NO. 52952-1

COURT OF APPEALS, DIVISION II
OF THE STATE OF WASHINGTON

WASHINGTON STATE FEDERATIONERATION and WASHINGTON FARM BUREAU, and PUGET SOUNDKEEPER ALLIANCE, COMMUNITY ASSOCIATION FOR RESTORATION OF THE ENVIRONMENT (CARE), FRIENDS OF TOPPENISH CREEK, SIERRA CLUB, WATERKEEPER ALLIANCE, CENTER FOR FOOD SAFETY, and RE SOURCES FOR SUSTAINABLE COMMUNITIES,

Petitioners,

v.

STATE OF WASHINGTON, DEPARTMENT OF ECOLOGY, AND STATE OF WASHINGTON POLLUTION CONTROL HEARINGS BOARD,

Respondents.

RESPONDENT DEPARTMENT OF ECOLOGY'S RESPONSE TO PETITIONERS' OPENING BRIEFS

ROBERT W. FERGUSON
Attorney General

Phyllis J. Barney, WSBA # 40678
Assistant Attorney General
P.O. Box 40117
Olympia, WA 98504
360-586-4616
OID #90124

TABLE OF CONTENTS

TABLE OF AUTHORITIES

Cases

State Statutes

Federal Statutes

State Regulations

Federal Regulations

I. INTRODUCTION

Ecology issued two general Permits imposing conditions on Concentrated Animal Feeding Operations (CAFOs) to prevent them from discharging pollutants in a way that would impact waters of the state. The Pollution Control Hearings Board properly concluded that the Permits complied with federal and state regulatory requirements. The Board's decision should be affirmed.

CAFOs are complex facilities where manure and other waste material produced by the animals raised is first stored, and then treated by applying it to field crops as fertilizer during the growing season. Among other provisions, the Permits require implementation of best management practices to ensure that CAFOs do not discharge to surface waters, and require every permitted facility to evaluate what risk it poses to groundwater, then adaptively manage its operations based on that risk.

Although the Permits are protective of waters of the state, Puget Soundkeeper Alliance *et al.* (Soundkeeper) challenges the Board's decision on multiple grounds. Soundkeeper's arguments rest on two premises. First, that work done at five individual dairies adjacent to each other in the Yakima Valley, previously identified by the Environmental Protection Agency (EPA) as impacting groundwater, can be extrapolated to the terms of general permits intended to cover multiple facilities state wide. Second,

that permittees will violate the terms and conditions of the Permits, and thus the Permits are not strong enough to protect water quality. Neither premise is true.

The Washington State Dairy Federation (Federation) objects to one condition that requires CAFOs in Eastern Washington to use a standard tool measuring cumulative temperature (T-SUM 200) to determine when plants are growing actively enough to be able to utilize (and thus treat) manure applied to their fields. The Federation's objection is based on speculation that T-SUM 200 does not work in Eastern Washington without pointing to evidence in the record that this is the case.

Ecology's Permits contain specific, enforceable effluent limitations to prevent impacts to state waters from CAFO operations. The Board correctly decided the issues in this appeal, and should be affirmed.

II. COUNTERSTATEMENT OF THE ISSUES

1. Did the Board properly affirm the Permits as implementing all known, available, and reasonable methods of prevention, control, and treatment applicable to CAFOs?

2. Did the Board properly affirm the Permits because it found they contain all effluent limitations necessary for the protection of water quality?

3. Did the Board properly affirm the Permits because it found the monitoring requirements consistent with the requirements of federal state law and regulation?

4. Did the Board properly affirm that the Permits' incorporation of effluent limits formerly contained in Nutrient Management Plans as enforceable conditions is consistent with applicable law?

5. Did the Board properly rule that RCW 90.48 contains no statutory requirement that Ecology must address climate change in the Permits?

6. Did the Board properly affirm the Permits' use of a standard tool for determining the timing of the first manure application of the spring?

III. COUNTERSTATEMENT OF THE CASE

A. The Clean Water Act

The federal Clean Water Act (CWA), 33 U.S.C. §§ 1251–1387, is a "comprehensive water quality statute designed to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." *PUD No. 1 of Jefferson Cty. v. Dep't of Ecology*, 511 U.S. 700, 704, 114 S. Ct. 1900, 128 L. Ed. 2d 716 (1994). Under the CWA, a discharge to navigable waters of the United States is unlawful unless the discharge is in accordance with a discharge permit. *Community Ass'n for Restoration of the Environment v. Dep't of Ecology*, 149 Wn. App. 830, 835, 205 P.3d 950 (2009) *(CARE)* (citing 33 U.S.C. §§ 1311(a), 1342). Discharge permits govern discharges surface waters from "point sources" as defined in the CWA. 33 U.S.C. § 1362(14). Discharges to groundwater are governed by state law requirements. RCW 90.48.160.

Ecology issues general discharge permits under the CWA and RCW 90.48. RCW 90.48.260, .160. As opposed to individual permits issued to a single facility, general permits cover multiple facilities across the state that are conducting the same type of activities—in this case, CAFO operations. RCW 90.48.260; AR 3436.[1]

One of the important roles for states under the CWA is the development and implementation of state-specific water quality standards. 33 § U.S.C. 1313(a); *American Paper Institute, Inc. v. U.S. E.P.A.*, 996 F.2d 346, 349 (D.C. Cir. 1993). Water quality standards consist of (1) the designated uses of a water body, (2) water quality criteria for those waters based on those uses, and (3) an antidegradation provision. 33 U.S.C. § 1313(c)(2)(A); *Pronsolino v. Nastri*, 291 F.3d 1123, 1127 (9th Cir. 2002). Water quality criteria may be numeric limits for specific pollutants, or general narrative limits (such as "no toxics in toxic amounts"). *American Paper Institute, Inc.*, 996 F.3d at 349–50. No permit can be issued that violates water quality standards. 40 C.F.R. § 122.44(d)(1)(i); WAC 173-226-070(3)(a).

[1] AR denotes citation to the Administrative Record filed in this matter.

B. CAFO Permits

CAFOs are agricultural facilities where animals are confined and fed for a total of 45 days or more during a 12-month period in an area that does not support the growth of vegetation. AR 3405 (citing 40 C.F.R. § 122.23(b)). A CAFO is defined as large, medium, or small on the basis of the number of animals confined. 40 C.F.R. § 122.23(b). A CAFO operation, which includes animal confinement pens and corrals, other operational areas such as milk processing, feed storage, manure storage areas, and land application fields, is a "point source" of discharges under the federal CWA. As a point source, CAFOs are subject to regulation under CWA regulations. 40 C.F.R. § 122.23(a).

Discharges from CAFOs require regulation through permits because of their potential for discharging pollutants. CAFOs produce manure, which then is managed at the facility, stored in lagoons, and land applied to crop fields. AR 3405. The CAFO Permits require a facility to implement best management practices to prevent manure from entering surface waters. Manure contains nutrients which are taken up by growing crops, but if manure is applied to fields in excess of crop needs, the risk is that those nutrients may migrate to groundwater. Of particular concern are nitrogen (in the form of nitrate) and phosphorous. AR 3406. Nitrate in a drinking water source can pose health risks to vulnerable populations. *Id.* Nitrate and

phosphorous in surface water can lead to algae and plant growth, which in turn can reduce oxygen in the water body. *Id.*

In January 2017, after an extensive public process, Ecology issued two permits regulating discharges from CAFOs. One permit, the Combined Permit, regulates discharges to both surface and ground waters as a combined federal CWA and state RCW 90.48 permit. AR 6911–68. The second permit, the State Only Permit, does not allow any discharges to surface water, but regulates discharges to groundwater under RCW 90.48. AR 6969–7021.

