10.1007/s40572-020-00291-4>. See also Abraham Lustgarten, *The Great Climate Migration*, *New York Times* (July 23, 2020) available at <https://www.nytimes.com/interactive/2020/07/23/magazine/climate-migration.html>.

⁶⁶ Guilherme Jeremias, et al., *Synthesizing the role of epigenetics in the response and adaptation of species to climate change in freshwater ecosystems*, 26 *Molecular Ecology* 2790-2806 (May 26, 2018), <https://onlinelibrary.wiley.com/doi/full/10.1111/mec.14727>; Jonas A. Aguirre-Liguori, et al., *The evolutionary genomics of species' responses to climate change*, 5 *Nature Ecology & Evolution* 1350 (2021); Erica L. Larson, et al., *Insect hybridization and climate change*, *Frontiers in Ecology and Evolution* 7 (2019), <https://www.frontiersin.org/articles/10.3389/fevo.2019.00348/full>.

⁶⁷ Lucie M. Bland, et al., *Using multiple lines of evidence to assess the risk of ecosystem collapse*, *Proceedings of the Royal Society B: Biological Sciences* 284.1863 (2017), <https://royalsocietypublishing.org/doi/full/10.1098/rspb.2017.0660>.

⁶⁸ M. Nazari Sharabian, et al., *Climate Change and Eutrophication: A Short Review*, 8 *Eng. Technol. Appl. Sci. Res.*, no. 6, 3668-72 (Dec. 2018) <https://www.nature.com/articles/s41598-021-02725-x.pdf>; https://digitalscholarship.unlv.edu/cgi/viewcontent.cgi?article=1561&context=fac_articles; Essie M. Rodgers, *Adding climate change to the mix: responses of aquatic ectotherms to the combined effects of eutrophication and warming* *Biology letters* 20210442 17.10 (2021) (Eutrophic water bodies also are less able to absorb carbon and therefore contribute to climate change.); Yi Li et al., *The role of freshwater eutrophication in greenhouse gas emissions: A review*, *Science of the Total Environment* 768 (2021): 144582.

⁶⁹ Stephen R. Carpenter, *Eutrophication of Aquatic Ecosystems: Bistability and Soil Phosphorus*, *PNAS* (June 22, 2005), <https://www.pnas.org/doi/10.1073/pnas.0503959102>.

pollutants, often exacerbating their impact and range of harm to human and nonhuman species alike.⁷⁰

While climate change is likely to drive many species extinct, disease-causing organisms and their vectors are likely to thrive, leading to an increased risk of epidemics and pandemics in human and non-human organisms alike.⁷¹ The world's food supply is vulnerable to climate change as a result of the mass extinction crisis, the increased range of disease vectors and the impact of drought, fire and extreme weather on crops.⁷² The world's water supply is vulnerable to climate change as a result of shifts in precipitation levels and frequency, changes in snowpack, increased risk of salination of water supplies.⁷³

Climate change is a threat multiplier driving the migration of climate refugees and the increasing global conflict.⁷⁴ This disruption, and conflict, as well as the loss of biodiversity, and the associated anxiety, negatively affect the world's population both spiritually and emotionally.⁷⁵

1. Impacts of Climate Change in Washington State

Climate change is no longer a theoretical possibility for the residents of Washington State. We have lost lives, lands, and have suffered health setbacks from the effects of the crisis. We have been displaced, lost natural and economic resources, and have experienced a wholesale shift in how we experience the weather, other species, and our waters and our

⁷⁰ See Hayley Hung, et al., *Climate change influence on the levels and trends of persistent organic pollutants (POPs) and chemicals of emerging Arctic concern (CEACs) in the Arctic physical environment – a review*, Environ. Sci.: Process Impacts (2022), <https://pubs.rsc.org/en/content/articlehtml/2022/em/d1em00485a>; see also Sara I. Zandalinas, et al., *Global Warming, Climate Change, and Environmental Pollution: Recipe for a Multifactorial Stress Combination Disaster*, 26 Science Direct 588-99 (June 2021), <https://www.sciencedirect.com/science/article/pii/S1360138521000583>; see also Henrique Cabral, et al., *Synergistic Effects of Climate Change and Marine Pollution: An Overlooked Interaction in Coastal and Estuarine Areas*, Int. J. Environ. Res. Public Health 16 (15) 2737 (2019), <https://www.mdpi.com/1660-4601/16/15/2737>; see also BBC News, *Bramble Cay melomys: Climate change-ravaged rodent listed as extinct*, BBC (Feb. 20, 2019) (Climate change has already driven an unknown number of species extinct, including the Bramble Cay melomys.).

⁷¹ Joacim Rocklöv & Robert Dubrow, *Climate change: an enduring challenge for vector-borne disease prevention and control*, Nature Immunology 21.5 479-83 (Apr. 29, 2020), <https://www.nature.com/articles/s41590-020-0648-y>.

⁷² UN, *The World's Food Supply is Made Insecure by Climate Change*, UNAI Food Security and Climate Change, <https://www.un.org/en/academic-impact/worlds-food-supply-made-insecure-climate-change>.

⁷³ See Tara Dooley, et al., *Thirsting for a Future: Water and children in a changing climate*, UNICEF Programme Division, Division of Data, Research and Policy, and Division of Communication (Mar. 2017), https://www.unicef.org/media/49621/file/UNICEF_Thirsting_for_a_Future_ENG.pdf; see also Bryson Bates, et al., *Climate Change and Water*, IPCC Technical Paper VI (June 2008), <https://www.ipcc.ch/site/assets/uploads/2018/03/climate-change-water-en.pdf>.

⁷⁴ Satchit Balsari, et al., *Climate Change, Migration, and Civil Strife*, 7 Curr. Envir. Health Rpt. 404 (2020), <https://link.springer.com/article/10.1007/s40572-020-00291-4>.

⁷⁵ See Ashlee Cunsolo, & Neville R. Ellis, *Ecological grief as a mental health response to climate change-related loss*, Nature Climate Change 8.4 275-81 (2018); see also Gary W. Evans, *Projected behavioral impacts of global climate change*, Annual Review of Psychology 70.1 449-74(2019), <http://co-jo.com/wp-content/uploads/2019/06/evans2018.pdf>.

air as a result of these impacts. Washington State, including the Department of Ecology failed to take the looming crisis seriously decades ago, and now it insists on regulating CAFOs as though we live those many decades ago, in a pre-climate change world.

The speed and intensity of the impacts of the climate crisis have even taken seasoned climatologists by surprise.⁷⁶ These irreversible changes usher in the decades of environmental disruption nearly assured by a history of governmental failures.⁷⁷ Ecology must aggressively mitigate every possible source, through every opportunity, including the CAFO NPDES permit. And it must embed coherent adaptation into its permitting of CAFOs. To do otherwise violates the law and betrays the agency's mandate to care for air and water of all current residents, their children, and the future generations of the state.

Washington State is already experiencing more extreme weather events more frequently with increasingly dire results. For example, last year's remarkable heat wave killed hundreds of people, cooked shellfish on beaches, decimated crops, and further stressed our forests.⁷⁸

Climate change has shifted Washington's hydrological cycle. Snowpack has declined and glaciers have melted.⁷⁹ Peak stream flow shifted more than have a month

⁷⁶ H.-O. Pörtner, et al., *Climate Change 2022: Impacts, Adaptation and Vulnerability*, IPCC (2022), https://www.ipcc.ch/report/ar6/wg2/downloads/report/IPCC_AR6_WGII_SummaryForPolicymakers.pdf (stating with high confidence that the “extent and magnitude of climate change impacts are larger than estimated in previous assessments” resulting in “[w]idespread deterioration of ecosystem structure and function, resilience and natural adaptive capacity, as well as shifts in seasonal timing have occurred due to climate change” resulting in “adverse socioeconomic consequences”)

⁷⁷ Bryson Bates, et al., *Climate Change and Water*, IPCC Technical Paper VI (June 2008), <https://www.ipcc.ch/site/assets/uploads/2018/03/climate-change-water-en.pdf>.

⁷⁸ See Julie Ingwersen, ‘Wither away and die:’ *Pacific Northwest heat wave bakes wheat, fruit crops*, Reuters (July 12, 2021), <https://www.reuters.com/world/us/wither-away-die-us-pacific-northwest-heat-wave-bakes-fruit-crops-2021-07-12/>; see also Evan Bush, *Birds jumped from their nests to escape Seattle's June heat wave. Some Died. Others needed help.*, The Seattle Times (July 28, 2021), <https://www.seattletimes.com/seattle-news/environment/birds-jumped-from-their-nests-to-escape-seattles-june-heat-wave-some-died-others-needed-help/>; see also Nadja Popvich & Winston Choi-Schagrin, *Hidden Toll of the Northwest Heat Wave: Hundreds of Extra Deaths*, New York Times (Aug. 11, 2022), <https://www.nytimes.com/interactive/2021/08/11/climate/deaths-pacific-northwest-heat-wave.html>; see also Catrin Einhorn, *Like in ‘Postapocalyptic Movies’: Heat Wave Killed Marine Wildlife en Masse*, New York Times (July 9, 2021), <https://www.nytimes.com/2021/07/09/climate/marine-heat-wave.html>; see also Brian Hagenbach, *Pacific Northwest heat wave causes vibrio bacteria outbreak in oysters*, SeafoodSource (Aug. 2, 2021), <https://www.seafoodsource.com/news/food-safety-health/pacific-northwest-heatwave-causes-vibrio-bacteria-outbreak-in-oysters>; see also Julia Rosen, *PNW scientists find ruin and resilience after summer heat wave*, High Country News (Dec. 9, 2021), <https://crosscut.com/environment/2021/12/pnw-scientists-find-ruin-and-resilience-after-summer-heat-wave>; see also Sergio Olmos & Jordan Gale, *When Hard Jobs Turn Hazardous*, New York Times (Sept. 4, 2021), <https://www.nytimes.com/2021/09/04/business/economy/heat-wildfires-drought-farmworkers.html>; see also Kyle Almekinder, *Using Spectral Indices to Determine the Effects of the Summer 2021 North American Heat Wave at Mount Rainier, Washington*, The University of Arizona (Oct. 8, 2022), https://repository.arizona.edu/bitstream/handle/10150/664141/MS-GIST_2022_Almekinder.pdf?sequence=3&isAllowed=y.

⁷⁹ H.A. Roop, et al., *Shifting Snowlines and Shorelines: The Intergovernmental Panel on Climate Change's Special Report on the Ocean and Cryosphere and Implications for Washington State*, Briefing paper

earlier in Puget Sound watersheds most dominated by snow melt.⁸⁰ The shift in snow melt regimes, as well as increasing surface temperatures, drives increased water temperatures, increased risk of eutrophication, and elevated harms from already dangerous levels of pollutants.⁸¹ In addition to the impact of changes in snow pack and snow melt timing, climate change drives increased intensity in precipitation events. The combined impact of decreased snowpack and increased precipitation intensity drives increased intensity of flooding events in regions such as Snohomish County.⁸²

Washington forests struggle under climate change impacts including drought, and insect outbreaks.⁸³ And forest health is further impacted by their increasing vulnerability to forest fires as a result of historic management approaches combined with accelerating climate change.⁸⁴ Forest fires which also threaten species, destroy property, increase the air pollution burden, and can result in loss of human life.⁸⁵

The state's shellfish, crabs and plankton have, for years, been suffering the impact of ocean acidification as well as warming ocean temperatures.⁸⁶ Cascading impacts of

prepared by the Climate Impacts Group, University of Washington, <https://cig.uw.edu/projects/shifting-snowlines-and-shorelines/> (between 1955 and 2916, spring snowpack declined by approximately 30 percent and melt reduced the total area of the North Cascades occupied by glacier by more than 56 percent since 1900).

⁸⁰ *Id.*

⁸¹ Northwest Fisheries Science Center, *Extinction Risk of Chinook Salmon Due to Climate Change*, NOAA Fisheries (Mar. 23, 2022), <https://www.fisheries.noaa.gov/west-coast/climate/extinction-risk-chinook-salmon-due-climate-change>.

