NORTHWEST ENVIRONMENTAL ADVOCATES

August 16, 2021

Ellie Ott, PSNGP Permit Writer
Department of Ecology
Water Quality Program
P.O. Box 47600
Olympia, WA 98504-7600

submitted via: online comments form

Re: **Proposed Puget Sound Nutrient General Permit**

Dear Ms. Ott:

This letter constitutes Northwest Environmental Advocates' comments on the Washington Department of Ecology's proposed Puget Sound Nutrient General Permit (PSNGP). We have repeatedly urged Ecology to follow the requirements of the federal Clean Water Act (CWA) as well as Washington law. Ecology's proposed permit fails to meet the requirements of both federal and state law and we, once again, urge Ecology to pull back from this ineffective and illegal path towards long-overdue regulation of nitrogen discharges to Puget Sound.

I. FEDERAL AND STATE NPDES REGULATIONS DEMONSTRATE THAT ECOLOGY'S PLANNED GENERAL PERMIT WILL BE ILLEGAL

A. Applicable Federal Regulations

All discharges are covered by the requirements of the Clean Water Act and its implementing regulations. While specific rules govern the issuance of general permits, such general permits must also meet the requirements that apply to individual permits.

1. Federal Regulations Pertaining to General Permits

Federal regulations allow states to regulate discharges using general NPDES permits. 40 C.F.R. §§ 122.28, 123.25. For sources that are not stormwater sources, general permits may only regulate sources or "treatment works treating domestic sewage" within each established category or subcategory if all of the sources:

(A) Involve the same or substantially similar types of operations;
(B) Discharge the same types of wastes or engage in the same types of sludge use

or disposal practices;

(C) Require the same effluent limitations, operating conditions, or standards for sewage sludge use or disposal;

(D) Require the same or similar monitoring; and

(E) In the opinion of the Director, are more appropriately controlled under a general permit than under individual permits.

40 C.F.R. § 122.28(a)(2)(i). More important to Ecology's proposed permit, the federal regulations also require that "[w]here sources within a specific category or subcategory of dischargers are subject to water quality-based limits imposed pursuant to § 122.44, the sources in that specific category or subcategory shall be subject to the same water quality-based effluent limitations." 40 C.F.R. § 122.28(a)(3) (emphasis added).

Where a general NPDES permit has already been issued, the basis for a permitting agency to require a source to obtain an individual permit instead of coverage under the general permit includes that the "discharge(s) is a significant contributor of pollutants." 40 C.F.R. § 122.28(b)(3)(G). The determination that leads a permitting agency to that conclude an individual permit is necessary under this provision may include evaluating the location, size, and quantity and nature of the pollutants contained in discharge(s). 40 C.F.R. § 122.28(b)(3)(G)(1)–(3).

2. Requirements Pertaining to All Discharges Including Those Covered by General Permits

a. Water Quality-Based Effluent Limitations Are Required Where a Source is Causing or Contributing to a Violation of Water Quality Standards

All dischargers are required to meet the requirements set out in the Clean Water Act and federal regulations, regardless of whether they are covered under an individual or general permit. If the technology-based limits required by the statute and regulations are not sufficient to ensure that a discharge will not cause or contribute to violations of water quality standards, permits must include water quality-based effluent limits (WQBEL). 33 U.S.C. §§ 1311(b)(1)(C), 1342(a)(2) ("[T]here shall be achieved . . . any more stringent limitation, including those necessary to meet water quality standards . . . established pursuant to any State law or regulations [.]"); *see also, id.* §§ 1311(e), 1312(a), 1313(d)(1)(A), (d)(2), (e)(3)(A); 40 C.F.R. §§ 122.4(a), (d).[1] The agency issuing an NPDES permit "is under a specific obligation to require that level of effluent control which is needed to implement existing water quality standards without regard to the limits of practicability." S. Rep. No. 92-414, at 43 (1971). Because WQBELs are set irrespective of costs and technology availability, they further the technology-forcing policy of the CWA. *See NRDC*

[1] The federal regulations are made applicable to states by 40 C.F.R. § 123.25(a).

v. U.S. E.P.A., 859 F.2d 156, 208 (D.C. Cir. 1987) ("A technology-based standard discards its fundamental premise when it ignores the limits inherent in the technology. By contrast, a water quality-based permit limit begins with the premise that a certain level of water quality will be maintained, come what may, and places upon the permittee the responsibility for realizing that goal."); *see also Riverkeeper, Inc. v. U.S. E.P.A.*, 475 F.3d 83, 108 (2d Cir. 2007) (Sotomayor, J.) (referencing the Act's "technology-forcing imperative"), *rev'd sub nom by Entergy Corp*, 556 U.S. 208.

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

EPA's permitting regulations mirror the statutory requirement for WQBELs. 40 C.F.R. § 122.44(d). NPDES effluent limitations must control all pollutants that are or may be discharged at a level "which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality." 40 C.F.R. § 122.44(d)(1)(i). Accordingly, WQBELs in NPDES permits must be "derived from" and comply with all applicable water quality standards. 40 C.F.R. § 122.44(d)(1)(vii). WQBELs are typically expressed numerically, but when "numeric effluent limitations are infeasible," a permit may instead require "[b]est management practices (BMPs) to control or abate the discharge of pollutants." 40 C.F.R. § 122.44(k)(3). However, "[n]o permit may be issued: . . . [w]hen the imposition of conditions cannot ensure compliance with the applicable water quality requirements of all affected States." 40 C.F.R. § 122.4(d).

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

comply with all applicable effluent limitations and standards[.]" *Waterkeeper Alliance, Inc. v. EPA*, 399 F.3d 486, 498 (2d Cir. 2005) (emphasis in original).