With regard to discharges to surface waters, the Permits are essentially no discharge permits, with only the Combined Permit allowing a discharge to surface waters in one instance, as a result of a significant storm event. AR 6922. Both Permits conditionally authorize discharges to groundwater from production areas, manure storage lagoons, and land application fields, but only if the facility is in full compliance with permit conditions. AR 6917, 6975 (Condition S1.A). Under the Permits, no pollutants may be discharged at a level that will cause or contribute to a violation of state surface or ground water quality standards. WAC 173-226-070(2)(b); AR 6922, 6980 (Condition S3). Ecology determined that an operation in compliance with all of the conditions of its CAFO Permit has implemented all known, available, and reasonable

methods of prevention, treatment, and control of pollutants (the "AKART" standard) and is protective of water quality. WAC 173-226-070(1); AR 7045, 7060–61.

As part of the development of the Permits, Ecology undertook an extensive review of relevant scientific literature and published the Manure and Groundwater Quality Literature Review (Literature Review).[2] AR 4060–64. The Literature Review informed permit development in the areas of land applications of manure, lagoon requirements, and monitoring. AR 7141.

The Permits were issued in January 2017, and expire in March 2022. Both Soundkeeper and the Federation appealed the Permits on multiple grounds. During motions practice, six issues were decided in Ecology's favor on summary judgment. After a seven-day hearing on the remaining issues, the Board issued its decision, which upheld the Permits with the exception of one condition challenged by the Federation.[3] The Board concluded that the Permits, taken as a whole, comply with the CWA and state water pollution control laws, and are protective of water quality.

---

[2] Ecology Publication No. 16-03-026, June 2016; AR 7129–7276.

[3] The issue on which the Federation prevailed was how to locate the "bottom" of a manure lagoon for the purpose of measuring the distance from the bottom of the lagoon to groundwater. The Board remanded the Permits to Ecology to make the location of a lagoon bottom consistent with location identified by the federal Natural Resource Conservation Service. AR 3444–45. Ecology did not appeal the Board's decision on this issue.

AR 3404. The Board agreed that the Permits require that AKART is implemented at CAFOs. AR 3440. The Board concluded that the terms and conditions of the Permits built on the previous permit and represented an advancement from the conditions in that earlier permit. AR 3436.

IV. STANDARD OF REVIEW

This Court will review the Board's orders under the Washington Administrative Procedure Act (APA). *CARE*, 149 Wn. App. at 839. The Court will apply the APA standards of review to the facts in record before the Board. *Id.* at 840.

The Court may grant relief if the Board's order is not supported by evidence that is substantial when viewed in light of the entire record. RCW 34.05.570(3)(e). The Court must decide whether any fair-minded person could have ruled as the Board did, and is not permitted to substitute its judgment for that of the Board on the credibility of witnesses or the weight to be given to conflicting evidence. *Calledoc v. Wash. State Patrol*, 84 Wn. App. 663, 676 n.9, 929 P.2d 510 (1997).

In addition, the Court may grant relief if the Board's order is arbitrary or capricious. RCW 34.05.570(3)(i). An action is arbitrary or capricious if it "is willful, unreasoning, and taken without regard to the attending facts or circumstances." *Ass'n of Wine and Spirits and Wine*

Distributors v. Wash. State Liquor Control Bd., 182 Wn.2d 342, 358, 340 P.3d 849 (2015) (internal citations omitted).

"'The burden of demonstrating the invalidity of agency action is on the party asserting invalidity.'" *CARE,* 149 Wn. App. at 840 (citing RCW 34.05.570(1)(a)). As the agency designated by the Legislature to regulate state water resources, Ecology's interpretation of relevant statutes and regulations is entitled to great weight. *Port of Seattle v. Pollution Control Hearings Bd.*, 151 Wn.2d 568, 593, 90 P.3d 659 (2004). Where both Ecology and the Board agree on an issue, the Court is "loath to override the judgment of both agencies, whose combined expertise merits substantial deference." *Port of Seattle*, 151 Wn. 2d at 600.

V. ARGUMENT

A. The Permits Require All Known Available and Reasonable Methods of Prevention, Treatment, and Control of Pollutants at CAFOs

The Board concluded that the Permits include conditions that require AKART and establish technology-based effluent limitations for CAFOs. AR 3440–41. The Permits' combination of conditions represent "the most current methodology that can be reasonably required" for preventing and controlling pollutant discharges. *Cf. Puget Soundkeeper Alliance v. Dep't of Ecology*, 102 Wn. App. 783, 792, 9 P.3d 892 (2000)).

The Permits must be taken as whole, because the interconnected conditions work together to implement AKART. The conditions in the Permits, when all are properly implemented and functioning together, ensure that a CAFO is operating in compliance with state and federal water quality laws and regulation. AR 3404.

All general permits issued by Ecology must apply, and assure compliance with, AKART. WAC 173-226-070. "AKART" is shorthand for "[t]echnology-based treatment requirements and standards reflecting all known, available, and reasonable methods of prevention, treatment, and control" required under state and federal law. WAC 173-226-070(1). This means AKART is "the most current methodology that can be reasonably required for preventing, controlling, or abating pollutants associated with a discharge." WAC 173-201A-020. Effluent limitations, either numeric or narrative like those in the CAFO Permits, are one method of implementing AKART. WAC 173-226-070(1)(a). Another way to implement AKART is the use of best management practices to prevent discharges. WAC 173-226-070(3)(d).

AKART's inclusion of the term "reasonable" requires that Ecology impose permit conditions that are both economically and technically feasible. AR 3435–36 (citing *Puget Soundkeeper Alliance v. Dep't of Ecology*, 102 Wn App. at 792–93). The application of AKART in permits

includes not only constructed technologies, but also operational protocols, requirements for evaluations of systems, and identification, planning, and implementation of pollution prevention plans that are technically and economically achievable. *Id.* The Board found that the Permits included conditions requiring the implementation of AKART and established technology-based effluent limitations. AR 3440–41.

Soundkeeper argues that the Permits do not implement AKART for storage lagoons, land application fields, and compost areas, animal pens and corrals. Soundkeeper bases much of their argument on work conducted by their expert, Mr. Erickson, at the Cow Palace and 4 other adjacent dairies in the Lower Yakima Valley, which are also referred to as the "dairy cluster" facilities. AR 4374. Cow Palace was the subject of a citizen's suit under the Resource Conservation and Recovery Act, 42 U.S.C. § 6901 et. seq. EPA had previously entered into an administrative order with Cow Palace to address the high levels of nitrates in groundwater that EPA attributed to the dairies. AR 4601; *Cmty. Ass'n for Restoration of the Env't, Inc. v. Cow Palace, LLC*, 80 F. Supp. 3d 1180, 1187 (E.D. Wash. 2015). Mr. Erickson's work at the dairy cluster facilities included soil sample testing and groundwater testing for contaminants. AR 4379–81 The dairy cluster facilities were not following nutrient budgets for land applications like those required in the Permits, and were not properly maintaining their lagoons.

AR 3408. The Board concluded that Soundkeeper did not show that the cluster dairies were operating under the terms of either the current or the previous CAFO permit. AR 3437–38. Mr. Erickson testified that he had never been called in to do monitoring work at a dairy that did not already have an existing contamination concern. AR 4635–36.

Soundkeeper's argument that only synthetic double liners with leak detection are AKART for lagoons fails because it is based on Soundkeeper's experience with lagoons that were not properly maintained, and because such liners are prohibitively expensive, making them economically unreasonable. The Permits implement AKART for production areas, and Soundkeeper offers no alternative practices to those in the Permits. Soundkeeper does not meet its burden to show that the Board's decision is contrary to law, unsupported by substantial evidence in the record, or arbitrary or capricious.

