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POLLUTION CONTROL HEARINGS BOARD
STATE OF WASHINGTON

NORTHWEST ENVIRONMENTAL
ADVOCATES,

Appellant,

v.

WASHINGTON STATE DEPARTMENT OF
ECOLOGY, SKAGIT COUNTY SEWER
DISTRICT NO. 2

Respondent.

Notice of Appeal

1. Identity of Appealing Parties and Representatives

The appealing party is:

Northwest Environmental Advocates
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The representatives of the appealing parties are:

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3 **2. Identification of Other Parties**

4 The respondents in this appeal are the Washington State Department of Ecology (“Ecology”)
5 and Skagit County Sewer District No. 2 (hereinafter “Big Lake”).

6 **3. Decision Under Appeal**

7 This is an appeal of a National Pollutant Discharge Elimination Systems and State Waste
8 Discharge Permit, permit No. WA0030597, issued on January 29, 2021. A copy of the Permit is
9 attached. A copy of the amended permit application, dated September 17, 2018, is attached.

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

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

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

16 Skagit County Sewer District No. 2’s Big Lake sewage treatment plant, 17079 SR 9, Mount
17 Vernon, WA 98274, discharges into the Skagit River just upstream of the split between the North
18 Fork and South Fork. The Big Lake plant treats wastewater from single-family residences and a few
19 commercial users. The facility uses a Membrane Bioreactor wastewater treatment system capable of
20 removing nutrients from the facility’s effluent. The facility is permitted to release 300,000 gallons
21 of effluent a day and releases approximately 10,000 pounds of nutrients a year.

22 The discharge of nutrients from sewage treatment facilities to Puget Sound and its tributaries
23 is creating a water quality crisis. These excessive levels of nutrients—*i.e.*, nitrogen and
24 phosphorous—feed an overabundance of nuisance algal blooms, which deprive aquatic organisms of
25 sunlight and oxygen. This excess algae growth then sinks and decomposes in the water, a process
26 that consumes oxygen and depletes 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 contribute
4 to low dissolved oxygen (D.O.) levels, below state water quality criteria, in Puget Sound.” Big Lake
5 Fact Sheet, at 30. 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 173-220-020;
23 *see also* 33 U.S.C. §§ 1311(a), 1362(12). Such permits, known as National Pollutant Discharge
24 Elimination System (“NPDES”) permits, must include “effluent limitations” for the pollutants being
25 discharged. The permit’s effluent limits must ensure compliance with the laws’ two independent
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1 requirements: (1) technology-based effluent limitations; and (2) water quality-based effluent
2 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. 33 U.S.C. § 1370.

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

16 With respect to Washington’s technology-based AKART requirement, Ecology’s
17 longstanding practice is to set a rebuttable baseline presumption of what pollution control
18 technology constitutes AKART. Rather than make an individual AKART determination for each
19 permit issued to a sewage treatment facility, Ecology has long relied on a presumptive definition of
20 AKART, defined by rule, for the sector as a whole. Ecology’s current AKART standard for sewage
21 treatment facilities sets a rebuttable presumption of numeric effluent limits for four pollutant
22 parameters: biological oxygen demand, total suspended solids, fecal coliform, and pH. *See* WAC
23 173-221-040. A facility may apply for “alternative” effluent limits where site-specific conditions
24 apply. WAC 173-221-050. The current AKART standard for sewage treatment facilities does not
25 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 having come 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, which is 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 again when establishing the technology-
17 based effluent limits for Big Lake. The Permit contains effluent limits for biological oxygen
18 demand, total suspended solids, fecal coliform, and pH, as prescribed under WAC 173-221-040.
19 Notably, because the regulation does not include a limit on the discharge of nutrients, the Permit
20 does not include an effluent limit on the facility’s nutrients discharges. *See* Big Lake Fact Sheet at
21 75. By relying solely on its outdated and inadequate AKART regulation, Ecology failed to
22 undertake the required analysis of what current technologies could be reasonably required for
23 preventing, controlling, or abating the pollutants associated with the discharge of nutrients from this
24 facility.