⁸² Guillaume Mauger, et al., *Climate Change & Flooding in Snohomish County: New Dynamically Downscaled Hydrologic Model Projections*, Climate Impacts Group, University of Washington (2021), <https://cig.uw.edu/wp-content/uploads/sites/2/2022/07/Snohomish-WRF-DHSVM-Final-Report-DOI.pdf>.

⁸³ Michelle C. Agne, et al., *Interactions of predominant insects and diseases with climate change in Douglas-fir forests of western Oregon and Washington, U.S.A.*, 409 *Forest Ecology and Management* 317-22 (2018), https://sncc.forestry.oregonstate.edu/sites/default/files/Agne2018_FEM.pdf.

⁸⁴ William L. Gaines, et al., *Climate change and forest management on federal lands in the Pacific Northwest, USA: Managing for dynamic landscapes*, 505 *Forest Ecology and Management* 119794 (Jan. 15, 2022), <https://www.sciencedirect.com/science/article/pii/S0378112721008859>.

⁸⁵ See Annie Doubleday, et al., *Mortality associated with wildfire smoke exposure in Washington state, 2006-2017: a case-crossover study*, 19 *Environmental Health Art.* 4 (Jan. 13, 2020), <https://ehjournal.biomedcentral.com/articles/10.1186/s12940-020-0559-2>; see also Bobby Stevenson, et al., *How will climate change affect Northwest forests?*, *Climate Impacts in the Northwest*, <https://express.adobe.com/page/udaAw5GCBxYBe/>; see also Timothy Bella, *At least 7 dead, including 1-year-old boy, in West Coast wildfires*, *Washington Post* (Sept. 10, 2020), <https://www.washingtonpost.com/nation/2020/09/10/west-coast-wildfires-deaths/#:~:text=At%20least%20seven%20people%2C%20including%20a%201-year-old%20boy%2C,burning%20throughout%20the%20American%20West%2C%20officials%20announced%20Wednesday>.

⁸⁶ Nina Bednaršek, et al., *Chemical Exposure Due to Anthropogenic Ocean Acidification Increases Risks for Estuarine Calcifiers in the Saltish Sea: Biogeochemical Model Scenarios*, *Front. Mar. Sci.* (July 10, 2020), <https://www.frontiersin.org/articles/10.3389/fmars.2020.00580/full>; see also Hedia Adelman, et al., *Ocean Acidification: From Knowledge to Action*, *Ecology* (Nov. 2012), <https://apps.ecology.wa.gov/publications/documents/1201015.pdf>; see also Jan Newton & Terrie Klinger, *OA in the Pacific Northwest*, University of Washington (2012), <https://environment.uw.edu/ocean->

temperature changes from shifts in hydrological cycles, changes in stream flow regimes, increasing rates of eutrophication, cumulative harms from pollutants and toxics are driving precipitous declines in species such as Chinook salmon.⁸⁷ The loss of prey species from cumulative harms drive declines in marine species such as yellowtail rockfish and Southern Resident killer whale.⁸⁸ Terrestrial species such as the Cascades frog and the greater sage-grouse are at risk from the impact of climate change including through the loss of habitat such as shrub-steppe.⁸⁹

The sea level along the coastline of Washington State is rising as glaciers melt.⁹⁰ The resultant flooding threatens infrastructure, including railway lines, and increases risk of toxic runoff.⁹¹ This rising sea level is also driving the loss of entire villages. Multiple

[acidification-in-the-pacific-northwest/](#); see also Nina Bednaršek, et al., *Exoskeleton dissolution with mechanoreceptor damage in larval Dungeness crab related to severity of present-day ocean acidification vertical gradients*, 716 *Science of the Total Environment* 136610 (May 10, 2020), <https://www.sciencedirect.com/science/article/abs/pii/S0048969720301200>; see also Ecology, *Acidification in Puget Sound*, <https://ecology.wa.gov/Water-Shorelines/Puget-Sound/Issues-problems/Acidification>.

⁸⁷ Lisa G. Crozier, et al., *Climate change threatens Chinook salmon throughout their life cycle*, *Communications Biology* 4.1 1-14 (2021), <https://www.nature.com/articles/s42003-021-01734-w>.

⁸⁸ See A.K. Snover, et al., *Climate Change Impacts and Adaptation in Washington State: Technical Summaries for Decision Makers*, Climate Impacts Group, University of Washington 6-1 (2013); see also Marine Mammal Commission, *Southern Resident Killer Whale*, Marine Mammal Commission (2020), <https://www.mmc.gov/priority-topics/species-of-concern/southern-resident-killer-whale/>.

⁸⁹ See Dan Siemann, et al., *Climate Change Effects on Shrub-Steppe and Grassland Habitats in Washington State*, WDFW and the National Wildlife Federation (July 2011), <https://wdfw.wa.gov/sites/default/files/publications/01203/wdfw01203.pdf>; see also Pete Bisson, *Salmon and Trout in the Pacific Northwest and Climate Change*, USDA Climate Change Resource Center (June 2008), <https://www.fs.usda.gov/ccrc/topics/salmon-and-trout>; see also Amanda M. Kissel, et al., *Compounding effects of climate change reduce population viability of a montane amphibian*, *Ecological Applications* 29.2 e0183 (2019), <https://esajournals.onlinelibrary.wiley.com/doi/abs/10.1002/eap.1832>.

⁹⁰ H.A. Roop, et al., *Shifting Snowlines and Shorelines: The Intergovernmental Panel on Climate Change's Special Report on the Ocean and Cryosphere and Implications for Washington State*, Briefing paper prepared by the Climate Impacts Group, University of Washington, <https://cig.uw.edu/projects/shifting-snowlines-and-shorelines/> (between 1955 and 2916, spring snowpack declined by approximately 30 percent and melt reduced the total area of the North Cascades occupied by glacier by more than 56 percent since 1900). (The total rise varies but in Friday Harbor on San Juan Island in northern Puget sound, the sea level has risen more than four inches since 1934).

⁹¹ See John Ryan, *Sea level on steroids: Record tides flood Washington coastlines*, KUOW News (Jan. 9, 2022), <https://www.kuow.org/stories/record-setting-tides-flood-washington-coastlines>; see also Phil Ferolito, *Snipes Mountain Dairy cited in Outlook flood incident; no penalty issue*, *Yakima Herald* (July 10, 2017), https://www.yakimaherald.com/news/local/snipes-mountain-dairy-cited-in-outlook-flood-incident-no-penalty-issued/article_e5610056-659b-11e7-8331-1f15d64e5251.html#:~:text=OUTLOOK%2C%20Wash.%20-%20An%20Outlook%20dairy%20has%20been,flooding%20incident%20that%20inundated%20part%20of%20nearby%20community.

Tribal nations are now relocating in the face of the threat to their communities.⁹² Finally, the climate crisis is already having an impact on the mental health of Washingtonians.⁹³

Climate destabilization is locked in for the next decades, so any action Ecology takes as a regulatory agency, such as NPDES permitting, must also take climate impacts into account. Further, while we are most certainly going to experience impacts of the climate crisis into the future, the full extent of the harm depends on how rapidly we curtail emissions. There is still a window to protect current and future generations from the worst, but it is a narrow one, and it requires every single agency, and person with capacity and power to consider every source of GHG when they are making decisions about how to regulate the entities driving the climate crisis, including CAFOs.

2. Impacts of Climate Change on the Harm from CAFO Pollution

Ecology's dairy CAFO NPDES permitting is necessary, and mandated under the CWA and the Washington State Water Pollution Control Act (WPCA) because the concentration of dairy cows and calves on these sites results in urine and manure that, without proper management, discharge into groundwater and surface waters and harm the health of humans, other species, and aquatic ecosystems.⁹⁴ Climate change magnifies these impacts.⁹⁵ . =Any permit that is not embedded in the context of climate change cannot fulfill the minimum goals of the CWA's NPDES permitting program and the WPCA's legal mandate. As described in our technical comment,⁹⁶ the draft General Permit fails to comply with either state or federal water quality law. This would be true even if the hydrological cycle and weather patterns were not being impacted by the climate crisis. But given that these systems that will be, over the life of the permit, deeply dynamic, the General Permit, if released in its current draft form, will be obsolete at the moment of issuance..

a. CAFO Discharges and Water Quality

Because they concentrate animals into relatively small areas, dairy CAFOs produce excessive amounts of manure, and process wastewater. These waste products contain nitrogen and phosphorous, ammonia, viruses and microbial pathogens, growth hormones,

⁹² EPA, *Quinault Indian Nation Plans for Relocation*, U.S. Environmental Protection Agency (last updated Mar. 15, 2022), <https://www.epa.gov/arc-x/quinault-indian-nation-plans-relocation>.

⁹³ Ashli Blow, *Climate Change Takes a Toll on Seattleites' Mental Health*, Crosscut (June 6, 2022), <https://crosscut.com/environment/2022/06/climate-change-takes-toll-seattleites-mental-health>.

⁹⁴ See Carrie Hribar, *Understanding Concentrated Animal Feeding Operations and Their Impact on Communities*, Nat'l. Assoc. of Local Boards of Health (2010), https://www.cdc.gov/nceh/ehs/docs/understanding_cafos_nalboh.pdf; see also Paul Ebner, *CAFOs and Public Health: Pathogens and Manure*, Purdue University (Aug. 2007), <https://www.extension.purdue.edu/extmedia/id/cafo/id-356.pdf>.

⁹⁵ See *id.*

⁹⁶ 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, (August 17, 2022) (technical comment).

antibiotics, chemicals used as additives to the manure or to clean equipment, animal blood, silage leachate, and copper sulfate.⁹⁷

CAFOs attempt to manage this waste by using it as fertilizer for crop lands during part of the year. During the rest of the year, CAFOs store it in lagoons, tanks, or composting areas in preparation to add to crops or sell. Lagoons and composting areas can discharge pollutants into groundwater. Accumulated waste in pens and corrals have the potential to discharge as well. Finally, because of the imbalance between crop needs and CAFO byproducts, application to crops also results in leaching nitrogen into groundwater and, ultimately surface water, and run-off of phosphorous into surface water. The release of these contaminants into waters impairs drinking water, impedes other water-related activities, harms other species and impacts ecosystem balance.⁹⁸

Nitrates in water are hazardous when consumed by vulnerable populations because they impact the capacity of the blood to carry oxygen. Infants are particularly vulnerable and suffer blue baby syndrome or death from exposure.⁹⁹ Adults exposed to high concentrations of nitrates risk poor health and potentially higher rates of stomach and esophageal cancer.¹⁰⁰ For those living in communities with multiple overlapping environmental risks, such as Yakima County, exposure to nitrates in water compounds the already harmful impacts of hazardous air, heat exposure and other challenges. Pregnant women exposed to nitrates risk giving birth to babies with birth defects or losing them through miscarriage.¹⁰¹

Phosphorous and nitrates interrupt aquatic ecosystems. Phosphorous supports nitrogen fixation by cyanobacteria and so its presence allows this micro-organism to outcompete other algae resulting in hazardous blooms that produce toxins that affect the liver, nerves or skin in humans and other animals.¹⁰² Both nitrates and phosphorous drive surface water eutrophication.¹⁰³ Nitrogen in the form of ammonia contributes to these harms by depleting oxygen and killing aquatic life. It also converts to nitrates, adding to the nitrate load of surface waters and further driving eutrophication.¹⁰⁴

⁹⁷ See Carrie Hribar, *Understanding Concentrated Animal Feeding Operations and Their Impact on Communities*, Nat'l. Assoc. of Local Boards of Health (2010), https://www.cdc.gov/nceh/ehs/docs/understanding_cafos_nalboh.pdf; see also Paul Ebner, *CAFOs and Public Health: Pathogens and Manure*, Purdue University (Aug. 2007), <https://www.extension.purdue.edu/extmedia/id/cafo/id-356.pdf>.

⁹⁸ Yagiong Guo, et al., *Association of Common Zoonotic Pathogens with Concentrated Animal Feeding Operations*, *Frontiers in Microbiology* (Jan. 10, 2022), <https://www.frontiersin.org/articles/10.3389/fmicb.2021.810142/full>.

