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POLLUTION CONTROL HEARINGS BOARD  
STATE OF WASHINGTON

NORTHWEST ENVIRONMENTAL  
ADVOCATES,

Appellant,

v.

WASHINGTON STATE DEPARTMENT OF  
ECOLOGY, BIRCH BAY WATER AND  
SEWER DISTRICT

Respondent.

Notice of Appeal

**1. Identity of Appealing Parties and Representatives**

The appealing party is:

Northwest Environmental Advocates  
PO Box 12187  
Portland, OR 97212-0187

The representatives of the appealing parties are:

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**2. Identification of Other Parties**

The respondents in this appeal are the Washington State Department of Ecology (“Ecology”) and Birch Bay Water and Sewer District.

**3. Decision Under Appeal**

This is an appeal of a National Pollutant Discharge Elimination Systems and State Waste Discharge Permit, permit No. WA0029556 (“Permit”), issued on January 29, 2021. A copy of the Permit is attached. A copy of the permit application, dated September 17, 2018, is attached.

**4. Short and Plain Statement of the Grounds for Appeal**

The Permit is contrary to law because it is inconsistent with the requirements and intent of the federal Clean Water Act and its governing regulations promulgated by the U.S. Environmental Protection Agency (“EPA”) and the Washington State Water Pollution Control Act and its governing regulations promulgated by Ecology.

**5. Statement of Facts and Preliminary Identification of Issues**

Birch Bay Water and Sewer District operates an activated sludge wastewater treatment plant, located at 7096 Point Whitehorn Road, Birch Bay, WA, 98230, that discharges to Georgia Strait. The facility, which services primarily residential areas, can discharge up to 1.44 million gallons of effluent a day. The facility’s system is not designed to remove nutrients from the effluent before discharge and releases approximately 75,000 pounds of nitrogen a year.

The discharge of nutrients from sewage treatment facilities to Puget Sound and its tributaries is creating a water quality crisis. These excessive levels of nutrients—*i.e.*, nitrogen and phosphorous—feed an overabundance of nuisance algae, and the resulting blooms deprive aquatic organisms of sunlight and oxygen. The excess algae growth sinks and decomposes in the water, consuming oxygen and depleting the supply in the water to below levels needed to support healthy

1 fish and other marine life. In addition, this decomposition process releases carbon dioxide, making  
2 the water more acidic, exacerbating the local effects of ocean acidification.

3           According to Ecology, “the nutrients discharged from wastewater treatment plants  
4 contribute to low dissolved oxygen (D.O.) levels, below state water quality criteria, in Puget  
5 Sound.” Birch Bay Fact Sheet, at 29. Ecology has further concluded that

6           circulation within the inner basins of Puget Sound distributes a portion of pollutants  
7 throughout the waters of the Sound. Discharges in one basin can affect the water quality in  
8 other basins. Thus, all wastewater discharges to Puget Sound containing inorganic nitrogen  
contribute to the D.O. impairment.

9 *Id.* Based on this, Ecology has concluded that Big Lake’s discharges of inorganic nitrogen have a  
10 reasonable potential to contribute to water quality impacts. *Id.*

11           In Washington, state law and the federal Clean Water Act work in tandem to establish the  
12 regulatory framework for controlling and eventually eliminating pollution discharged into the state’s  
13 waters. The Washington Water Pollution Control Act declares the “public policy of the state of  
14 Washington to maintain the highest possible standards to insure the purity of all waters of the state  
15 consistent with public health and public enjoyment thereof, the propagation and protection of  
16 wildlife, birds, game, fish and other aquatic life, and the industrial development of the state.” RCW  
17 90.48.010. Thus, “[c]onsistent with this policy, the state of Washington will exercise its powers, as  
18 fully and as effectively as possible, to retain and secure high quality for all waters of the state [and]  
19 work[] cooperatively with the federal government in a joint effort to extinguish the sources of water  
20 quality degradation.” *Id.* To achieve these objectives, both state and federal law make it unlawful  
21 for any person to discharge pollutants from a point source—any discernible, confined, and discrete  
22 conveyance—into the state’s surface waters without a permit. RCW 90.48.080, WAC 173-220-  
23 020; *see also* 33 U.S.C. §§ 1311(a), 1362(12). Such permits, known as National Pollutant  
24 Discharge Elimination System (“NPDES”) permits, must include “effluent limitations” for the  
25 pollutants being discharged. The permit’s effluent limits must ensure compliance with the laws’  
26

1 two independent requirements: (1) technology-based effluent limitations; and (2) water quality-  
2 based effluent limitations.