1. The Permits' AKART conditions for lagoons include a permeability standard for new lagoons, and an assessment for existing lagoons

The Permits require new lagoons to be constructed so that they seal to reduce seepage to the soil underneath them. The Permits also require a CAFO operator to evaluate their existing lagoons to determine if they pose

an elevated risk to groundwater. If they do, the Permits require action to mitigate the risk.

Manure storage lagoons are a necessary part of CAFO operations, because they provide storage for manure accumulated during the non-growing season, when it cannot be applied to land. AR 7193. In general, industrial storage lagoons may be lined with synthetic liners, or utilize a liner of compacted soil or clay. AR 3416. The risk associated with storage lagoons with compacted soil or clay liners at CAFOs is that some amount of manure will seep to the soil under the lagoon and from there, eventually reach groundwater. AR 7193. Once properly constructed and in operation, soil and clay liners will continue to seal and reduce seepage. AR 3419.

For newly constructed or refurbished lagoons, the Permits set a construction standard for allowable seepage (permeability) of 1×10^{-6} centimeters per second. AR 6923, 6981. This seepage rate is considered AKART for new lagoons. AR 4124. With use, lagoons will seal more tightly, achieving a permeability of 1×10^{-7}. AR 3419.

Ecology determined that available information did not support a conclusion that seepage from all lagoons was resulting in contamination of groundwater. AR 3418. Because of this lack of information on the condition of existing lagoons, the Permits require permittees to conduct a lagoon

assessment.[4] AR 3423, 6946–47, 7000–02, 3818, 3864–70. The lagoon assessment is required because Ecology needs to collect information on the design and condition of existing lagoons across the state. AR 3866–67, 5163–64. The lagoon assessment is AKART in these Permits for existing lagoons. AR 5163. The assessment results then informs the CAFO's next steps. If a CAFO has a high risk lagoon, it must develop and implement a plan to address the deficiencies of the lagoon. AR 7543, 6946, 7001. If the assessment shows that the lagoon is too close to groundwater, the Permits require groundwater to be monitored. *Id.* The Board concluded that implementing the lagoon assessment program is appropriate and reasonable. AR 3405.

How much seepage occurs below a lagoon varies based on head pressure, soils, compaction, and permeability. AR 3416–18. While Soundkeeper equates any lagoon seepage with a violation of water quality standards for groundwater, Ecology does not. AR 4145 (referencing a study where no impacts to groundwater were shown). As Soundkeeper's expert Mr. Erickson testified, lagoon seepage of between 1,000 and 5,000 gallons per day was not like taking a 1,000- to 5,000-gallon bucket of pollutants and dumping it directly into groundwater. AR 4709–10. The time it takes

[4] The lagoon assessment tool required by the Permits is Technical Note #23 published by the federal Natural Resources Conservation Service. AR 7517–58.

pollutants to travel from the soil surface to groundwater are affected by many factors, including the composition of the soil (sand versus clay), saturation levels of the soil, and precipitation. AR 4101–02.

Because of the permeability of earthen liners, Soundkeeper argues that double-synthetic liners with leak detection should represent AKART for manure storage lagoons. Brief of Petitioners Puget Soundkeeper Alliance, et al. (Soundkeeper Br.) at 18. But even its own expert disagrees. Soundkeeper's Mr. Erickson testified that he thought the double-synthetic lined lagoons with leak detection, like those he was in the process of installing at Cow Palace, were more than facilities needed to have. AR 4575–76. He did advocate for a double-lined system, where one of the liners was synthetic. *Id.* Mr. Erickson's expert report stated that synthetic liners are not used at CAFOs, although they are common in other industries. AR 6001–02 ¶ 30.

The cost of double-synthetic liners with leak detection is considerable. Mr. Erickson testified that the cost of lining the first lagoon at the Cow Palace facility, which was approximately two and a half acres in size, was $400,000 for the liner and installation. The second lagoon, which was four and half acres, cost approximately $600,000 to line. For the third lagoon, Mr. Erickson anticipated that product improvement would reduce the cost to $220,000. The Federation's expert Dr. Neibergs testified that this

expense would put dairy producers out of business. AR 4827–31. Such liners are thus not economically feasible.

2. Conditions specific to proper management of land application areas implement AKART

A CAFO's land application area is the most significant area of the facility when it comes to the risk to ground water. AR 4108. The land application area also presents a risk to surface water from unauthorized runoff. The Board concluded that the land application conditions of the Permits (Conditions S4.H, S4.J, S4.L, and S4.M) implement AKART. AR 3440–42. The Board also concluded that Ecology's adaptive management provisions for land application fields was reasonable and lawful. AR 3442.

Soundkeeper fails to address AKART requirements for land application areas, and therefore has waived this issue. *Holder v. City of Vancouver*, 136 Wn. App. 104, 107, 147 P.3d 641 (2006). Ecology provides the Court with this brief discussion because of the central importance of land application as the primary form of treatment of manure at a CAFO, and because land application fields are included in the discussion of effluent limitations and monitoring that follows.

The purpose of land applications at a CAFO is treatment of the manure to reduce nitrate. AR 4065–66. Land application does this by

utilizing manure as fertilizer for crops. "Crop uptake is the primary nitrogen treatment mechanism and removal component for manure land treatment systems." AR 7170. Treatment occurs through timing the land application to when uptake by a crop is maximized, because that is when leeching below the plant root zone is minimized, and over application is avoided. AR 7915. If manure is applied in amounts over what a crop can utilize, nitrate can move below the root zone with the downward flow of precipitation or irrigation water, and eventually reach groundwater. AR 7290, 4066–68.

The adaptive management conditions of the Permits provide a feedback loop to minimize the risk to groundwater from land applications. The Permits require spring soil sampling to measure how much residual nitrate is in the soil at the beginning of the growing season. AR 6928–29, 6985–86 (Condition S4.I.1). This amount is then taken into account in calculating field nutrient budgets for the upcoming year. AR 6930, 6987–88 (Condition S4.J.1). The yearly nutrient budget specifies, field by field, the maximum amount of manure that can be applied to the land that season, taking into account the nutrient content of the manure itself, and the type and amount of crop growth expected. *Id.*

The Permits also require fall soil sampling to measure the level of nitrate remaining at the end of the growing season, a CAFO's "report card" of its treatment success. AR 6928–29, 6986 (Condition S4.I.2). The level of

nitrate remaining in the fall is the measure used to determine if action is required by the facility under the adaptive management scheme to reduce the amount of nitrate residual in the soil during the next season. AR 6932–34, 6990–91 (Condition S4.K and Table 3). Table 3 of the Permits sets out four risk levels based on the amount of nitrate measured in a fall soil sample, and the actions required at each level in response to residual nitrate. *Id.* The risk levels were developed using WSDA guidance and studies analyzed for the Literature Review. AR 4080–87. As the risk level based on residual nitrate rises, a heightened response is required to reduce the risk of nitrate leaching to groundwater. AR 6934, 6991 (Table 3).

Specific to surface water protection, the Permits contain numerous provisions that require a CAFO to implement best management practices to prevent runoff from land application fields (Conditions S4.H, S4.I, S4.J, and S4.M). AR 3441. A facility operating in compliance with the Permits will not discharge to surface water from these fields.

The Board affirmed the use of soil sampling and adaptive management in the Permits. AR 3404. The Board concluded that the evidence presented at hearing established that Ecology applied its technical expertise and permitting experience and "developed reasonable adaptive management conditions to address excessive nitrates in land application

fields." AR 3442. The Board found the adaptive management provisions consistent with applicable law and regulation. *Id.*

3. The Permits' conditions are AKART for pens and corrals and for composting areas

Pens, corrals, and composting areas are part of the production area of a CAFO. AR 3871–72. As the Board concluded, the Permits require that run-off from these areas is prevented (Conditions S4.A, S4.B.2, S4.C), infrastructure is inspected and timely repaired, (Condition S4.C) clean water is diverted away from contact with contaminants (Condition S4.D), animals are prevented from accessing surface water (Condition S4.E), chemicals are properly managed (Condition S4.F), and mortalities properly managed (Condition S4.G). AR 3440–41, 6923–27, 6980–85.