⁹⁹ Carrie Hribar, *Understanding Concentrated Animal Feeding Operations and Their Impact on Communities*, Nat'l. Assoc. of Local Boards of Health (2010), https://www.cdc.gov/nceh/ehs/docs/understanding_cafos_nalboh.pdf;

¹⁰⁰ *Id.*

¹⁰¹ *Id.*

¹⁰² *Id.*

¹⁰³ *Id.*

¹⁰⁴ *Id.*

CAFOs are also responsible for the discharge of pathogens that are harmful to humans and other animals such as viruses, pathogenic bacteria such as *E. coli*, *Salmonella*, and *Campylobacter*, protozoan pathogens *Giardia* and other parasites such as *Cryptosporidium parvum*.¹⁰⁵ Present alongside these disease vectors is fecal coliform, which, when detected at high levels, serves as an indicator of potential pathogens in water and drives public health responses including shutting down shellfish harvests and closing beaches.¹⁰⁶ Finally, hormones released from CAFOs into surface waters impact aquatic animal reproduction, reducing fertility in some species of fish.¹⁰⁷

b. Compounding Impacts of Climate Change and CAFO Discharge

As described above, climate change profoundly impacts the waters of the state. When CAFOs discharge to these impacted waters, the effect of the multitude of harmful components of that discharge on the water add to the already harmful impacts of climate change. Further, the impact of these components, particularly nitrogen and phosphorous, ammonia, and microbial pathogens is likely amplified by increased concentrations, increased temperatures, and systems already made vulnerable by multiple and cumulative environmental stressors.¹⁰⁸ Increasingly extreme weather events such as heat domes, unusual polar vortex behavior increases the likelihood of large animal die-offs and

¹⁰⁵ Carrie Hribar, *Understanding Concentrated Animal Feeding Operations and Their Impact on Communities*, Nat'l. Assoc. of Local Boards of Health (2010), https://www.cdc.gov/nceh/ehs/docs/understanding_cafos_nalboh.pdf; Yagiong Guo, et al., *Association of Common Zoonotic Pathogens with Concentrated Animal Feeding Operations*, *Frontiers in Microbiology* (Jan. 10, 2022), <https://www.frontiersin.org/articles/10.3389/fmicb.2021.810142/full>; see also Paul Ebner, *CAFOs and Public Health: Pathogens and Manure*, Purdue University (August, 2007) <https://www.extension.purdue.edu/extmedia/id/cafo/id-356.pdf>; see also Malcolm J. Brandt, et al., *Coliform Bacterium*, *Environmental Microbiology* (Third Edition) (2015), <https://www.sciencedirect.com/topics/earth-and-planetary-sciences/coliform-bacterium>; Miguella P. Mark-Carew, et al., *Incidence of and Risks Associated with Giardia Infections in Herds on Dairy Farms in the New York City Watershed*, *Acta Vet Scand* (June 21, 2010), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2904781/>.

¹⁰⁶ *Id.*

¹⁰⁷ Carrie Hribar, *Understanding Concentrated Animal Feeding Operations and Their Impact on Communities*, Nat'l. Assoc. of Local Boards of Health (2010), https://www.cdc.gov/nceh/ehs/docs/understanding_cafos_nalboh.pdf;

¹⁰⁸ Carrie Hribar, *Understanding Concentrated Animal Feeding Operations and Their Impact on Communities*, Nat'l. Assoc. of Local Boards of Health (2010), https://www.cdc.gov/nceh/ehs/docs/understanding_cafos_nalboh.pdf; Yagiong Guo, et al., *Association of Common Zoonotic Pathogens with Concentrated Animal Feeding Operations*, *Frontiers in Microbiology* (Jan. 10, 2022), <https://www.frontiersin.org/articles/10.3389/fmicb.2021.810142/full>; see also Paul Ebner, *CAFOs and Public Health: Pathogens and Manure*, Purdue University (August, 2007) <https://www.extension.purdue.edu/extmedia/id/cafo/id-356.pdf>; see also Malcolm J. Brandt, et al., *Coliform Bacterium*, *Environmental Microbiology* (Third Edition) (2015), <https://www.sciencedirect.com/topics/earth-and-planetary-sciences/coliform-bacterium>; Miguella P. Mark-Carew, et al., *Incidence of and Risks Associated with Giardia Infections in Herds on Dairy Farms in the New York City Watershed*, *Acta Vet Scand* (June 21, 2010), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2904781/>.

contamination from decaying bodies leaching into soils.¹⁰⁹ Similarly, increasing rates and intensity of atmospheric river events increase the likelihood of flooding in regions with floodplains such as Skagit, Snohomish, and Whatcom Counties where CAFOs are concentrated.¹¹⁰ We attach a set of maps documenting this clustering to this comment.

These clustered CAFOs in a region where extreme weather and changing water cycles will lead to more severe flooding events results in an increasing risk that storm runoff carrying CAFO discharges will reach waters. The dangers of regulating without adaptation includes the likelihood that CAFO infrastructure intended to protect against such discharge (e.g. manure ponds), will fail regularly into the future.¹¹¹ Flooding also kills cattle and potentially pollutes waterways from decaying bodies.¹¹²

At the same time, as snowpack declines and cycles of reduced rainfall occur, along with the periodic intense flooding, CAFO discharges meet ground and surface water bodies already depleted, so the harmful components of these discharges remain more concentrated. For humans and other species, this means an increased risk of illness from pathogens and nitrates.

Further, for surface waters, climate change by increasing the temperature, changing wind and solar radiation patterns, and decreasing the total amount of water in surface and groundwater systems, increases the likelihood of eutrophication, dead zones, and harmful cyanobacteria blooms. The addition of nitrates, ammonia and phosphorous can tip

¹⁰⁹ Donald W. Meyers, *Blizzard kills more than 1,600 dairy cows in Lower Yakima Valley*, Yakima Herald-Republic (Feb. 12, 2019), https://www.yakimaherald.com/news/local/blizzard-kills-more-than-1-600-dairy-cows-in-lower-yakima-valley/article_3d8bd5c0-2f2c-11e9-98e6-d7f06ec067c6.html.

¹¹⁰ See Se-Yeun Lee & Alan F. Hamlet, *Skagit River Basin Climate Science Report*, Skagit County and the Envision Skagit Project (Sept. 2011), <https://www.skagitcounty.net/EnvisionSkagit/Documents/ClimateChange/Complete.pdf>

Guillame Mauger, et al., *Climate Change & Flooding in Snohomish County: New Dynamically Downscaled Hydrologic Model Projections*, Climate Impacts Group, University of Washington (2021), <https://cig.uw.edu/wp-content/uploads/sites/2/2022/07/Snohomish-WRF-DHSVM-Final-Report-DOI.pdf>; John Prizzi, *Preliminary Assessment of Flooding Hazards in the Nooksack River Watershed, Washington State, and its Effect on Water Quality and the Local Shellfish Industry*, Univ. of British Columbia (2017), <https://mlws.landfood.ubc.ca/all-projects/prizzi-2017-prem-assessment-of-flooding-hazards-in-the-nooksack-river-watershed/>.

¹¹¹ See Se-Yeun Lee & Alan F. Hamlet, *Skagit River Basin Climate Science Report*, Skagit County and the Envision Skagit Project (Sept. 2011), <https://www.skagitcounty.net/EnvisionSkagit/Documents/ClimateChange/Complete.pdf>; see also

Guillame Mauger, et al., *Climate Change & Flooding in Snohomish County: New Dynamically Downscaled Hydrologic Model Projections*, Climate Impacts Group, University of Washington (2021), <https://cig.uw.edu/wp-content/uploads/sites/2/2022/07/Snohomish-WRF-DHSVM-Final-Report-DOI.pdf>; John Prizzi, *Preliminary Assessment of Flooding Hazards in the Nooksack River Watershed, Washington State, and its Effect on Water Quality and the Local Shellfish Industry*, Univ. of British Columbia (2017), <https://mlws.landfood.ubc.ca/all-projects/prizzi-2017-prem-assessment-of-flooding-hazards-in-the-nooksack-river-watershed/>.

¹¹² Kirk Johnson, 'Just Total Chaos'; *Floods Bring Death and Devastation to Dairies*, New York Times (Dec. 7, 2021), <https://www.nytimes.com/2021/12/06/us/washington-floods-dairy-farmers.html> (describing destruction of dairy CAFO infrastructure during the 2021 Nooksack River floods, the death of “[d]ozens of cattle.”).

vulnerable systems into these states, and can lead to permanently eutrophic water systems.¹¹³ These multiplying risk factors hurt species already challenged by changing flow regimes, increased temperatures and pathogens and toxins in the waters, such as Chinook salmon, driving them closer to extinction in the state's waters and bringing their predators, such as the Southern Resident killer whale that much closer to extinction.

C. Ecology Started To Incorporate Mitigation Into Regulation of CAFOs But Failed To Embed Adaptation Into Permitting

Under SEPA's broad duties, Ecology must consider climate change in its actions regulating CAFOs. This includes requiring mitigation of impacts as well as incorporating adaptation into permitting. Ecology began the process of requiring mitigation efforts in this draft permit. Unfortunately, it failed to provide for any adaptation, or even recognize that climate change has, and will continue to, impact the environment into which CAFOs discharge.

1. Ecology identified the impact of CAFOs on the climate crisis, and incorporated some management elements aimed at reducing N₂O emissions.

Ecology incorporated steps towards adequate action on mitigation of CAFO emissions in its draft General Permit. To fully realize the multiple mandates over the agency to address the climate crisis, Ecology should continue to expand, and strengthen these efforts.

As Ecology recognized in the Fact Sheet “[a]griculture, in general, has an opportunity to play a significant role in reducing the climate warming gas nitrous oxide.”¹¹⁴ Additionally, a “key goal” of the permit, according to Ecology, is to prohibit “nutrient applications when the field is saturated”.¹¹⁵ To that end, the General Permit directs the permittee to make sure nitrate is not applied to crops in excess of what is required to reach estimated yield.¹¹⁶ The permit also directs the permittee to estimate nitrogen mineralization and nitrogen loss through volatilization during application to the land. These are steps in the right direction, although it is not entirely clear from the permit how Ecology anticipates ensuring compliance.

Unfortunately, the permit does not directly address CH₄ emissions, even though the Fact Sheet identifies composting manure as opposed to stockpiling solid manures as one way to reduce CH₄ emissions. More generally, Ecology fails to take a full account of the impact of the permitting program on the emissions across the state. This is essential to the consideration of climate change in the context of the permit. Furthermore, it is mandated by SEPA.

2. Ecology failed to consider how climate change exacerbates CAFO impacts on the environment

¹¹³ Stephen R. Carpenter, *Eutrophication of Aquatic Ecosystems: Bistability and Soil Phosphorus*, PNAS (June 22, 2005), <https://www.pnas.org/doi/10.1073/pnas.0503959102>.

¹¹⁴ Fact Sheet at 25.

¹¹⁵ *Id.*

¹¹⁶ General Permit at 29, 30, 32.

Despite the clear mandate to consider climate change, the General Permit includes no analysis of the impact of climate change on streamflow timing, snowmelt, water table levels, temperature of waterbodies, extreme weather events such as heat waves, and flooding or any of the many other impacts of climate change we describe above that will directly affect the impact of CAFO discharges.

First, Ecology fails to anticipate, analyze, or incorporate an analysis of the impact of discharge on the changes in conditions. As discussed in our technical comment the draft General Permit will allow harmful discharge including nitrate, phosphorous and disease-causing micro-organisms from production areas, composting areas, lagoons, and field applications. This failure ranges from an exemption for areas' agricultural stormwater, no limits for field application of phosphorous, the failure to require lagoons built using effective technology, and the failure to mandate effective management of animal carcasses. Discharge entering surface and groundwater under this permit will be magnified over time by the impacts of the climate crisis.