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

8 Under Washington law, state technology-based effluent limits in NPDES permits must also  
9 include “all known, available, and reasonable methods of preventing, controlling and treating”  
10 pollutants—namely, Washington’s “AKART” standard. RCW 90.48.010. This fundamental  
11 requirement seeks to ensure that public waters are protected to the maximum extent possible by  
12 requiring dischargers to keep pace with improvements in treatment technology. That is, AKART  
13 “shall represent the most current methodology that can be reasonably required for preventing,  
14 controlling, or abating the pollutants associated with a discharge.” WAC 173-201A-020. Once  
15 Ecology establishes what pollution removal treatment qualifies as AKART for a particular  
16 discharge, it must translate that technology into permit limitations. WAC 173-220-130(1)(A).

17 With respect to Washington’s technology-based AKART requirement, Ecology’s  
18 longstanding practice is to set a rebuttable baseline presumption of what pollution control  
19 technology constitutes AKART. Rather than make an individual AKART determination for each  
20 permit issued to a sewage treatment facility, Ecology has long relied on a presumptive definition of  
21 AKART, defined by rule, for the sector as a whole. Ecology’s current AKART standard for sewage  
22 treatment facilities sets a rebuttable presumption of numeric effluent limits for four pollutant  
23 parameters: biological oxygen demand, total suspended solids, fecal coliform, and pH. *See* WAC  
24 173-221-040. A facility may apply for “alternative” effluent limits where site-specific conditions  
25 apply. WAC 173-221-050. The current AKART standard for sewage treatment facilities does not  
26 establish limits for nutrient pollutants.

1 AKART is an evolving standard that mirrors the development of new pollution removal  
2 technologies because, by definition, the technology that is “known,” “available,” and “reasonable”  
3 will change over time. Thus, to implement AKART, Ecology must require dischargers to use  
4 increasingly more stringent treatment as technological advancements become known, available, and  
5 reasonable to prevent, control, and abate the discharge of pollutants. *See* WAC 173-201A-020  
6 (“AKART shall represent *the most current* methodology that can be reasonably required for  
7 preventing, controlling, or abating the pollutants associated with a discharge.”) (emphasis added)

8 Ecology’s current AKART standard for sewage facilities is based on “secondary treatment.”  
9 WSR 87-23-020 (Order 87-26) (filed Nov. 12, 1987). Secondary treatment of sewage is a pollution  
10 removal technology that is over a century old, with the first full-fledged sewage treatment systems  
11 coming on-line in 1920. While secondary treatment technology became the underpinning for  
12 modern sewage treatment, it was also noted long ago—in the 1950s and 1960s—that secondary  
13 treatment did not reliably or predictably remove nitrogen or ammonia, a form of nitrogen.

14 Despite having not updated its AKART regulation since 1987, Ecology relies exclusively on  
15 WAC 173-221 to establish permit conditions for sewage treatment facilities that discharge to Puget  
16 Sound and its tributaries. Ecology continued this practice when establishing the technology-based  
17 effluent limits for Birch Bay. The Permit contains effluent limits for biological oxygen demand,  
18 total suspended solids, fecal coliform, and pH, as prescribed under WAC 173-221-040. Notably,  
19 because the regulation does not include a limit on the discharge of nutrients, the Permit does not  
20 include an effluent limit on the facility’s nutrients discharges. *See* Birch Bay Fact Sheet at 64. By  
21 relying solely on its outdated and inadequate AKART regulation, Ecology failed to undertake the  
22 required analysis of what current technologies could be reasonably required for preventing,  
23 controlling, or abating the pollutants associated with the discharge of nutrients from this facility.

24 In addition, Ecology failed to develop effluent limits based on the required analysis to  
25 ensure the permittee complies with the AKART requirement with regard to the facility’s nutrient  
26 discharges. WAC 173-220-130(3)(b). Ecology has included a technology-based “action level” for

1 the discharge of total nitrogen in the Permit. This “action level” is not an effluent limitation, WAC  
2 173-220-030(9), nor does it ensure the facility will comply with AKART. Rather, if the permittee  
3 exceeds this “action level,” which is set at the facility’s current level of nitrogen discharges, the  
4 “Permittee must take adaptive management actions as required in section S11” of the Permit.  
5 Permit, Section S1.B. Section S11 of the Permit requires the permittee to develop a Nutrient  
6 Optimization Plan that includes “changes considered for the next year to continue treatment  
7 efficiency optimization, and a description of future options that would require major modifications  
8 to implement.” Notably, the Permit does not require that the permittee implement any of the  
9 changes it “considered.” Thus, although the required Nutrient Optimization Plan must “describe  
10 what has been implemented in the last year and what will be implemented in the next year,” the  
11 Permit does not mandate that any steps be taken, identify the goal for those steps, or describe the  
12 consequences for not taking any action.