While pen and corral areas of a CAFO may be a potential source of contamination, the Literature Review did not find that these areas were a significant contributor of nitrate to soils. AR 7159, AR 4108. Compaction of manure in these areas created a barrier layer that reduced infiltration of nitrate, and because the areas were not designed to hold water, there was no hydraulic head present to move the nitrate to soil. *Id.* The Board found that Soundkeeper did not offer any management techniques to address animal pens as a potential source of pollution. AR 3433.

Ecology's permit writer, Mr. Jennings, testified that while compost areas are a potential source of pollution, drying areas for compost he had observed in Eastern Washington had soil compacted by equipment which would prevent the movement of nitrate into the soil. AR 3893. Soundkeeper's expert agreed, testifying that he had worked on compacting soils under compost piles at Cow Palace as a management technique. AR 4572–74. Mr. Erickson found, however, that each spring the benefit of the compacting was lost due to activity on the facility. As an additional protective practice, Mr. Erickson recommended moving any stormwater runoff from compost areas into lagoons, a practice the Permits require. AR 6925, 6983 (Condition S4.B.2). Ultimately, Mr. Erickson had to concede that he had not come up with an answer on how to address the risk to groundwater from the compost areas. AR 4574.

The Board concluded that the Permits are AKART for CAFOs, because they contain conditions that require the application of all known, available, and reasonable methods of prevention, treatment, and control of pollutants at CAFO facilities. Soundkeeper does not meet its burden to show that the Board's conclusion is contrary to law, unsupported by substantial evidence in the record, or arbitrary or capricious.

B. The Permits Contain All Statutorily Required Effluent Limitations and are Protective of Water Quality

The Board found that the Permits included conditions establishing effluent limits in the Permits that prevent unauthorized discharges to waters of the state. AR 3440–41. An effluent limitation is any restriction on timing, quantities, rates, and concentrations of pollutants discharged into the waters of the state. AR 3440 (citing 33 U.S.C. § 1362(11)); 40 C.F.R. § 122.44(k). Effluent limitations may be numeric limits on the amount of specified pollutants that may be contained in a facility's discharge. *American Paper*, 996 F.2d at 350. However, where setting numeric limits are infeasible, best management practices may be incorporated into permits in their place. 40 C.F.R. § 122.44(k)(3); *Cf. Citizens Coal Council v. U.S. E.P.A.*, 447 F.3d 879, 895 (6th Cir. 2006) ("[T]he CWA does not mandate the use of numeric limitations only."). Effluent limitations also include schedules of compliance and the use of best management practices. *Id.* The federal CAFO rule "establishes *non-numerical* effluent limitations in the form of best management practices." *Waterkeeper Alliance, Inc. v U.S. E.P.A.*, 399 F.3d 486, 502 (2nd Cir. 2005) (emphasis in original). Finding that the Permits do not permit unauthorized discharges to waters of the state, the Board deferred to Ecology's expertise administering water quality laws and

Ecology's technical judgment and affirmed Ecology's choice to not impose numeric limits in the permits. AR 3441.

The Permits contain numerous conditions that are the effluent limitations applicable to CAFOs to prevent discharges that would violate water quality standards. As Soundkeeper states, the effluent limitations constitute essentially the entire Permit, because the Permit conditions as a whole, when properly implemented at a facility, prevent unauthorized discharges. Soundkeeper Br. at 24.

Consistent with the federal regulations, the Permits' effluent limitations prevent discharges that would violate water quality standards from a CAFO. 40 C.F.R. §§ 122.41, 412. These effluent limitations are found primarily in Condition S4 and include, among other requirements: performance standards for manure storage facilities (Condition S4.B); requirements regarding pipes, tile lines, and other infrastructure (Condition S4.C); requirements for diversion of clean water and preventing animal contact with water (Condition S4.D, E); sampling of nutrients and soils (Condition S4.H, I); extensive requirements governing location, timing, source, and rates for land applications of manure (Condition S4.J); adaptive management benchmarks for land applications (Condition S4.K); irrigation water management (Condition S4.L); and requirements for field best management practices to prevent discharges to surface waters and

groundwater (Condition S4.M). AR 6923–37, 6981–92. Critically, all actions designed and implemented to meet Permit conditions and to prevent prohibited discharges must be incorporated into the required Manure Pollution Prevention Plan. AR 6938–41, 6993–95 (Condition S4.Q). The plan is intended to be a living document setting out specifically how a facility is implementing the conditions of the Permits. AR 3828–29 6938–41, 6993–95.

Soundkeeper argues that "specific" effluent limits for surface water discharges are required in the Permits, which Ecology interprets as calling for numeric effluent limits. Soundkeeper Br. at 24. Soundkeeper's argument is based on its belief that CAFOs will discharge in violation of the Permits. Additionally, Soundkeeper argues for numeric limits for groundwater discharges, without addressing the practical issues associated with monitoring for compliance with such limits, and the lack of assistance such limits provide with regard to proper management of the CAFO.

1. Setting numeric limits for surface water discharges is unreasonable because the Permits prohibit such discharges

Specific to surface water discharges, best management practices are required in the Permits in order to prevent, control or abate the discharge of pollutants. WAC 173-226-070(3)(d); 40 C.F.R. § 122.44(k)(3). Setting

numeric limits for surface waters is infeasible in the Permits, because they do not permit discharges in the first instance. 40 C.F.R. § 122.44(k)(3).

The State Only Permit, issued under RCW 90.48, prohibits all discharges to surface water from a CAFO. AR 3414. Consistent with the federal CAFO rule, the Combined Permit authorizes discharges from a CAFO to surface waters in only one instance. AR 3441. The Combined Permit allows a discharge from the production area of a CAFO due to a significant (once in 25-years) storm event. AR 3413, 6922 (Condition S3.C); AR 7095. The production area includes animal confinement areas, manure, litter, feed and wastewater storage areas, and all areas used in handing and processing of materials or wastes, including manure stockpiled on fields. AR 7099. This discharge is authorized if a CAFO is otherwise operating in full compliance with their permit, and precipitation causes an overflow from the production area, so long as that area is designed, constructed, operated and maintained to contain all manure stored at a facility, plus the contaminated runoff and direct precipitation from a 25-year, 24-hour rainfall event. All other discharges to surface waters are prohibited under the Combined Permit.

The Permits also address emergency winter applications of manure to land to protect public health and safety, for instance to prevent a manure storage lagoon from over topping. AR 3429, 6932, 6989 (Condition

S4.J.5), 5160–62. The Permits are clear that such a land application, if made in violation of the requirements of S4.J.1–4, or in amounts greater than the yearly nutrient budget for the field where manure is applied, is a permit violation. AR 6932, 6989 (Condition S4.J.5). All of the Permits' other conditions remain in effect during an emergency application, including the requirement for best management practices on land application fields to prevent a discharge to surface waters. AR 6935, 6992 (Condition S4.M). The Permits also require a permittee to keep records of such emergency applications, report their occurrence, and develop and implement a compliance plan so a future emergency violation can be avoided. AR 6932, 6989.