Second, Ecology fails to address the fact that climate change brings increasing rates and intensity of atmospheric river events which increase the likelihood of flooding in regions such as Skagit, Snohomish, and Whatcom Counties. CAFOs across these counties are located within floodplains. (See Appendix 1). When these regions see floods, which they do, and will continue to, in increasing rates into the future, the storm runoff carries CAFO discharges into waters, including from CAFO infrastructure intended to protect against such discharge (e.g. manure ponds). These flood events also kill cattle. Because the draft General Permit fails to address impacts from decaying carcasses result in pollutants reaching surface and ground water from those bodies.

Third, Ecology fails to recognize or analyze the increasing likelihood of extreme heat from heat domes, and unusual polar vortex behavior resulting in extreme cold snaps, both of which risk large animal die-offs. The failure to consider these impacts of the climate crisis, impacts we are well familiar with already is exacerbated by the agency's failure to embed a plan for effectively addressing animal carcasses to prevent discharge and contamination from decaying animal bodies.

Finally, the permit fails to incorporate effective water monitoring, as described in our technical comment. Because the climate crisis has thrown the hydrological and weather systems into more dynamic states, effective monitoring is perhaps even more important than it was in a reasonably predictable climate regime. Without adequate monitoring in a climate crises means that the state and the public will likely not have a sense of the true impacts of these facilities on the environments entrusted to Ecology for current and future generations.

Even if the General Permit complied with the CWA, this failure to incorporate consideration of the intersection between climate impacts and discharge would be counter to Ecology's duty under SEPA. But given the permit's failure to comply with state and federal law the failure to consider climate impacts magnifies this failure across the laws governing this permit's issuance.

III. Environmental Impact Statements Under SEPA and the Threshold Determination

Because SEPA functions as an “environmental full disclosure law,”¹¹⁷ when agencies propose “major actions significantly affecting the quality of the environment” they must complete an Environmental Impact Statement (EIS).¹¹⁸ This requirement to gather, analyze and share information is essential to realizing SEPA’s broad goals and policies and necessary to ensure that the people of the state are able to “to shape their future environment by deliberation, not default.”¹¹⁹ This information gathering and analysis must be completed by the applicant and/or the lead agency and should include consultation with Tribes and with other expert agencies.¹²⁰

A. Threshold Determination

Along with the draft General Permit, Ecology issued a determination of nonsignificance (DNS) under SEPA excusing it from undertaking an EIS.

This threshold determination is the first step in the EIS process.¹²¹ The lead agency,¹²² here Ecology, issues the threshold determination after it reviews the information provided by the applicant, here also Ecology, in its SEPA Checklist. It then determines whether an EIS is required.¹²³ The information the agency must consider under SEPA is broad and includes the following elements of the environment:

- Natural elements including earth, air and climate, water, plants and animals, energy and natural resources.
- The built environment including environmental health, land and shoreline use, transportation, public services and utilities.¹²⁴

Only if, after reviewing information and analyses of the proposed action’s impact on this broad range of environmental elements, the lead agency determines that there “will be no probable significant adverse environmental impacts from a proposal” may it issue a DNS, ending the EIS requirement.¹²⁵ “If . . . the lead agency reasonably believes that a proposal may have a significant adverse impact, an EIS is required.”¹²⁶

¹¹⁷ *Norway Hill Pres. & Prot. Ass’n v. King County Council*, 87 Wn.2d 267, 272, 552 P.2d 674 (1976). See 43.21C.030(2)(c); WAC 197-11-400 to -440. See also *King County v. Wash. State Boundary Review Bd. for King County*, 122 Wn.2d 648, 664, 860 P.2d 1024 (1993).

¹¹⁸ RCW 43.21C.030(c). See also RCW 43.21C.031 (describing “significant” and the required contents of an EIS); WAC 197-11-782, 197-11-794(1) (defining “significant”).

¹¹⁹ *Stempel v. Dep’t of Water Res.*, 82 Wash. 2d 109, 118, 508 P.2d 166, 172 (1973).

¹²⁰ Ecology, SEPA Handbook at 20-21.

¹²¹ WAC 197-11-310(1) (stating that “[a] threshold determination is required for any proposal which meets the definition of action and is not . . . statutorily exempt as provided in chapter 43.21C RCW.”)

¹²² The lead agency is “designated when an agency is developing . . . a proposal.” WAC 197-11-050. See WAC 197-11-911 for lead agency designation. Ecology is the lead agency here.

¹²³ WAC 197-11-310

¹²⁴ WAC 197-11-444(1)-(2).

¹²⁵ WAC 197-11-340(1) (emphasis added).

¹²⁶ WAC 197-11-330(4).

Under SEPA, “significant” means “more than a moderate adverse impact on environmental quality.”¹²⁷ “Moderate” means “tending toward the mean or average amount or dimension” and “having average or less than average quality; Mediocre.”¹²⁸ The synonyms of “moderate” include “modest, average, medium, ordinary and mediocre.”¹²⁹ Therefore, an impact is significant under SEPA if it is above a modest amount, or more than average.¹³⁰ Of the three possible threshold determinations, only the DNS concludes there will be no likely significant impacts, and forecloses further SEPA analyses on the proposed action without identifying conditions that will serve to reduce potential impacts.¹³¹ It is therefore not a decision to take lightly and **must be based on “information reasonably sufficient to evaluate the environmental impact of a proposal.”**¹³²

During the threshold process, the agency must evaluate significance of possible impacts to the environment by analyzing context and intensity of the impact.¹³³ This means that the agency must evaluate:

(1) the extent to which the action will cause adverse environmental effects in excess of those created by existing uses in the area, and (2) the absolute quantitative adverse environmental effects of the action itself, including the cumulative harm that results from its contribution to existing adverse conditions or uses in the affected area.¹³⁴

As stated in the SEPA regulations, “[s]everal marginal impacts,” although not significant in isolation, “when considered together may result in a significant adverse impact.”¹³⁵

SEPA’s implementing regulations anticipate situations where information is necessarily incomplete or unavailable.¹³⁶ The regulations direct the lead agency to obtain the information, if possible, provided the “costs are not exorbitant.” However, if the costs to obtain it are unknown or exorbitant and the agency plans to proceed with the action, “it

¹²⁷ WAC 197-11-794

¹²⁸ Merriam-Webster Dictionary (2020).

¹²⁹ Merriam-Webster Thesaurus (2020).

¹³⁰ WAC 197-11-794.

¹³¹ An agency issuing a Mitigated Determination of Nonsignificance incorporates conditions to reduce the likelihood that the action will result in significant adverse impacts. WAC 197-11-350. A Determination of Significance leads to a more comprehensive evaluation, and arguably to the action that realizes the purpose of SEPA. WAC 197-11-360(1).

¹³² WAC 197-11-335. See also *Boehm v. City of Vancouver*, 111 Wn. App. 711, 718, 47 P.3d 137 (2002) (internal citations and footnotes omitted).

¹³³ WAC 197-11-794 (stating “Significance involves context and intensity . . . and does not lend itself to a formula or quantifiable test.”).

¹³⁴ *Norway Hill*, 87 Wn.2d at 277 (quoting *Narrows view Pres. Ass’n v. Tacoma*, 84 Wn.2d 416, 423, 526 P.2d 897 (1974)).

¹³⁵ WAC 197-11-330(3)(c).

¹³⁶ WAC 197-11-080(1),

shall generally indicate in the appropriate environmental documents its worst case analysis and the likelihood of occurrence.”¹³⁷

Even if the project is “designed to improve the environment,” it may have significant adverse environmental impacts.¹³⁸ Therefore, the “threshold determination shall not balance whether the beneficial aspects of a proposal outweigh its adverse impacts” but instead must consider only whether the “proposal has any probable significant adverse environmental impacts.”¹³⁹

After it issues the DNS, the lead agency may reconsider the decision, particularly if it provides a comment period, as Ecology did here. An agency reviewing timely comments on a DNS “shall reconsider the DNS . . . and may retain or modify the DNS or, if [it] determines that significant adverse impacts are likely, withdraw the DNS or supporting documents.”¹⁴⁰ Upon withdrawal, an agency may reissue the DNS, or it may issue a Mitigated Determination of Nonsignificance, which allows an applicant to avoid the EIS requirement provided it undertake mitigations to reduce environmental impacts.¹⁴¹ Finally, the agency may issue a Determination of Significance and require the applicant to complete an EIS.¹⁴²

Ecology identified the General Permit as a nonproject (or programmatic) action under SEPA. In submitting this comment, we want to make clear that we are not convinced this is appropriate. We also are concerned because Ecology does not expressly articulate the duties of future CAFOs and CAFOs that change operations under SEPA.

Because SEPA’s implementing regulations only provide for slight moderations in an EIS that is a nonproject as opposed to project action¹⁴³ and there is no language in either the statute or the regulations indicating that a nonproject threshold determination differs from a project threshold determination, it ultimately does not matter at the threshold step whether or not this is a project or nonproject action.¹⁴⁴ As the process and requirements for threshold determinations are the same for either type of action, we focus here on Ecology’s failure to comply with SEPA in issuing the DNS and reserve discussion for the propriety of characterizing this as a nonproject action for another time.

¹³⁷ WAC 197-11-080(3).

¹³⁸ WAC 197-11-330(5). See also Ecology, State Environmental Policy Act Handbook 2018 Updates at 22 (2018) (noting that “SEPA Rules state that the beneficial aspects of a proposal shall not be used to balance adverse impacts in determining significance.”) (emphasis in original) available at <https://ecology.wa.gov/DOE/files/4c/4c9fec2b-5e6f-44b5-bf13-b253e72a4ea1.pdf>.

¹³⁹ WAC 197-11-330(5). See also Ecology, SEPA Handbook at 22 (noting that “SEPA Rules state that the beneficial aspects of a proposal shall not be used to balance adverse impacts in determining significance.”) (emphasis in original).

¹⁴⁰ WAC 197-11-340(2)(f).

¹⁴¹ WAC 197-11-350

¹⁴² WAC 197-11-360

¹⁴³ WAC 197-11-442.

¹⁴⁴ See also Ecology, SEPA Handbook at 43 (stating that the “procedural requirements for SEPA review of a nonproject proposal are basically the same as a project proposal.”).

B. Ecology's DNS Violates SEPA

Ecology, in issuing the DNS, failed to comply with SEPA's prima facie procedural requirements.¹⁴⁵

First, Ecology issued the DNS in the absence of reasonably sufficient information to determine that the General Permit as drafted is not likely to adversely impact the environment. Indeed, nearly uniformly across all elements of the environment identified in the SEPA checklist, a resource created *by Ecology itself*,¹⁴⁶ the agency answered "unknown." The checklist has almost no substantial useful analysis and is about as far as can be from "reasonably sufficient information" as required to issue a DNS under SEPA.¹⁴⁷

Further, Ecology issued the DNS in the face of extensive evidence of the adverse impact the Draft Permit is likely to cause as a result of allowing CAFOs to discharge pollutants into the waters, failure to comply with federal and state clean water law, and additional cumulative, direct, indirect, short- and long-term impacts on the environment. This information is not difficult for the agency to obtain. Indeed, *the agency itself* has much of the information about probability of adverse environmental impacts as a result of its regulation (limited as it is) of existing CAFOs, the data members of the public have provided the agency,¹⁴⁸ and from information gathered and made public in legal actions against many of these entities as their discharges have continuously the environment, courts have issued rulings against them under a variety of legal actions.¹⁴⁹

Finally, we can find no evidence that Ecology consulted with Tribes or other expert agencies when it prepared the DNS. This failure is counter to Ecology's own guidance¹⁵⁰ and contributes to checklist's lack of information.

Ecology's failure to base the DNS on reasonably sufficient information and its issuance of the DNS in the face of known probable significant adverse impacts, violates SEPA.

1. The DNS is Unlawful Because it Does not Rely on Reasonably Sufficient Information

¹⁴⁵ *Boehm*, 111 Wn. App. at 718 (stating that the agency must be able to demonstrate that it "adequately considered the environmental factors in a manner sufficient to be a prima facie compliance with the procedural dictates of SEPA" in order for a threshold determination to survive a judicial appeal).