13         The requirement that the permittee must “take adaptive management actions as required in  
14 section S11” if it exceeds the “action limit” does not alter the Permit’s lack of a mandate to take any  
15 steps to reduce the discharge of nitrogen. First, section S11 of the Permit clarifies that the nitrogen  
16 “action limit” must be exceeded for two consecutive years before the permittee will be required to  
17 “submit a plan and a schedule to reduce and maintain TIN discharges below the Action Level.”  
18 Notably, the Permit does not specify a deadline for the permittee to submit this plan or a deadline or  
19 a time limit for the schedule by which the permittee must come into compliance with the “action  
20 limit.” Therefore, because the “action level” is not based on all known, available, and reasonable  
21 methods of preventing, controlling, and treating nutrients and does not ensure the facility will  
22 discharge nutrients pollutants at levels consistent with AKART, the permit is not consistent with the  
23 law.

24         While technology-based effluent limits are aimed at ensuring that permit limits keep pace  
25 with advances in available treatment technology, the second type of permit limit is aimed at  
26 achieving minimum standards for water quality pending the eventual cessation of all polluting

1 discharges. *See* 33 U.S.C. §§ 1311(b)(1)(C), 1342(a)(2). These water quality-based effluent limits  
2 are derived from state water quality standards, which define the minimum water quality that must be  
3 attained—without exception—in the receiving waterbody in order to protect human health and  
4 aquatic life. *See* 33 U.S.C. § 1313(a)(3), (c)(2)(a); *PUD No. 1 of Jefferson Cnty. v. Wash. Dep’t. of*  
5 *Ecology*, 511 U.S. 700, 704 (1994) (“state water quality standards provide a supplementary basis . . .  
6 so that numerous point sources, despite individual compliance with effluent limitations, may be  
7 further regulated to prevent water quality from falling below acceptable levels”) (internal quotations  
8 omitted).

9 Water quality-based effluent limits are necessary when even after imposing the required  
10 technology-based effluent limits the discharge will still “cause [or have] the reasonable potential to  
11 cause” an exceedance of applicable water quality standards. 40 C.F.R. § 122.44(d)(1)(i); WAC  
12 173-220-130(1)(b)(i); Ecology, Water Quality Program Permit Writer’s Manual (“When reviewing  
13 a permit application or renewal, the permit writer must first determine the proper technology-based  
14 limits. Then the writer must decide if these limits are stringent enough to ensure that water quality  
15 standards are not violated in the receiving water. If they are not, then water quality-based limits  
16 must be developed.”).

17 According to Ecology, “nutrients discharged from wastewater treatment plants contribute to  
18 low dissolved oxygen (D.O.) levels, below state water quality criteria, in the Salish Sea.” Birch Bay  
19 Fact Sheet, at 29; *see also id.* (“all wastewater discharges to the Salish Sea containing inorganic  
20 nitrogen contribute to the D.O. impairment.”). As noted above, Birch Bay’s discharges included  
21 nitrogen. As a result, the permit must include water quality-based effluent limits. WAC 173-220-  
22 130(1)(b); 40 C.F.R. § 122.44(d)(1)(iii); Birch Bay Fact Sheet, at 29 (“this permit must require the  
23 Permittee to control nutrients consistent with the Clean Water Act and Washington’s Water  
24 Pollution Control Act.”). Yet, the Permit contains no such limits for the discharge of nutrients.  
25 Specifically, Permit section S1 contains no water quality-based effluent limits for nutrients. The  
26 “action level,” which is a technology-based limit, Ecology set at a level equal to the current level of

1 nitrogen discharges, Birch Bay Fact Sheet, at 31—namely, the levels Ecology determined are  
2 contributing to a violation of the state’s dissolved oxygen water quality standard—is not a water  
3 quality-based effluent limit. Moreover, the Nutrient Optimization Plan requirement, section S11, is  
4 not an effluent limit, is not a best management practice, under 40 C.F.R. § 122.44(k), and does not  
5 ensure the facility’s discharge complies with the state’s water quality standards. 40 C.F.R. §  
6 122.4(d); WAC 173-220-130(1)(b).

7 **6. Request for Relief**

8 Appellants request that the Board order the Department of Ecology to modify the Permit  
9 to comply with all applicable legal requirements, as identified in this appeal.

10 DATED this 26th day of February 2021.

11 Respectfully submitted,

12 

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CERTIFICATE OF SERVICE

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I certify that on February 26, 2021, I caused to be served the Notice of Appeal and attachments in the above-captioned matter upon the following:

Pollution Control Hearings Board [X] U.S. Mail  
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7096 Point Whitehorn Road [ ] Hand Delivered  
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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 26th day of February 2021, in Seattle, Washington.

*s/ Andrew Hawley*  
\_\_\_\_\_  
Andrew Hawley