Relevant to the potential for surface water discharges at CAFOs covered by the Combined Permit is the issue of what constitutes "agricultural stormwater." 33 U.S.C. § 1362(14); 40 C.F.R. § 122.23(e).[5] Congress explicitly exempted agricultural stormwater from being included within the definition of "point source" under the CWA. AR 3414; 33 U.S.C. § 1362(14); *Waterkeeper*, 399 F.3d at 508–09. A discharge meeting the definition of agricultural stormwater is not regulated by the Combined

[5] Agricultural stormwater is "[d]ischarges to surface water from land application fields generated only by precipitation provided that the following are true: 1. The discharge was not from the production area, 2. The discharge was not caused by human activities even if the activity took place during precipitation, and 3. Permittee is in compliance with their CAFO permit. AR 7095.

Permit because it is not part of the point source–the CAFO. The Combined Permit, consistent with this, provides an exemption from regulation for discharges meeting the definition of agricultural stormwater. AR 6923 (Condition S3.D). But not all runoff attributable to rain meets the definition of agricultural stormwater and thus may not be exempt from permit enforcement. If any of the three factors are not met, for instance if the discharge was caused by the human activity of applying manure to a field during a rainstorm, a resulting discharge is not agricultural stormwater and is a violation of the Combined Permit. *Concerned Area Residents for the Env't v. Southview Farm*, 34 F.3d 114, 120 (2nd Cir. 1994).

Again, the State Only Permit prohibits all discharges to surface water. AR 3414. No discharge to surface water from a production area is authorized by the State Only Permit. *Id.* There is no agricultural stormwater exemption applicable to a facility under RCW 90.48. Therefore if a facility is covered by and operates in compliance with the State Only Permit, any discharge to surface waters is a permit violation.

Although Soundkeeper argues that numeric discharge limits for specific pollutants are required for surface water discharges, such limits are neither feasible to set, nor even reasonable in these Permits that essentially prohibit surface water discharges altogether.

The CWA authorizes regulation of the discharge of pollution. *Waterkeeper*, 399 F.3d at 504. Typically a permit will be issued to a facility that first collects its wastewater and then discharges that wastewater to surface waters through pipes or outfalls. Such permits reasonably establish numeric limits on the pollutants in that wastewater, because those facilities are adding pollutants to surface waters. Permits for such discharging facilities reasonably require monitoring for the amount of pollutants in the discharge to determine if the facility is in compliance with its permit. *Cf. Puget Soundkeeper Alliance v. Dep't of Ecology*, 191 Wn.2d 631, 635, 424 P.3d 1173 (2018). But here, the only discharge to surface waters authorized is only in one of the Permits, and happens during a catastrophic storm event that occurs once in 25 years. Numeric effluent limits are neither necessary nor reasonable in these Permits, which instead relies on AKART, narrative limits, and best management practices to prevent violations of water quality standards. And certainly the application of technology-based treatment and controls, and the use of best management practices to prevent discharges in the first instance is a more effective method of preventing unlawful discharges before they can occur. *Puget Soundkeeper Alliance*, 191 Wn.2d at 641.

2. Setting numeric limits for groundwater is unreasonable because the Permits' management practices are the best way to control impacts to groundwater

The impracticability of setting numeric effluent limits for groundwater is base in part on the issues associated with connecting the results of groundwater monitoring to management practices at a CAFO. Groundwater monitoring identifies what pollutants are present in groundwater at the time it is sampled. AR 4098. But groundwater monitoring does not necessarily identify the source of those pollutants, nor when those pollutants reached groundwater. *Id.* Groundwater monitoring is backward looking, as it measures what may have happened at the surface some time before. AR 3431. There is a lag time between when something is done at the land surface and when a pollutant is detected in groundwater. AR 4100–01, 4441. This makes it difficult to determine when that pollutant reached groundwater. The Board concluded that "the evidence presented at hearing demonstrated that the Permits as a whole are protective of groundwater." AR 3438. Soundkeeper does not meet its burden to show that the Board's decision upholding Ecology's choice to not include numeric limits in the Permits is contrary to law, unsupported by substantial evidence in the record, or arbitrary or capricious.

C. The Permits Require the Monitoring Necessary through Inspections and Soil Sampling

The Board affirmed the monitoring requirements of the Permits. AR 3437. The Board concluded that Soundkeeper did not meet its burden to prove that either surface water monitoring or groundwater monitoring is necessary under the CAFO Permits. As described above, setting numeric effluent limits for the discharge of specific pollutants is not reasonable in the Permits, and therefore monitoring for specific pollutants in a water sample is similarly not a reasonable requirement.

The Permits contain other forms of monitoring, however, because Ecology's view is that monitoring is not limited to the collection and analysis of water samples for specific pollutants. Ecology considers monitoring to include the visual inspections required by Condition S5.A of the Permits. AR 5159, 6941, 6996. With regard to surface water, such visual monitoring can easily detect unlawful discharges. The Permits also require soil monitoring to implement the adaptive management program protective of groundwater.

The Board concluded that Soundkeeper failed to prove that surface water monitoring is necessary in the Permits, based primarily on the lack of permissible discharges authorized by the Permits. AR 3437. Soundkeeper once again relies on their contention that permittees will

violate their permits as a basis for requiring monitoring. Soundkeeper Br. at 39–41.

1. Surface water monitoring is not necessary

For CAFOs, essentially no discharges to surface waters are authorized, so there are no discharges containing pollutants to be sampled and analyzed for compliance with numeric limits. A discharge to surface water from a CAFO can be determined visually, without the need for taking a sample. AR 5159–60. The Permits' prohibition of surface water discharges is not unenforceable as Soundkeeper contends. Soundkeeper Br. at 41. Outside of the significant storm provision, if a permittee discharges to surface waters, it is a violation of their permit, and Ecology then has the option to issue enforcement and order a permittee to take corrective actions. RCW 90.48.120.

Condition S4.M of the Permits requires prevention of all discharges to surface waters and conduits to surface waters from fields. AR 6935, 6992. Soundkeeper asserts that a facility with tile drains will cause a discharge to surface waters. Soundkeeper Br. at 25. Mr. Jennings testified that such a discharge is not a discharge authorized by the Permits. AR 3964. Monitoring by taking a sample to confirm a violation is

unnecessary when the fact of the discharge itself is a violation in the first instance.

Soundkeeper's expert Dr. Keeney testified that surface water monitoring should be required for CAFOs. AR 675. While he stated that such monitoring was not difficult to do, he indicated that several sampling points would be required, including near an "outlet" at the CAFO, then upstream and downstream from the outlet, and then at outlets of other major tributaries and streams, and also possibly at other facilities that are discharging. AR 4425–26, 4433, 4454–55. This type of receiving water monitoring is not the monitoring of pollutants located in a discharge. Dr. Keeney also acknowledged that it would be difficult to monitor sheet flow run-off from a field. AR 4458. Relevant to monitoring during a storm event, he also testified that a stormwater discharge sample taken at the beginning of a storm might not be representative of the entire storm event. AR 4456–57. The extensive surface water monitoring advocated by Dr. Keeney is not reasonable in the Permits, which do not authorize discharges to those surface waters in the first instance.

2. Groundwater monitoring is not necessary

As discussed above, groundwater monitoring presents several challenges, including that its lack of a direct connection to a particular

practice hampers its use as a management tool. An additional complication to groundwater monitoring for land application fields is that CAFOs often swap fields, sometimes yearly, or use leased fields for land application. AR 3863–64, 5157–58. Requiring monitoring wells to be constructed on fields that may only be used once is not reasonable.

In response to two circumstances, the Permits provide for groundwater monitoring. One is in the event that a storage lagoon is sited too close to groundwater. AR 6946, 7001. The other is in the context of adaptive management, where a CAFO has the option to install groundwater monitoring in response to high fall soil nitrates that occur for three consecutive years. AR 6934, 6991. These uses of groundwater monitoring as a management tool is reasonable, as they are directed at specific conditions and activities at a facility.