¹⁴⁶ RCW 43.21C.110 (conferring statutory authority to Ecology to implement SEPA); WAC 197-11-960 (describing the checklist); Ecology, SEPA Checklist Guidance (last visited August 13, 2022) <https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance>.

¹⁴⁷ WAC 197-11-335.

¹⁴⁸ See for example xx submitted by Friends of Toppenish Creek. Attached.

¹⁴⁹ See e.g. The Law Offices of Charlie Tebbutt, CAFOs - Concentrated Animal Feeding Operations <http://charlietebbutt.com/cafos.html> (last visited August 13, 2022) (listing several successful and ongoing actions against CAFO operations in Washington State for violations of the CWA and the Resource Conservation and Recovery Act (RCRA 42 U.S.C §6901 et. seq.)).

¹⁵⁰ Ref.

The DNS relies on the SEPA checklist prepared by Chelsea Morris on June 22, 2022. The DNS does not incorporate an analysis or identify anything other than the checklist to support its issuance. Because the DNS relies on a checklist that does not provide reasonably sufficient information and analyses of possible environmental impacts from a permit allowing operations to discharge into waters of the state, it violates SEPA.

We discuss this failure in more detail below. However, there are two patterns we believe are emblematic of Ecology's failure here. A DNS that relied on any single instance of either of these two approaches to evaluating the potential impact of an element of the environment would be illegal on its face. The checklist is rife with them.

First, the checklist relies heavily on the term "unknown" to describe adverse impacts. This, on its face violates SEPA. But Ecology also removes "unknown" when it describes what it views are the "benefits" of the General Permit. Under SEPA, a DNS issued based on balancing adverse with beneficial impacts is unlawful. Placing a thumb on the scale of the "beneficial" impacts and then trying to balance them against unnamed, unanalyzed adverse impacts is even more egregious.

Further, the Checklist repeatedly **states that the Draft Permit will "not cause or contribute to" particular environmental impacts yet in subsequent sentences it provides a list of possible adverse impacts.**¹⁵¹ Ecology conducts no further analysis. How did Ecology conclude based on the lists of actual impacts that the Permit will not cause or contribute to environmental impacts? How does it justify issuing a DNS in the face of actual articulated impacts? We cannot answer that question because Ecology failed to show its work.

Finally, nowhere does Ecology provide evidence that it consulted with other agencies or with Tribes. This failure is evident across all elements of the environment and renders the DNS unlawful. As illustrated, we provide more specific examples of Ecology's failure to rely on reasonably sufficient information in its issuance of the DNS below.

a. The Checklist Does Not Include the Basic Information about the Proposed Action Essential to Determining if it is Likely to Have a Significant Impact on the Environment

Information about types of facilities, locations of facilities, and potential future facility siting is essential for determining the likelihood that a proposed action will have a significant impact. The agency has much of this information. (See Appendix 2). It has the capacity to develop the rest of it. And for that information that is either too costly or is impossible to obtain, SEPA directs the agency to provide an analysis of the worst case scenario.¹⁵²

i. The Checklist Provides No Information About the Number of CAFOs, Number of Animals, Distribution of CAFOs or

¹⁵¹ See, e.g., SEPA Checklist B. 2.a.

¹⁵² WAC 197-11-080(3).

Estimation of How This Will Change Over the Life of the Permit.

First, the DNS relies on the checklist's inadequate description of the types of facilities covered by the permit. The checklist states that "draft permits apply to existing animal feeding operations that confine animals for 45 days or more in a 12-month period and discharge to waters of the state."¹⁵³ This is the federal definition of animal feeding operations (AFOs), provided the facility is not also used to grow crops.¹⁵⁴ It does not fully describe the characteristics of operations considered CAFOs.

Under federal law, AFOs with certain concentrations of animals are considered "Medium" or "Large" CAFOs and are covered by the Clean Water Act NPDES permitting program.¹⁵⁵ Medium CAFOs house from 200 to 699 mature dairy cows, and Large CAFOs house 700 or more mature dairy cows.¹⁵⁶ Small AFOs are also considered CAFOs if they meet one of two methods for discharge of pollutants.¹⁵⁷

Beyond this initial failure to adequately define the covered operations, the Checklist fails to provide any information estimating the current number of covered CAFOs, as well as those likely to come under the permit in the future, or the number of cows and calves in these facilities. The failure to include this information is particularly egregious because, Ecology presumably has this information. State regulations mandate that Ecology provide this information to the public in its NPDES permit Fact Sheet and more generally during this public comment period.¹⁵⁸ The issuance of the DNS without incorporation of this information into the threshold determination process violates SEPA.

ii. The Checklist Does Not Provide Information or Analysis About the Current and Possible Future Distribution of CAFOs in Washington State

The Checklist provides no information or analysis of the distribution of CAFOs across the state, nor does it demonstrate any effort to anticipate future CAFO distribution. Without this information, the DNS does not rely on reasonably sufficient information about the impact of the proposed action on the environment, as SEPA mandates.

Ecology knows where CAFOs are in the state, as a result of its own regulatory activities, through its collaboration with the Washington State Department of Agriculture

¹⁵³ SEPA Checklist A.11.

¹⁵⁴ 40 C.F.R. §122.23(b)(1).

¹⁵⁵ 40 C.F.R. Sec. § 122.23(a), (b)(2).

¹⁵⁶ *Id.*

¹⁵⁷ *Id.*

¹⁵⁸ WAC 173-226-120(1)(e) (stating that the Fact Sheet "shall summarize the following" "[a] listing or some other means of identifying the facilities proposed to be covered under the general permit."); *see also* WAC 173-220-060 (mandating that the NPDES permit Fact Sheet summarize "the location of the discharge in the form of a sketch or detailed description."); 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.").

(WSDA), and through federal sources of information. We attach a series of maps created from Ecology and WSDA’s own data showing the distribution of CAFOs across the state.

Further, locations across the state that can support potential future CAFOs are not unlimited. The current distribution of CAFOs along with the local government’s land use and zoning ordinances provide a roadmap of regions that can legally house future CAFOs. Ecology should be aware of the lands that allow CAFOs as identified by counties and municipalities across the state that have issued comprehensive plans under the Growth Management Act.¹⁵⁹ Further, local ordinances provide additional constraints on housing agricultural animals that may rule out (or rule in) locating CAFOs in that region.¹⁶⁰

b. The SEPA Checklist Does Not Provide Reasonably Sufficient Information About Possible Impacts to Any Listed Elements of the Environment to Support the DNS

SEPA requires the lead agency to collect information and analysis of the potential for significant impacts on essentially every element of the natural and built environments, from air and water to historical and cultural resources, aesthetics, recreation, land use, and human health.¹⁶¹ Included in this analysis is the potential for the action to violate local, state and federal law.¹⁶²

Ecology submitted a SEPA checklist with virtually no information or analysis, instead generally filling in “unknown” in answer to the checklist’s questions about the environment and then stating “The draft CAFO general permits apply to existing and new CAFOs located in Washington. Therefore the [environmental element] will depend on the location of the facility.”¹⁶³ The issuance of the DNS in the face of this information vacuum violates SEPA. If Ecology does not know the answer to these questions, it must conduct an EIS. To do otherwise is counter to the fundamental goal of the statute.

Because Ecology failed to rely on reasonably sufficient information on any aspect of the environment, the DNS fails across the elements of the environment implicated by the permit. To illustrate this failure, we discuss Ecology’s failure to consider information about climate change in the checklist.

i. The DNS Does Not Rely On Reasonably Sufficient Information About Impacts to the Air

Ecology’s discussion of the impacts of the General Permit on the air in its checklist does not include an actual analysis of how the permit intersects with climate emissions.

The entry includes the statement that the “The draft permits do not propose to cause or contribute to air emissions from CAFOs.”¹⁶⁴ But it goes on to state that the “types and

¹⁵⁹ RCW 36.70A.040(1), (3), .050. *See also* RCW 36.70A.060. Yakima County Code 19.14.010 (Identifying types of zones where CAFOs are allowed (and the permitting necessary)).

¹⁶⁰ *See e.g.* Seattle Municipal Code 23.42.052(D).

¹⁶¹ *See* WAC 197-11-444, -960 (listing elements of the environment under SEPA).

¹⁶² *Id.*

¹⁶³ *See* SEPA Checklist B.1.a. (describing impacts to earth).

¹⁶⁴ SEPA Checklist B.2.a.

quantities of air emissions from CAFOs vary depending on the animal housing type, feed, and manure management at each facility.”¹⁶⁵ And it lists the “types of emissions that may occur at a facility.”¹⁶⁶

The statement that the permit will not cause impacts to the air is not, in itself, sufficient information to support the DNS, even without the internally inconsistent information. Reasonably sufficient information requires an actual analysis of the predicted emissions from the CAFOs that the General Permit allows to operate, in the way that they operate. And it requires an evaluation of the cumulative impact of permitting all of these CAFOs, CAFOs, as NPDES permits allow the continuation of the pollution of our waters.

ii. The DNS Did Not Consider the Impact of Climate Change on CAFO Facilities and Their Discharges

Ecology did not rely on reasonably sufficient information about the effect of the climate crisis on CAFO discharges to support the DNS. Because the climate crisis impacts all aspects of the natural and the built environment, the DNS, issued in the face of the failure to consider climate impacts, violates the law because it is not based on reasonably sufficient information about any elements of the environment implicated by the climate crisis.

The checklist does not discuss the climate crisis in relation to the discharge allowed by the draft General Permit anywhere other than in the air section. Among other things, it does not discuss how climate impacts to hydrological cycles will exacerbate the effect of discharges allowed under the permit. It does not describe how the climate crisis will increase severe weather events, impact CAFO facilities and kill livestock, or how these effects then result in increased discharge under the permit. It does not describe how increased concentrations of pollutants and increased risk of algal blooms resulting from climate change exacerbating discharges allowed by the permit in turn cause adverse impacts on listed species such as bull trout and Chinook salmon, as well as Southern Resident killer whales who rely on Chinook as their primary food source. It does not describe how the harms to these species from the permit in turn harms the humans who rely on these species, including members of Tribes and Indigenous people for whom these species are culturally essential.

The DNS is unlawful because it relies on a checklist that provides no analysis of how the climate crisis impacts the injury from CAFO discharge on the waters, the species dependent on these waters, including humans, and more broadly all aspects of the environment, natural or built.

2. The DNS is Unlawful Because There Are Likely to be Significant Adverse Impacts from the General Permit as Drafted on Elements of the Environment

The General Permit, as drafted, is likely to result in significant adverse impacts, including to the water, air, communities, nonhuman species, and important cultural and

¹⁶⁵ *Id.*

¹⁶⁶ *Id.*

historical elements in the environment. While Ecology's failure to comply with SEPA is manifest in its reliance on insufficient information to support the DNS, we provide examples below of the variety of adverse impacts that this draft General Permit will cause on the environment. Because the draft General Permit will cause known significant impacts on the environment, issuance of a DNS was unlawful. To comply with SEPA, Ecology must withdraw the DNS, issue a DS and immediately begin the scoping process.

a. The General Permit Is Likely To Significantly Impact Water, Humans and Other Species that Rely On Clean Water, And Cultural and Recreational Resources

The General Permit as drafted is likely to have significant impacts on the waters of the state. We discuss these impacts at length in our technical comment, incorporated into this comment by reference. We provide below additional evidence of significant impacts on the waters, other species, and the humans relying on the waters of the state. Because all of these impacts will be magnified by the growing climate crisis, climate change is likely to turn less than moderate impacts into significant impacts over the life of the permit. Issuance of a DNS in the face of the near certain significant impacts of a General Permit that allows discharges, in violation of state and federal law, violates SEPA.

According to Ecology's Water Quality Improvement Reports (Reports), prepared once the concentration of fecal coliform bacteria indicates sufficient fecal matter in waters to the point that the risk to human health is unacceptable,¹⁶⁷ livestock and animal agriculture are important contributors to impairment of watersheds and waterways.¹⁶⁸ In

¹⁶⁷ Section 303(d) of the Clean Water Act (CWA) requires that states assess surface waters and compile a 303(d) list of those that have become polluted to the point that they no longer support their use classification. These are "impaired" waters. 33 U.S.C. § 1313.