25 In addition, Ecology failed to develop effluent limits based on the required analysis to ensure
26 the permittee complies with the AKART requirement. Ecology has included a technology-based

1 “action level” for the discharge of nitrogen from Big Lake. This “action level” is not an effluent
2 limitation, WAC 173-220-030(9), nor does it ensure the facility will comply with AKART. Rather,
3 if the permittee exceeds this “action level,” which is set at the facility’s current level of nitrogen
4 discharges, the “permittee is to employ adaptive management in accordance with actions identified
5 in the optimization study required by section S10 of the permit.” Permit, Section S1. Section S10 of
6 the Permit, in turn, requires the permittee to “evaluate options and costs for nutrient reduction
7 optimization in the existing system. . . .” This evaluation must be memorialized in a “nutrient
8 reduction optimization plan,” submitted to Ecology a year after the Permit issues. Notably, the
9 permittee is not required to identify or propose any steps or measures that it will take to reduce the
10 discharge of nutrients from the facility. Instead, the permittee is required to “[c]onsider operational
11 adjustments, minor retrofits or refurbishments, minor upgrades, or process optimization that would
12 improve nutrient removal nutrient. . . .” Section S10 of the Permit does not require the permittee to
13 implement any measures or take any steps to reduce the discharge of nitrogen, even if the action
14 level is exceeded. Moreover, section S1 of the Permit does not define “adaptive management” or
15 otherwise explain how the permittee would “employ” “adaptive management” in response to an
16 exceedance of the “action level.” Therefore, because the “action level” is not based on all known,
17 available, and reasonable methods of preventing, controlling, and treating nutrients and does not
18 ensure the facility will discharge nutrients pollutants at levels consistent with AKART, the permit is
19 not consistent with the law.

20 While technology-based effluent limits are aimed at ensuring that permit limits keep pace
21 with advances in available treatment technology, the second type of permit limit is aimed at
22 achieving minimum standards for water quality pending the eventual cessation of all polluting
23 discharges. *See* 33 U.S.C. §§ 1311(b)(1)(C), 1342(a)(2). These water quality-based effluent limits
24 are derived from state water quality standards, which define the minimum water quality that must be
25 attained—without exception—in the receiving waterbody in order to protect human health and
26 aquatic life. *See* 33 U.S.C. § 1313(a)(3), (c)(2)(a); *PUD No. 1 of Jefferson Cnty. v. Wash. Dep’t. of*

1 Ecology, 511 U.S. 700, 704 (1994) (“state water quality standards provide a supplementary basis . . .
2 so that numerous point sources, despite individual compliance with effluent limitations, may be
3 further regulated to prevent water quality from falling below acceptable levels”) (internal quotations
4 omitted).

5 Water quality-based effluent limits are necessary when even after imposing the required
6 technology-based effluent limits the discharge will still “cause [or have] the reasonable potential to
7 cause” an exceedance of applicable water quality standards. 40 C.F.R. § 122.44(d)(1)(i); WAC 173-
8 220-130(1)(b)(i) and (ii); Ecology, Water Quality Program Permit Writer’s Manual (“When
9 reviewing a permit application or renewal, the permit writer must first determine the proper
10 technology-based limits. Then the writer must decide if these limits are stringent enough to ensure
11 that water quality standards are not violated in the receiving water. If they are not, then water
12 quality-based limits must be developed.”).

13 According to Ecology, “nutrients discharged from wastewater treatment plants contribute to
14 low dissolved oxygen (D.O.) levels, below state water quality criteria, in the Salish Sea.” Big Lake
15 Fact Sheet, at 30; *see also id.* (“all wastewater discharges to the Salish Sea containing inorganic
16 nitrogen contribute to the D.O. impairment.”). As noted above, Big Lake’s discharges included
17 nitrogen. As a result, the permit must include water quality-based effluent limits. WAC 173-220-
18 130(1)(b); 40 C.F.R. § 122.44(d)(1)(iii); Big Lake Fact Sheet, at 30 (“this permit must require the
19 Permittee to control nutrients consistent with the Clean Water Act and Washington’s Water Pollution
20 Control Act.”). Yet, the Permit contains no such limits for the discharge of nutrients. Specifically,
21 Permit section S1 contains no water quality-based effluent limits for nutrients. The “action level,”
22 which is a technology-based limit set at a level equal to the current level of nitrogen discharges, Big
23 Lake Fact Sheet, at 69—namely, the levels Ecology determined are contributing to a violation of the
24 state’s dissolved oxygen water quality standard—is not a water quality-based effluent limit.
25 Moreover, the Nutrient Optimization Plan requirement, section S10, is not an effluent limit, is not a
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1 best management practice, under 40 C.F.R. § 122.44(k), and does not ensure the facility's discharge
2 complies with the state's water quality standards. 40 C.F.R. § 122.4(d); WAC 173-220-130(1)(b).

3 **6. Request for Relief**

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

6 DATED this 26th day of February 2021.

7 Respectfully submitted,

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CERTIFICATE OF SERVICE

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
PO Box 40903 [] Hand Delivered
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7096 Point Whitehorn Road [] Hand Delivered
Birch Bay, WA, 98230 [] Email:

the foregoing being the last known addresses.

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

DATED this 26th day of February 2021, in Seattle, Washington.

s/ Andrew Hawley
Andrew Hawley