Ms. Redding, the author of the Literature Review, testified that a simple groundwater monitoring system would require at least three monitoring wells. AR 4098–99. Mr. Erickson testified that the simplest monitoring system he has proposed was an eight well system. AR 4623–24. He estimated the cost per well was around $4,000 each, so the array overall was at a cost of $40,000-$50,000. *Id.* EPA had installed approximately 40 monitoring wells at Cow Palace, to which Mr. Erickson added 14.

AR 4601–02. Because of site-specific characteristics, those 14 wells cost $10,000 each, or $140,000. AR 4602.

If there are monitoring wells with only one practice, such as a storage lagoon, positioned upgradient from them, it may be possible to conclude that particular practice was responsible for a particular result when groundwater is monitored. Given the lag time for pollutants reaching groundwater, however, it would not be possible to connect those pollutants with a particular practice. Even more confounding, where either multiple practices or multiple facilities are upgradient, it may not be possible to pinpoint the exact practice, or even facility, responsible for the nitrate found in a downgradient well. AR 4616–17. The Permits' approach is to require a facility to modify and correct its practices at the land surface to reduce the risk to groundwater, rather than to simply monitor pollutants in a way that cannot pinpoint a source or even when those pollutants entered the groundwater.

The Board concluded that Soundkeeper failed to prove that groundwater monitoring is necessary. AR 3437. While groundwater monitoring can tell identify the pollutants in the groundwater itself, it is unreasonable, for the purpose of a general permit applicable to many facilities, to find that groundwater monitoring can be linked to an activity at the surface so that a management practice can be modified.

D. The Permits' Enforceable Effluent Limitations Replace Nutrient Management Plans Written by CAFO Operators

The Board concluded that the Permits comply with the legal requirements regarding Nutrient Management Plan contents, recordkeeping, and enforceability. AR 3440. The Board found that Ecology's decision to incorporate the elements of a nutrient plan into the Permits as enforceable conditions was consistent with applicable law. *Id.*

Federal regulations state that permitted CAFOs must develop and comply with a site-specific Nutrient Management Plan. 40 C.F.R. §§ 122.23(h), 122.42(e). In the federal CAFO rule, the purpose of a nutrient plan is to set effluent limitations for a CAFO. *Waterkeeper*, 399 F.3d at 502. In the federal scheme, a nutrient plan is written by a permittee and must address the requirements of 40 C.F.R. § 122.42(e) which include: ensuring adequate storage for nutrients and proper operations for storage facilities, management of mortalities and chemicals, diversion of clean water, prevention of contact between animals and water bodies, identification of best management practices to prevent pollution runoff, testing of nutrients and soil, protocols for land application of nutrients, and recordkeeping. 40 C.F.R. § 122.42(e)(1)–(5).

In *Waterkeeper*, the Second Circuit invalidated an earlier version of the CAFO rule because the former rule did not require the regulating agency

to review a nutrient plan, and thus the specifics of the plan did not become incorporated into the CAFO permit itself as effluent limitations. *Waterkeeper*, 399 F.3d at 500–03. The court held that because the specific terms of a nutrient plan were effluent limitations, those terms must be incorporated in permits. *Id.* at 502–03. EPA amended the CAFO rule in response to the *Waterkeeper* decision, stating that when a facility applied for a permit, it would submit a nutrient plan for approval and with effluent limitations for incorporation into the permit. 73 Fed. Reg. 70417 (Nov. 20, 2008).

Ecology's experience administering the prior version of the Permits was that it often required several iterations of a nutrient plan before it was approvable. AR 3818–32 (discussing the administrative "do loop" created by this process). The back-and-forth required to reach an approvable nutrient plan took time, and in the interim, the facility was not under permit coverage and thus not subject to any effluent limitations. *Id.*; AR 5151–55.

As explained in the Fact Sheet, and set out in the table below, Ecology moved the required effluent limitations out of the plan written by the permittee, and put them into the Permits themselves as enforceable permit conditions. AR 3439, 7061–64. At the same time, Ecology requires a permittee to prepare and implement a Manure Pollution Prevention Plan, which must be designed to limit discharges. AR 6938–39, 6993–94

(Condition S4.Q). The Manure Pollution Prevention Plan is not the same thing as the federal Nutrient Management Plan. The CAFO Permits themselves contain the effluent limitations that used to be housed in the federal nutrient plan.

Soundkeeper argues that a Nutrient Management Plan should still be required, ignoring Ecology's experience with the difficulties of obtaining a final, approvable plan. Soundkeeper Br. at 41–45. Soundkeeper's reliance on a nutrient plan written by a CAFO operator also ignores the fact that the Permits now contain the effluent limits that protect water quality at the start of permit coverage—they are not dependent on a CAFO submitting the Manure Pollution Prevention Plan before they are enforceable.

Each requirement of the CAFO rule found in 40 § C.F.R. 122.42(e) is now a permit condition:

C.F.R.	Permit Condition
40 C.F.R. 122.23(h) 40 C.F.R. 412.4(c)(1) develop field specific nutrient budget	S4.Q S4.J
40 C.F.R. 412.4(c)(2) determine application rates	S4.J
40 C.F.R. 412.4(c)(3) manure and soil sampling	S4.H, S4.I S5.B, S5.C
40 C.F.R. 412.4(c)(4) inspect equipment	S5.A
40 C.F.R. 412.4(c)(5) setbacks/buffers	S4.M (Combined Permit Only)
40 C.F.R. 412.37(a) inspections	S5.A
40 C.F.R. 412.37(a)(4) records - mortalities	S4.G, S5.A.4
40 C.F.R.412.37(b) records–production area	S4.Q, S6.D, S6.E

C.F.R.	Permit Condition
40 C.F.R.412.37(c) records-land application	S6.B; S4.J.1, S6.B, S7.C
40 C.F.R.122.42(e)(1) implement a nutrient plan	S4.Q
40 C.F.R.122.42(e)(1)(i) adequate manure storage & management	S4.A,S4.B, S4.C, S4.O, S4.P, S4Q, S5.A, S6.A, S7.B
40 C.F.R.122.42(e)(1)(ii) mortality management	S4.G, S4.Q
40 C.F.R.122.42(e)(1)(iii) divert clean water	S4.D, S4.Q
40 C.F.R.122.42(1)(e)(iv) prevent direct contact	S4.E, S4.Q
40 C.F.R. 122.42(e)(1)(v) chemicals	S4.F, S4.Q
40 C.F.R. 122.42(e)(1)(vi) best management practices	S4.J, S4.K, S4.L, S4.M, S4.O, S4.Q, S5.A
40 C.F.R.122.42(e)(1)(vii) testing protocols for manure, other waste, and soils	S4.H, S4.I, S5.B, S5.C
40 C.F.R.122.42(e)(1)(viii) land application protocols	S4.J, S4.K, S4.L, S4.Q, S7
40 C.F.R.122.42(e)(1)(ix) record keeping	S4.Q, S6
40 C.F.R.122.42(e)(2) record keeping	S4, S6, S7
40 C.F.R.122.42(e)(3) manure transfers	S6.C, S4.N
40 C.F.R.122.42(e)(4) annual reporting	S7.C, annual report form
40 C.F.R.122.42(e)(6) nutrient plan updates	S4.Q.4

See also Cross Reference Table AR 7062–64.

There is no longer any need for Ecology to wait for a permittee to draft effluent limitations to be incorporated into their permit, because the limitations are already in the conditions of the CAFO Permits. The permittee then develops a site-specific pollution prevention plan to demonstrate how the facility will comply with the conditions. EPA reviewed the Permits prior to their issuance, and after understanding Ecology's approach, ultimately endorsed it. AR 5155–56.