¹⁶⁸ Ecology, *Swamp Creek Fecal Coliform Bacteria Total Maximum Daily Load*, Ecology Pub. No. 06-10-021 (June 2006), <https://apps.ecology.wa.gov/publications/documents/0610021.pdf>; Ecology, *Stillaguamish River Watershed Fecal Coliform, Dissolved Oxygen, pH, Mercury, and Arsenic Total Maximum Daily Load (Water Cleanup Plan)*, Ecology Pub. No. 05-10-044 (Apr. 2005), <https://apps.ecology.wa.gov/publications/documents/0510044.pdf>; Ecology, *Snoqualmie River Basin Fecal Coliform Bacteria, Dissolved Oxygen, Ammonia-Nitrogen, and pH Total Maximum Daily Load*, Ecology Pub. No 08-03-005 (Mar. 2008), <https://apps.ecology.wa.gov/publications/documents/0803005.pdf>; Ecology, *Snohomish River Tributaries Fecal Coliform Total Maximum Daily Load*, Ecology Pub. No. 00-10-087 (June 2001), <https://apps.ecology.wa.gov/publications/documents/0010087.pdf>; Ecology, *North Creek Fecal Coliform Bacteria Total Maximum Daily Load*, Ecology Pub. No. 03-10-047 (Sept. 2003), <https://apps.ecology.wa.gov/publications/documents/0310047.pdf>; Ecology, *Little Bear Creek Fecal Coliform Bacteria Total Maximum Daily Load (Water Cleanup Plan)*, Ecology Pub. No. 05-10-034 (May 2005), <https://apps.ecology.wa.gov/publications/documents/0510034.pdf>; Ecology, *Bear-Evans Watershed Fecal Coliform Bacteria Total Maximum Daily Load*, Ecology Pub. No. 08-10-026 (June 2008), <https://apps.ecology.wa.gov/publications/documents/0810026.pdf>; Ecology, *Padilla Bay Freshwater Tributaries Fecal Coliform Bacteria Total Maximum Daily Load Report*, Ecology Pub. No. 20-10-036 (Dec. 2020), <https://apps.ecology.wa.gov/publications/documents/2010036.pdf>; Ecology, *Soos Creek watershed TMDL*, <https://ecology.wa.gov/Water-Shorelines/Water-quality/Water-improvement/Total-Maximum-Daily-Load-process/Directory-of-improvement-projects/Soos-Creek-bacteria-TMDL>; Ecology, *Quincy NPDES Permit TMDL for Wasteway DW237 and W645*, Ecology Pub. No. 98-10-201 (Sept. 1998), <https://apps.ecology.wa.gov/publications/summarypages/9810201.html>; Ecology, *Johnson Creek Watershed Total Maximum Daily Load*, Ecology Pub. No. 00-10-033 (June 2000),

particular, the presence of CAFOs corresponds to high levels of fecal coliform bacteria in water samples, indicating the presence of fecal matter in the water as well as dangerous disease microbes.¹⁶⁹ The presence of fecal coliform indicates the presence of animal waste in water and the likelihood associated disease microbes are also present.¹⁷⁰ These impacts mean that these waters are no longer available to serve as “public water supplies, propagation of fish and wildlife, recreational purposes, and agricultural, industrial, and other purposes”.¹⁷¹

Although Ecology provides suggestions in these reports for mitigation, including regular site inspections, minimum setbacks, riparian buffers, soil sampling, groundwater sampling, properly constructed and lined lagoons, farm plans, storing manure away from waterways and potential drainage paths, and excluding livestock from flooded or flood-prone areas, as we discuss in our technical comments, the permit does not effectively mandate these protective actions and so the General Permit is likely to significantly impact the environment.¹⁷²

Further, even this mitigation cannot eliminate the possibility of pollution by CAFOs. For instance, *E. coli* can contaminate groundwater under unlined manure lagoons, which are allowable under the current draft permit, even if the lagoons are lined, “[m]anure-contaminated water can also enter directly into subsurface drainage systems through air vents, manholes, and other surface inlets.”¹⁷³ And, although “properly built lagoons may not lead to groundwater contamination,” Ecology admits, “lagoons may still contribute to bacteria loading.”¹⁷⁴

In addition to bacteria loading, CAFOs, as allowed to discharge under this draft General Permit, also significantly impact waters by discharging ammonia, nitrate and phosphorous. Manure lagoons contribute ammonia and nitrate into subsurface soil and groundwater. For example, the initial soil testing done at Henry Bosma Dairy under consent order from EPA, detected available nitrogen in excess of the federal limit of 45 mg N/kg

<https://apps.ecology.wa.gov/publications/documents/0010033.pdf>; Ecology, *Nooksack River Watershed Bacteria Total Maximum Daily Load*, Ecology Pub. No. 00-10-036 (June 2000),
<https://apps.ecology.wa.gov/publications/documents/0010036.pdf>; Ecology, *Whatcom Creek Fecal Coliform Total Maximum Daily Load Report*, Ecology Pub. No. 06-10-041 (Sept. 2006),
<https://apps.ecology.wa.gov/publications/documents/0610041.pdf>; Ecology, *Mid-Yakima River Basin Bacteria Total Maximum Daily Load*, Ecology Pub. No. 20-10-030 (Dec. 2020),
<https://apps.ecology.wa.gov/publications/documents/2010030.pdf> (“Ecology’s TMDL Reports”).

¹⁶⁹ *Id.*

¹⁷⁰ Water Science School, *Bacteria and E. coli in Water*, USGS (June 5, 2018), <https://www.usgs.gov/special-topics/water-science-school/science/bacteria-and-e-coli-water#overview>.

¹⁷¹ 33 U.S.C. § 1313(c)(2)(A).

¹⁷² See Ecology’s TMDL Reports.

¹⁷³ See *Mid-Yakima River Basin Bacteria Report* at 13.

¹⁷⁴ *Id.* at 140 (Ecology, replying to a comment by Washington State Dairy Federation).

in 32 of the samples taken from the lagoon, at all depths sampled, with levels as high as 286.3 mg N/kg.¹⁷⁵ This is despite the fact that regular use of this lagoon was abandoned in 2021.¹⁷⁶ As we discuss in our technical comment, the draft General Permit allows CAFOs to operate lagoons that are unprotective and therefore likely discharge nitrates, and ammonia, among other things.

Similarly, field application results in discharge of phosphorous, nitrates, and other dangerous components of manure. In Ecology's draft Johnson Creek Watershed TMDL, it documents the impact to watersheds resultant from the riparian vegetation removal resulting from farming activities.¹⁷⁷ Ecology states that "the result [of riparian vegetation removal] has been a **significant amount of runoff** from field application of dairy nutrients into surface water . . . [which] brings not only nutrients but fecal coliform and changes in pH."¹⁷⁸ As we discuss in our technical comment, Ecology's draft General Permit allows CAFOs to continue contributing these components to waters.

The permit as drafted will cause significant impacts to state waters. In doing so it destroys the uses of these waters for protected species, as well as for those who rely on the waters for realizing Treaty Rights, culturally important practices, recreational opportunities, and commercial activities.¹⁷⁹ In light of these impacts across environmental elements, the issuance of the DNS violates SEPA.

b. The General Permit Is Likely to Significantly Impact Air

Ecology's DNS is unlawful because, as we describe above, and as Ecology itself admits, CAFOs have a significant adverse impact on the climate.

Ecology suggests that the permit will not result in emissions. Certainly, the permit does not direct CAFOs to emit GHGs, nor does it directly regulate GHG emissions. Yet, by Ecology's own admissions the permit's conditions impact how the CAFOs function and how much they emit. Further, because the permit actually allows facilities to exist that, because they discharge, would not otherwise be lawful, the permitting of facilities that discharge also results in facilities that emit. Because the general permit creates the conditions for CAFOs to exist and emit GHGs, and CAFOs are, as Ecology itself recognizes, an important source of the two most potent GHGs in the state, the general permit will significantly impact the environment.

The issuance of the DNS in the face of these significant impacts is unlawful

c. The General Permit As Drafted Violates State and Federal Law

¹⁷⁵ Anchor QEA, H&S Bosma Dairy Lagoon No. 3 Abandonment Plan, Administrative Order on Consent Docket No. SDWA-10-2013-0080 5-6 (Jan.18, 2022).

¹⁷⁶ *Id.*

¹⁷⁷ *See Johnson Creek Watershed TMDL* at 13.

¹⁷⁸ *Id.*

¹⁷⁹ *See Ecology's TMDL Reports.*

An action can cause a significant impact under SEPA by violating local, state and federal law. Because the permit as drafted violates state and federal law, as we discuss in our technical comment, incorporated here by reference, the issuance of the DNS is unlawful.

Conclusion

In sum, Ecology, in drafting a permit that does not adequately consider climate, violated SEPA's broad mandate. While the effort towards incorporating mitigation of N2O is a good initial step, the permit needs more concrete requirements for mitigating the most potent GHG's. Further, Ecology needs to comprehensively evaluate how the CAFOs it allows to operate collectively contribute the climate change. But the wholesale failure to embed adaptation fails Ecology's implementing mandate and SEPA's broad mandate, and the people of the state, now and in the future, for whom it protects the water and the air.

Further, Ecology's DNS is unlawful. This General Permit will allow CAFOs to operate and contribute pollution to our waters and emissions to our air. Ecology failed to undertake the most essential part of the threshold process, collecting, analyzing and reviewing information about the impacts of the General Permit. Further, because there are a multitude of known significant impacts from issuance of this permit, Ecology can only comply with SEPA by issuing a DS and initiating the scoping process. We urge Ecology to withdraw the DNS and issue the mandating DS.

We hope to work with Ecology to make this process happen. Please let us know if you have questions by contacting Jennifer Calkins at calkins@westernlaw.org or (206) 607-9867.

Sincerely,



Jennifer D. Calkins, Ph.D., J.D.
Attorney and Diehl Fellow
Western Environmental Law Center
1402 3rd Avenue, Suite 1022
Seattle, WA 98101
(206) 487-7207, ext. 144
(206) 607-9867 direct
calkins@westernlaw.org

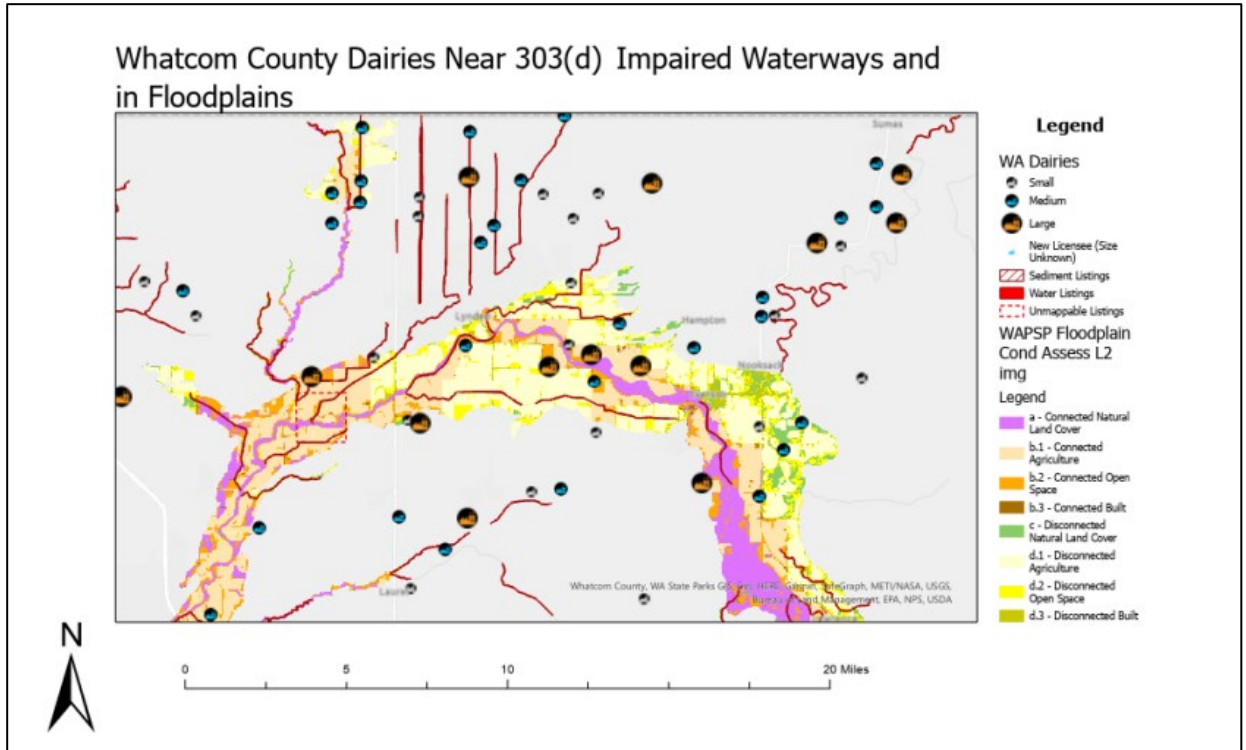
Jean Mendoza
Executive Director
Friends of Toppenish Creek