The *Waterkeeper* decision states that what federal law requires is public participation in "the 'development, revision, and enforcement of . . . [an] *effluent limitation.*'" *Waterkeeper*, 399 F.3d at 503 (citing 33 U.S.C. § 1251(e) (alteration and emphasis in the original). The effluent limitations that used to be developed individually by a CAFO in its nutrient plan are now conditions in the Permits themselves. The requirement for public participation in the development of effluent limitations is met by the opportunity the public has had to comment on the Permits. *See* AR 3800–01 (discussing the public comment process for the Permits).

Not only is development of a Manure Pollution Prevention Plan required, but also proper implementation of that plan is enforceable through enforcement of Condition S4.Q. AR 6938–41, 6993–95. Additionally, while the pollution prevention plan is no longer required to be submitted with an application, it is still a document available to the public on request, and Ecology intends to make the plans available online. AR 3830–31.

Soundkeeper relies on *Riverkeeper, Inc. v. Seggos*, 60 Misc.3d 462, 75 N.Y.S. 3d 854 (2018 N.Y. Slip Op. 28141), but the regulatory scheme the *Riverkeeper* court analyzed is completely different than Ecology's Permits and easily distinguishable. There, the best management practices were written by a planner hired by the permittee and were contained in a document called a Comprehensive Nutrient Management Plan that was

expressly confidential and not subject to public disclosure. *Riverkeeper*, 60 Misc.3d at 473–74. It was the planner and permittee that certified the compliance of the Comprehensive Plan with the CWA, the state regulator did not. *Id.* at 474. The court found this structure did not comply with the CWA requirements for agency oversight. *Id.* at 484. A second document, an Animal Nutrient Management Plan was a public document, but it only contained a subset of the information contained in the Comprehensive Plan. *Id.* at 474–75. The court found that the structure calling for two different plans was not consistent with the federal regulations. In contrast, here Ecology's Permits comply with the CWA, and both Ecology's Permits and a CAFO's pollution prevention plan are publicly available. In short, the *Riverkeeper* case is not applicable to Ecology's Permits.

The Board properly found that the Permits complied with applicable legal requirements regarding nutrient plans. AR 3440. Soundkeeper does not meet its burden to show that the Board's decision is contrary to law, unsupported by substantial evidence in the record, or arbitrary or capricious.

E. Legislation Directed at Greenhouse Gases does not Impose Requirements Specific to CAFO Permits

The CAFO Permits are discharge permits developed under the CWA and RCW 90.48, neither of which contain requirements specifically directed to mitigation of climate change. The Board on summary judgment

determined that while Soundkeeper made extensive policy arguments regarding climate change, it failed to identify a statutory requirement of RCW 90.48 that Ecology address climate change in a water discharge permit. On appeal Soundkeeper once again relies on legislative requirements limiting greenhouse gas emissions for its argument, but does not connect those requirements with the Permits.

"[W]here the original administrative decision was on summary judgment, the reviewing court must overlay the APA standard of review with the summary judgment standard." *Verizon Nw., Inc. v. Washington Emp't Sec. Dep't*, 164 Wn.2d 909, 916, 194 P.3d 255 (2008) (citing *Alpine Lakes Prot. Soc'y v. Dep't of Natural Res.*, 102 Wn. App. 1, 14, 979 P.2d 929 (1999)). The decision is reviewed directly, based on the record before the Board. *Alpine Lakes*, 102 Wn. App. at 14. The facts are viewed in the light most favorable to the nonmoving party, and the law evaluated *de novo* under the error of law standard. *Verizon*, 164 Wn.2d at 916. Under this standard, substantial weight is accorded to an agency's interpretation of a statute within its expertise, and to rules that the agency promulgated. *Id.* at 915.

Ecology has identified declining water quality as one impact of climate change on state water resources. AR 336. Consistent with state policy found in RCW 90.48.010, the purpose of discharge permits is

protection of water quality. Protection of water quality through permitting may provide a general benefit against the impacts of climate change. Even absent specific mention of climate change in the Permits, they still contain water quality protection in the form of requirements for soil monitoring to reduce nitrate concentration in soil, and thus reduce the nitrate available for leaching to groundwater. *See* AR 700. The use of best management practices on fields and in production areas that reduce the risk of surface water discharges in the face of increased storm intensity are also required permit effluent limitations.

Soundkeeper argues generally that the Permits fail to consider and address climate change, but points to no specific provisions of the CWA or RCW 90.48 imposing requirements related to climate change in CAFO Permits. Soundkeeper cites instead to reports prepared for the Legislature under RCW 70.235.040, which specifically addresses greenhouse gas emissions to air. AR 606–31, 633–68. The Legislature expressed its intent to limit and reduce emissions of greenhouse gases when it enacted E2SHB 2815, which added chapter 70.235 RCW to state law. Laws of 2008, ch. 14. At the same time, E2SHB 2815 also amended the Washington Clean Air Act to include extensive monitoring and reporting requirements for greenhouse gas emissions. *Id.* § 5. *See* RCW 70.94.151. When it amended the Washington Clean Air Act, the Legislature could also have amended

RCW 90.48 to include climate change requirements specific to water quality permits, but it did not. If the Legislature had intended to enact requirements related to wastewater discharge permits and climate change, it would have done so.

In addition to the reports required by the Legislature, Ecology does, consistent with RCW 43.21M.010, serve as a clearinghouse of relevant scientific and technical information on climate change. *See, e.g.,* excerpted documents at AR 591–99, 695–96, 698–701. The Permits' five-year cycle will allow them to be updated and amended in response to regulatory changes in the CWA and RCW 90.48 that address climate change, should such changes be enacted. For this Permit cycle, conditions requiring CAFOs to plan for storm events requires a CAFO operator to consider of storms of increased intensity, and, as noted above, conditions protective of water quality in the Permits may provide a general benefit against the impacts of climate change. Soundkeeper does not meet its burden to show that the Board's decision is contrary to law, unsupported by substantial evidence in the record, or arbitrary or capricious.

F. The Permits' Requirements for Use of a Standard Temperature Tool to Time the Land Applications is Reasonable

While acknowledging testimony presented by the Federation regarding a preference for a different system for the timing of spring land

applications, the Board nevertheless affirmed the Permits' use of T-SUM 200 as a timing tool. AR 3424–26. As described above, land application for the treatment of manure must be timed properly so that the crops are growing and will take up the nitrate the manure contains. In the draft Permits Ecology included a descriptive approach for this timing, referring to it as "spring green up." AR 3833–34. During the public comment period, the Federation stated "'[s]pring green up' is not a term we understand," and urged Ecology to include understandable terms and guidelines in the Permits. AR 3425, 7874. The Federation stated that T-SUM 200 is one such standard timing guideline. *Id.* T-SUM 200 relies on cumulative temperature to indicate when plants may be actively growing, and is defined as the "sum of the daily heat units above zero for each day since January 1 until 200 heat units are reached. Heat units are the average of each day's low and high temperatures in degrees Celsius." AR 3423 n.7.

Having initially suggested T-SUM 200 as a "standard timing guideline" representing "understandable terms" to be included in the 2017 Permits, the Federation now argues that T-SUM 200 should not be required to be used in Eastern Washington. Washington State Dairy Federation et al. Opening Brief (Federation Br.) at 3. The Federation does not meet its burden to demonstrate that the use of T-SUM 200 in the Permits is contrary to law, arbitrary, or capricious.

Ecology's Literature Review, published in June 2016 prior to the public comment period for the permits, reviewed three methods to determine the timing of manure applications. The first was a system called Adaptive Risk Management (ARM), which utilizes field characteristics and weather conditions to time manure applications. AR 7178-85, 5470–71, 5002–09. The second used precipitation and temperature data to estimate growing seasons for specific crops. AR 7282–84. The third was T-SUM 200. While Ms. Redding testified that she had not reviewed information specific to T-SUM 200's use in Eastern Washington, she also stated that because the method involved temperature units, it allowed for the variances that would be found on the east side versus the west side of the state. AR 4270.

On July 15, 2016, during the public comment period on the draft Permits, the Federation's expert Dr. Harrison provided comments on the Permits. AR 5755–5917. Dr. Harrison specifically recommended that Ecology use T-SUM 200 in the Permits. AR 5766, 4922–23. On August 29, 2016, the Federation provided its comments to Ecology. AR 7861–7913. At the hearing, Mr. Woods, the Federation Executive Director, confirmed the written comment. AR 5091. Neither on direct nor re-direct examination at hearing did Mr. Woods testify regarding limiting the use of T-SUM 200 to Western Washington. AR 5091, 5127.

The only testimony presented at hearing that disputed the use of T-SUM 200 in the Permits was that of Mr. Haggith, a Federation expert witness. Mr. Haggith's testimony focused on his preference for the use of the ARM method to time the first application of manure in Western Washington. AR 3426, 5001-09; *see also* AR 5469–71. Mr. Haggith disagreed that the Permits needed a standardized timing method for use in Eastern Washington, testifying that the permit conditions themselves, without the use of either ARM or T-SUM 200, were sufficient to protect groundwater quality in Eastern Washington. AR 5009. Mr. Haggith testified that both ARM and T-SUM 200 were developed under temperate coastal weather conditions where spring rain events regularly occur. AR 5008–09.

Soundkeeper's expert, Dr. Keeney, worked as a researcher in the Midwest, primarily Iowa and Wisconsin, where winter temperatures are arguably more similar to Eastern Washington than to temperate coastal areas. AR 4421. Dr. Keeney's expert report supported the use of T-SUM 200 to calculate the start date for spring land applications of manure, stating that T-SUM 200's reliance on temperature units specific to a location "helps to ensure that the timing of applications is more closely matched to the crop needs." AR 6244.

The Federation speculates broadly that the use of T-SUM 200 in Eastern Washington would prevent production of crops and make the

Permits "counterproductive and harmful." Federation Br. at 8–9. The Federation presented no evidence at hearing, nor does it cite to any evidence in the record, to support this speculation. The Federation implies that T-SUM 200 should be avoided because maximizing crop production is the goal of land application of manure. Federation Br. at 18. This misses the point.

As discussed above, the primary purpose of the land application regime in the Permits is treatment for the reduction of nitrate, not crop production. AR 4065–66, 7166. While the land treatment of manure does result in crop growth and the reduction of the need for artificial fertilizers, maximizing crop production is not the purpose of land application. In order to maximize treatment of manure, crops must be actively growing and taking up nitrogen, but realizing "a consistent economic increase" from crop growth is not the goal. Federation Br. at 18. As Dr. Keeney stated, the timing of manure application should be tied to crop uptake to reduce the level of post-harvest nitrate in the field as much as possible, as opposed to maximizing crop yield. AR 6244.

The Federation has not met its burden to demonstrate that the Permits are improper regarding the requirement for the use of T-SUM 200 in Eastern Washington. Two of the three experts who testified regarding T-SUM 200 at hearing supported its use. The Federation fails to provide

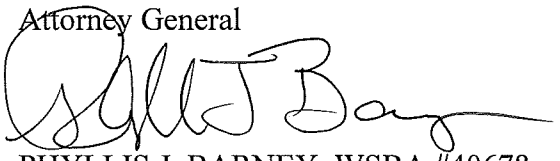
evidence supporting its claims that the Board's decision regarding the Permits' inclusion of the use of T-SUM 200 in Eastern Washington is arbitrary or capricious.

VI. CONCLUSION

The Board properly upheld Ecology's CAFO Permits. The Permits' conditions are protective of water quality and meet federal and state regulatory requirements, and therefore the Board's decision should be affirmed.

RESPECTFULLY SUBMITTED this 14th day of October 2019.

ROBERT W. FERGUSON
Attorney General



PHYLLIS J. BARNEY, WSBA #40678
Assistant Attorney General

Attorneys for Respondent
State of Washington,
Department of Ecology
360-586-4616

CERTIFICATE OF SERVICE

I certify that on October 14, 2019, I caused to be served the Department of Ecology's Response to Petitioner's Opening Briefs in the above-captioned matter upon the parties herein using the Appellate Court Portal filing system, which will send electronic notification of such filing to the following:

ANDREW M. HAWLEY ANDREA K. RODGERS WESTERN ENVIRONMENTAL LAW CENTER 1402 3RD AVENUE, SUITE 1022 SEATTLE WA 98101	[ ] U.S. Mail [ ] Hand Delivered [x] Email: hawley@westernlaw.org; andrearodgers42@hotmail.com
CHARLES M. TEBBUTT DANIEL C. SNYDER B. PARKER JONES LAW OFFICES OF CHARLES M TEBBUTT PC 941 LAWRENCE STREET EUGENE OR 97401	[ ] U.S. Mail [ ] Hand Delivered [x] Email: charlie@tebbuttlaw.com; dan@tebbuttlaw.com; parker@tebbuttlaw.com
LISA M. PETERSEN ASSISTANT ATTORNEY GENERAL LICENSING & ADMINISTRATIVE LAW DIVISION MS TB-14 SEATTLE WA 98104	[ ] U.S. Mail [ ] Hand Delivered [] Campus Mail: TB-14 [x] Email: lisa.petersen@atg.wa.gov; lalseaef@atg.wa.gov
VIRGINIA R. NICHOLSON COLIN FOLAWN SCHWABE WILLIAMSON & WYATT PC 1420 5TH AVENUE, SUITE 3400 SEATTLE WA 98101	[ ] U.S. Mail [ ] Hand Delivered [x] Email: vnicholson@schwabe.com; cfolawn@schwabe.com; tlaing@schwabe.com
ELIZABETH E. HOWARD SCHWABE WILLIAMSON & WYATT PC 1211 SW FIFTH AVENUE, SUITE 1900 PORTLAND, OR 97201	[ ] U.S. Mail [ ] Hand Delivered [x] Email: ehoward@schwabe.com

the foregoing being the last known addresses.

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

DATED this 14th day of October 2019, in Olympia, Washington.

Gretchen Clark

GRETCHEN CLARK, Legal Assistant

ATTORNEY GENERAL'S OFFICE - ECOLOGY DIVISION

October 14, 2019 - 2:35 PM

Transmittal Information

Filed with Court:	Court of Appeals Division II
Appellate Court Case Number:	52952-1
Appellate Court Case Title:	WA State Dairy Federation et al, Petitioner v WA State Pollution Control Hearings, Respondents
Superior Court Case Number:	18-2-05933-7

The following documents have been uploaded:

- 529521_Briefs_20191014143227D2310275_8456.pdf
  This File Contains:
  Briefs - Respondents
  The Original File Name was 2019-10-14EcyRespOpeningBriefs.pdf

A copy of the uploaded files will be sent to:

- AppellateAssistants@schwabe.com
- Lisa.Petersen@atg.wa.gov
- andrea@ourchildrenstrust.org
- andrearodgers42@gmail.com
- cfolawn@schwabe.com
- charlie@tebbuttlaw.com
- dan@tebbuttlaw.com
- ehoward@schwabe.com
- hawley@westernlaw.org
- lalseaef@atg.wa.gov
- parker@tebbuttlaw.com
- tlaing@schwabe.com
- vnicholson@schwabe.com

Comments:

Sender Name: Gretchen Clark - Email: gretchen.clark@atg.wa.gov
Filing on Behalf of: Phyllis Jean Barney - Email: phyllisb@atg.wa.gov (Alternate Email: ECYOlyEF@atg.wa.gov)

Address:
PO Box 40117
2425 Bristol Court SW
Olympia, WA, 98504-0117
Phone: (360) 586-6770

Note: The Filing Id is 20191014143227D2310275