Alyssa Barton
Policy Manager
Puget Soundkeeper Alliance

Amy van Saun
Senior Attorney
Center for Food Safety

Margie Van Cleve
Conservation Chair
Washington State Sierra Club

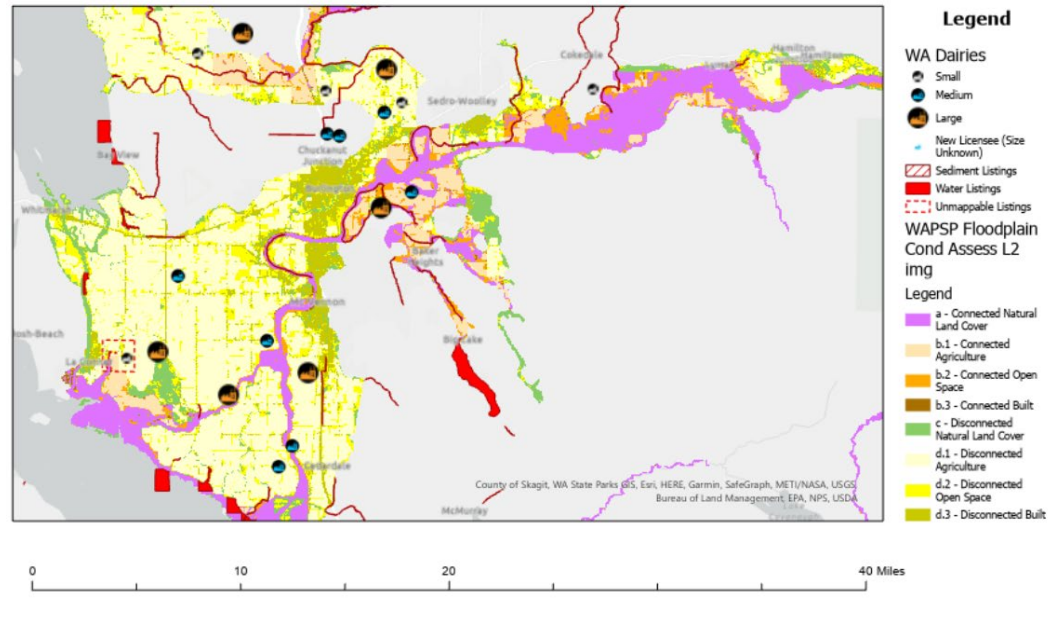
Appendix 1: Floodplain Maps



Floodplains

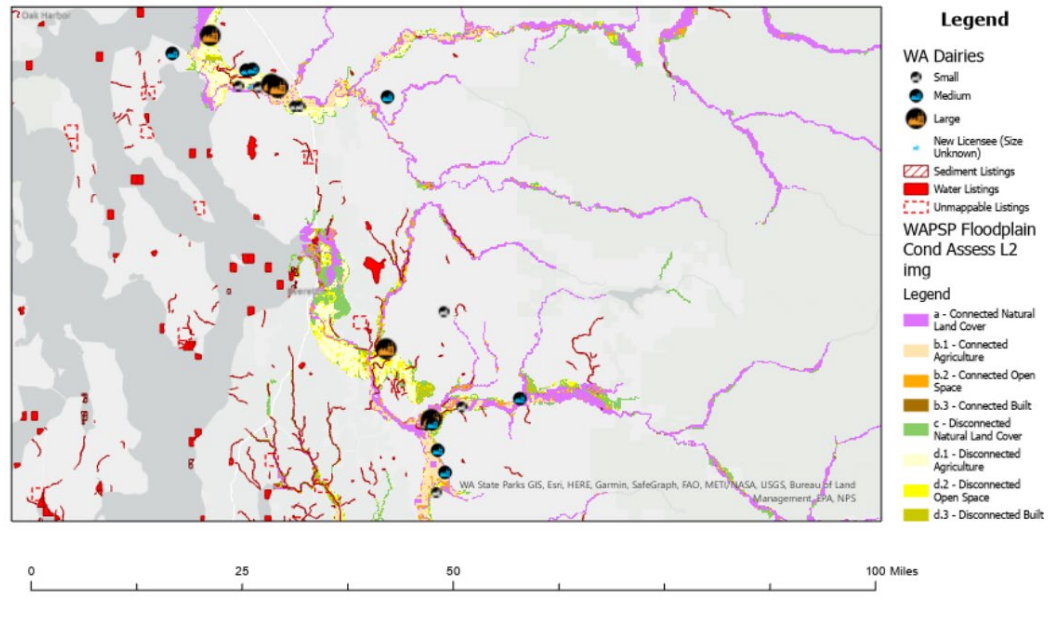
Sources: WSDA, *Washington Geospatial Open Data Portal: WA Dairies*, (last updated Aug. 2022) https://geo.wa.gov/datasets/26add7da921d4aa68ccb50ce191c6182_0/explore?location=15.757463%2C0.0000%2C2.00; Ecology, *WAECY – Water Quality Assessment – 303(d) List – Current*, (last updated Oct. 19, 2021), https://services.arcgis.com/61CKYNJLvwTXqrm/arcgis/rest/services/WQA_303d_current/FeatureServer; WA Puget Sound Partnership, *WAPSP Floodplain Cond Assess L2 img*, (last updated Feb. 3, 2022), https://gismanager.rcow.wa.gov/arcgis/rest/services/PSP/WAPSP_FloodplainCondAssess_v2_L2_wm/ImageServer.

Skagit County Dairies Near 303(d) Impaired Waterways and in Floodplains



Sources: WSDA, *Washington Geospatial Open Data Portal: WA Dairies*, (last updated Aug. 2022) https://geo.wa.gov/datasets/26add7da921d4aa68ccb50ce191c6182_0/explore?location=15.757463%2C0.0000%2C2.00; Ecology, *WAECY – Water Quality Assessment – 303(d) List – Current*, (last updated Oct. 19, 2021), https://services.arcgis.com/6lCKYNJLvwTXqrm/arcgis/rest/services/WQA_303d_current/FeatureServer; WA Puget Sound Partnership, *WAPSP Floodplain Cond Assess L2 img*, (last updated Feb. 3, 2022), https://gismanager.rco.wa.gov/arcgis/rest/services/PSP/WAPSP_FloodplainCondAssess_v2_L2_wm/ImageServer.

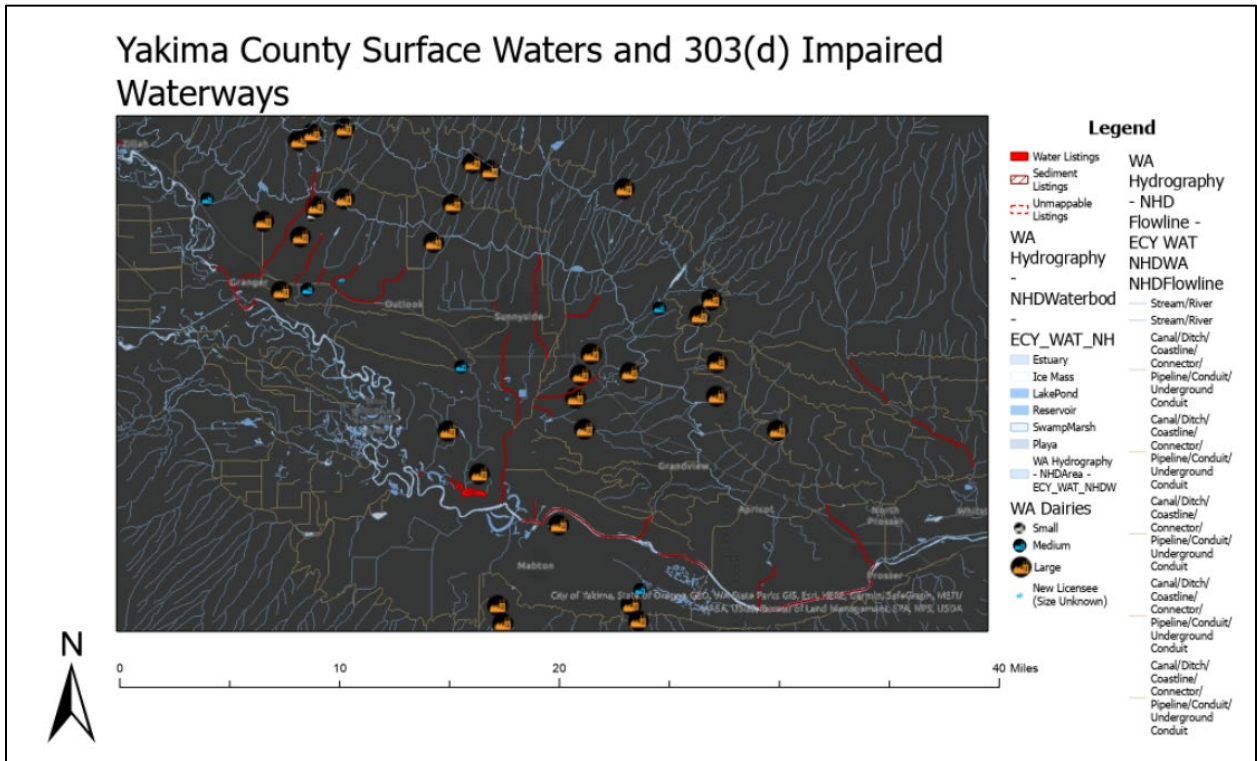
Snohomish County Dairies Near 303(d) Impaired Waterways and in Floodplains



Sources: WSDA, *Washington Geospatial Open Data Portal: WA Dairies*, (last updated Aug. 2022) https://geo.wa.gov/datasets/26add7da921d4aa68ccb50ce191c6182_0/explore?location=15.757463%2C0.0000%2C2.00; Ecology, *WAECY – Water Quality Assessment – 303(d) List – Current*, (last updated Oct. 19, 2021), https://services.arcgis.com/6lCKYNJLvwTXqrmr/arcgis/rest/services/WQA_303d_current/FeatureServer; WA Puget Sound Partnership, *WAPSP Floodplain Cond Assess L2 img*, (last updated Feb. 3, 2022), https://gismanager.rco.wa.gov/arcgis/rest/services/PSP/WAPSP_FloodplainCondAssess_v2_L2_wm/ImageServer.

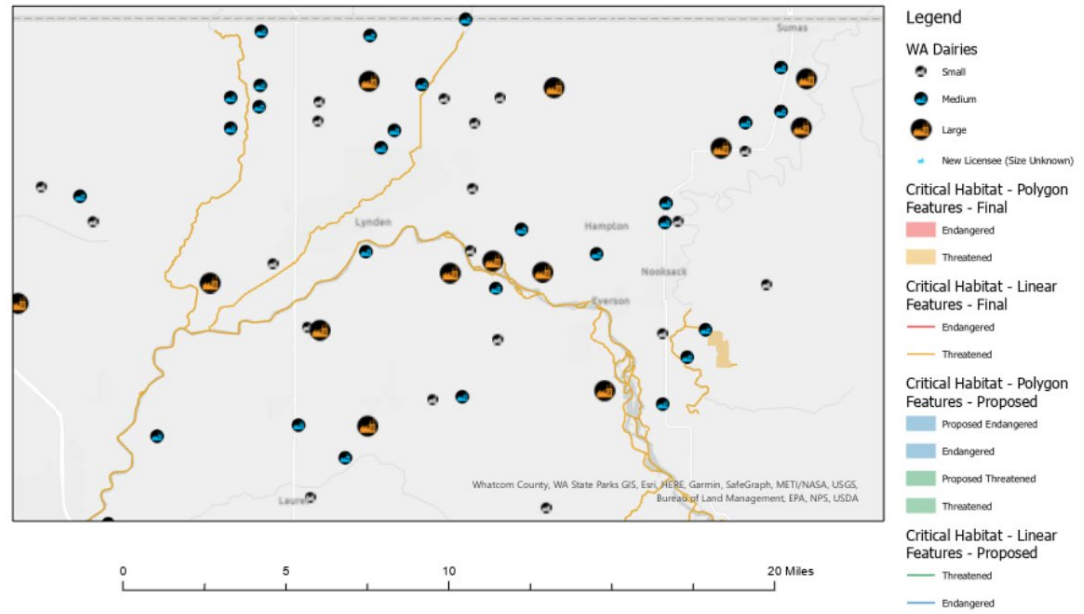
Appendix 2: Maps of CAFOs Relative Elements of the Environment

Yakima County Surface Waters and 303(d) Impaired Waterways



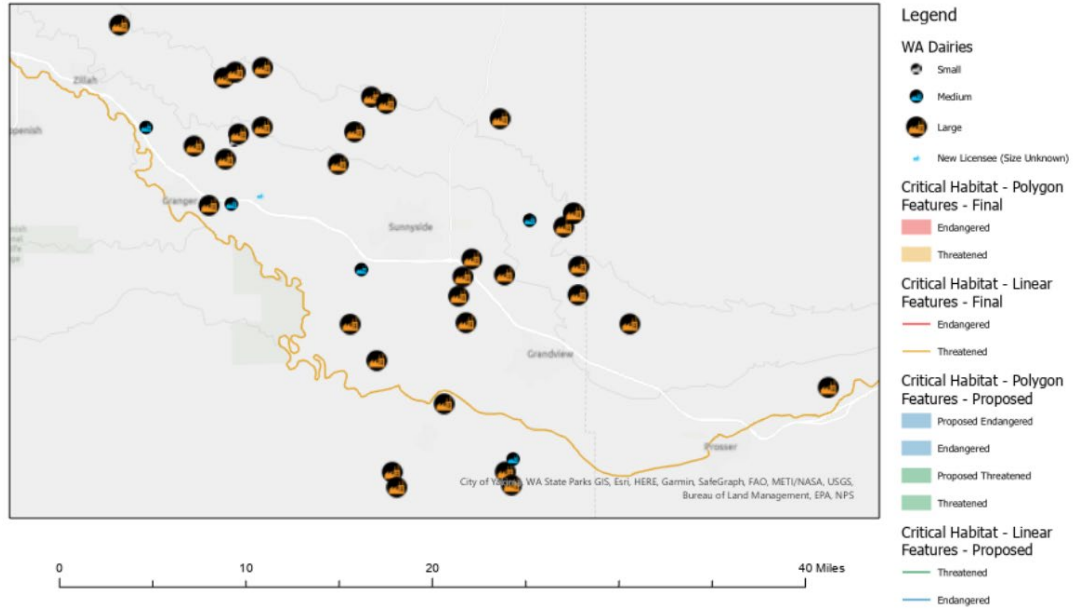
Sources: WSDA, *Washington Geospatial Open Data Portal: WA Dairies*, (last updated Aug. 2022) https://geo.wa.gov/datasets/26add7da921d4aa68ccb50ce191c6182_0/explore?location=15.757463%2C0.0000%2C2.00; Ecology, *WAECY – Water Quality Assessment – 303(d) List – Current*, (last updated Oct. 19, 2021), https://services.arcgis.com/61CKYNJLvwTXqrm/arcgis/rest/services/WQA_303d_current/FeatureServer; Ecology, *WA Hydrography – NHD Waterbody*, (last updated Jul. 1, 2021), <https://fortress.wa.gov/ecy/gisprod/arcgis/rest/services/GIS/ECYAuthoritativeGISDatasets/MapServer/26>.

Whatcom County Critical Habitat: Bull Trout



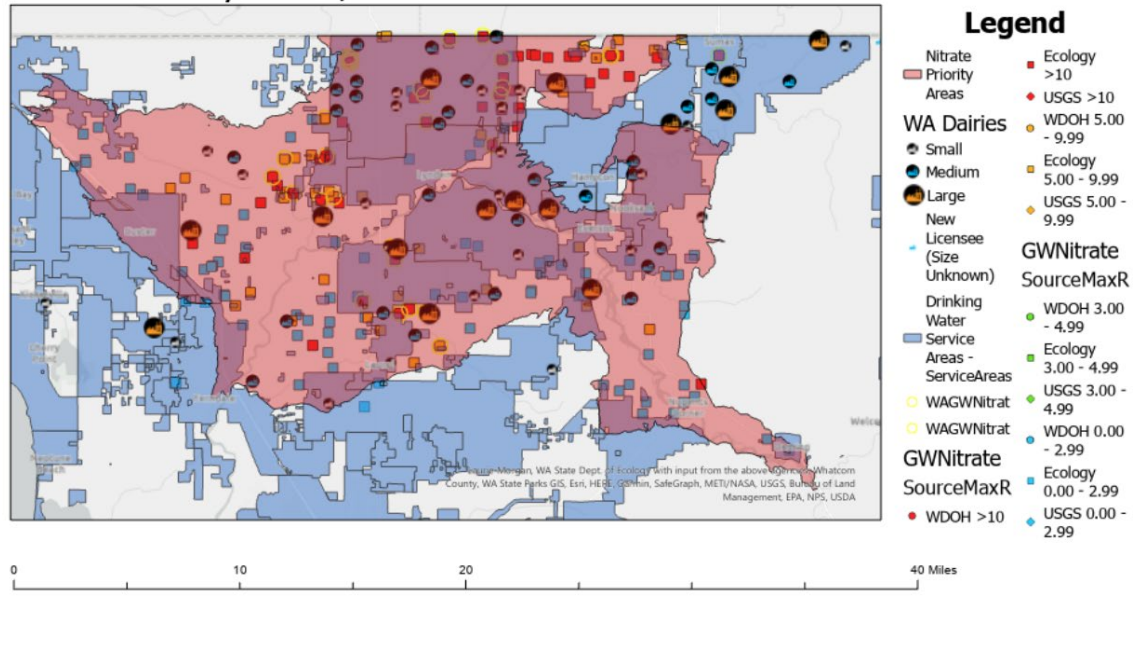
Sources: WSDA, *Washington Geospatial Open Data Portal: WA Dairies*, (last updated Aug. 2022) https://geo.wa.gov/datasets/26add7da921d4aa68ccb50ce191c6182_0/explore?location=15.757463%2C0.0000%2C2.00; National Geospatial Data Asset (NGDA), *Critical Habitat for Threatened and Endangered Species*, U.S. Fish and Wildlife Service feature layer (last updated Mar. 8, 2022), https://services.arcgis.com/QVENGdaPbd4LUkLV/arcgis/rest/services/USFWS_Critical_Habitat/FeatureServer.

Yakima County Critical Habitat: Bull Trout

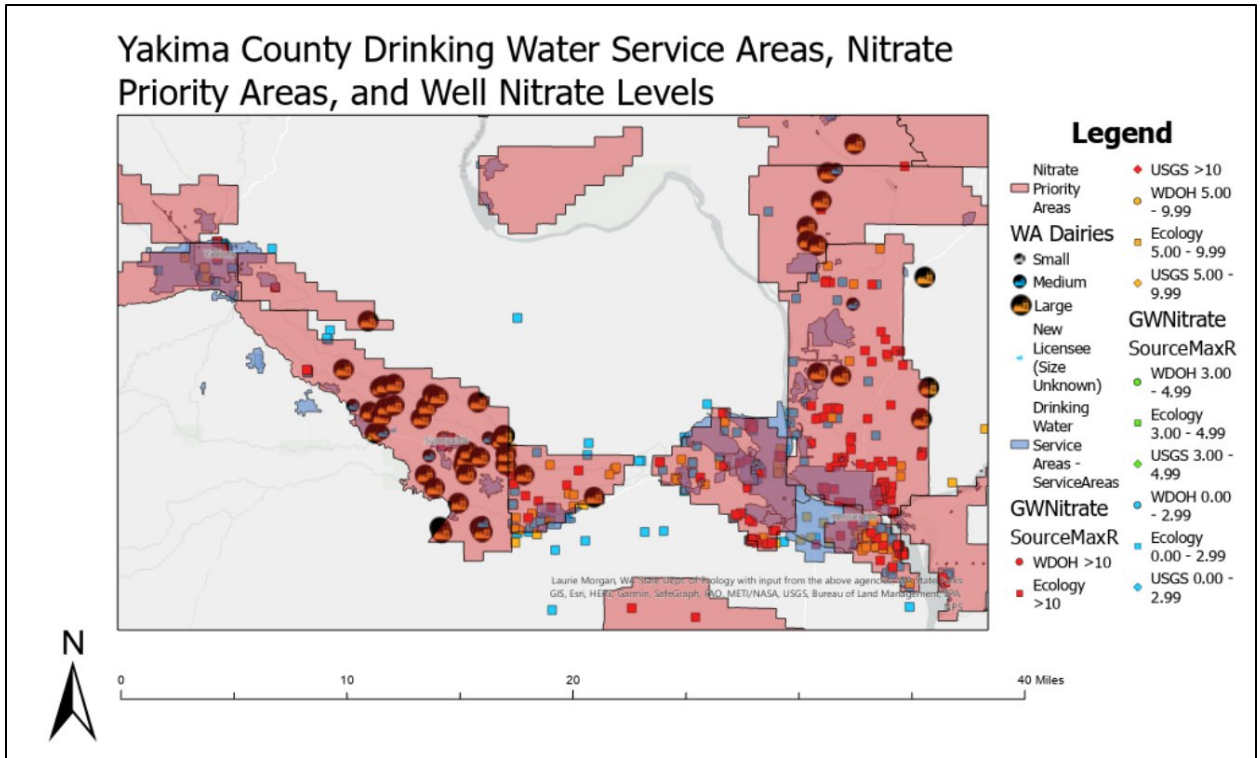


Sources: WSDA, *Washington Geospatial Open Data Portal: WA Dairies*, (last updated Aug. 2022) https://geo.wa.gov/datasets/26add7da921d4aa68ccb50ce191c6182_0/explore?location=15.757463%2C0.0000%2C2.00; National Geospatial Data Asset (NGDA), *Critical Habitat for Threatened and Endangered Species*, U.S. Fish and Wildlife Service feature layer (last updated Mar. 8, 2022), https://services.arcgis.com/QVENGdaPbd4LUkLV/arcgis/rest/services/USFWS_Critical_Habitat/FeatureServer.

Whatcom County Drinking Water Service Areas, Nitrate Priority Areas, and Well Nitrate Levels



Sources: WSDA, *Washington Geospatial Open Data Portal: WA Dairies*, (last updated Aug. 2022) https://geo.wa.gov/datasets/26add7da921d4aa68ccb50ce191c6182_0/explore?location=15.757463%2C0.0000%2C2.00; Ecology, *WAGWNitrateWells_Dev*, Ecology and the U.S. Geological Survey (last updated May 11, 2022), <https://gisdev.ecology.wa.gov/serverext/rest/services/WQ/WAGWNitrateWells/MapServer>; Ecology, *Nitrate Priority Areas*, (last updated Dec. 3, 2020), https://services9.arcgis.com/3OOxQa3Fy6OOVdwb/arcgis/rest/services/Nitrate_Priority_Areas/FeatureServer.



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