Although numeric criteria are easier to translate into a permit limitation, permit writers must also translate state narrative standards. *See id.* EPA regulations clearly specify that narrative criteria must be evaluated and must be met, and that limits must be established to ensure they are met. *See* 40 C.F.R. §§ 122.44(d)(1) (limits must be included to "[a]chieve water quality standards established under section 303 of the CWA, *including State narrative criteria* for water quality"); 122.44(d)(1)(i) (limitations must include all parameters "*including State narrative criteria* for water quality"); 122.44(d)(1)(ii) (reasonable potential must be evaluated for "in-stream excursion *above a narrative* or numeric criteria"); 122.44(d)(1)(v) (WET tests required where reasonable potential exists to cause or contribute to a narrative criterion excursion unless chemical-specific pollutants are "sufficient to attain and maintain applicable numeric and *narrative State water quality standards*"); 122.44(d)(1)(vi) (options for establishing limitations where reasonable potential exists for a discharge to cause or contribute to an excursion *above a narrative criterion*) (emphases added). As the court in *American Paper* found, when it upheld EPA's permitting regulations pertaining to narrative criteria, faced with the conundrum of narrative criteria "some permit writers threw up their hands and, *contrary to the Act*, simply ignored water quality standards including narrative criteria altogether when deciding upon permit limitations. *Id*. at 350 (emphasis added); *see also, id.* at 353, "[EPA's] initiative seems a preeminent example of gap-filling in the interest of a continuous and cohesive regulatory regime[.]").

EPA has explained that a WQBEL is "[a]n effluent limitation determined by selecting the most stringent of the effluent limits calculated using all applicable water quality criteria (e.g., aquatic life, human health, wildlife, translation of narrative criteria) for a specific point source to a specific receiving water." EPA, *NPDES Permit Writers' Manual*, Appendix A at A-17 (Sept. 2010) (hereinafter "EPA Manual").[2] The first step in establishing a WQBEL is determining if one is required. 40 C.F.R. § 122.44(d)(1) ("Limitations must control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality."). Because one requirement in issuing a WQBEL is both to determine if the discharge, collectively with other sources of the same pollutant, are causing or contributing to violations of water quality standards, and to limit that discharge accordingly, the federal regulations require the permit writer to assess the role of other sources in causing the violation. *Id.* at § (d)(1)(ii) ("When determining whether a discharge causes, has the reasonable potential to cause, or contributes to an in-stream excursion above a narrative or numeric criteria

[2] *Available at* http://www.epa.gov/npdes/pubs/pwm_app-a.pdf .

within a State water quality standard, the permitting authority shall use procedures which account for existing controls on point and nonpoint sources of pollution, the variability of the pollutant or pollutant parameter in the effluent, the sensitivity of the species to toxicity testing (when evaluating whole effluent toxicity), and where appropriate, the dilution of the effluent in the receiving water."). If, having conducted this evaluation, the permit writer determines that a discharge "causes, has the reasonable potential to cause, or contributes to an instream excursion above the allowable above the allowable ambient concentration of a State numeric criteria within a State water quality standard for an individual pollutant, the permit must contain effluent limits for that pollutant." *Id.* at § (d)(1)(iii). Where a state finds a reasonable potential to cause or contribute to a violation of narrative criteria for which the state has no numeric criteria, the federal regulations establish methods for establishing effluent limits. *Id*. at § (d)(1)(vi)(A- C).

The matter of determining whether a discharge is causing or contributing to a violation of standards is not resolved by the permit writer's merely looking at the point of discharge and whether it is on the state's 303(d) list for a parameter or pollutant discharged or affected by a parameter or pollutant in the discharge. First, there is a question of the nature of the parameter or pollutant discharged and how it is anticipated to affect water quality. Nitrogen discharges are among those pollutants that have a far-field effect, creating impacts on dissolved oxygen and algal growth—which can be both deleterious by itself and contribute to lowered dissolved oxygen—far away from the point of discharge. *See, e.g.*, EPA Manual at 176 ("Nutrients are another class of pollutants which would be examined for impacts at some point away from the discharge. The special concern is for those water bodies quiescent enough to produce strong algae blooms. The algae blooms create nuisance conditions, dissolved oxygen depletion, and toxicity problems (i.e., red tides or blue-green algae); *id*. at 198 ("[pollutants] such as BOD may not reach full effect on dissolved oxygen until several days travel time down-river.").

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

> The plain language of the regulatory requirement (that a permit issuer determine whether a source has the "reasonable potential to cause or contribute" to an exceedance of a water quality standard) does not require a conclusive demonstration of "cause and effect." *See In re Upper Blackstone Water Pollution Abatement Dist*., NPDES Appeal Nos. 08-11 through 08-18 & 09-06, slip op. at 31-34 & n.29 (EAB May 28, 2010), 14 E.A.D. ___.

In re Town of Newmarket, NPDES Appeal No. 12-05, slip op. at 54 n.23 (EAB Dec. 2, 2013) (emphasis added). In other words, the fact of a source's contributing to loading of a pollutant that has been identified to be causing a water quality impairment is sufficient to support a reasonable potential determination.

Second, there is a question as to whether a waterbody must actually be impaired in order for a discharge to present a reasonable potential to cause or contribute to violations of water quality standards. Again, the EAB provides assistance on the plain meaning of the permitting regulations and the policy rationale behind them:

> NPDES regulations do not support the City's contention that a permit authority must include effluent limits only for the pollutants discharged into receiving waters that are identified as impaired on the state's 303(d) list.
> * * *
> NPDES permitting under CWA section 301 applies to individual discharges and represents a more preventative component of the regulatory scheme [than 303(d)] in that, under section 301, no discharge is allowed except in accordance with a permit. Moreover, the CWA's implementing regulations require the Region to include effluent limits in discharge permits based on the reasonable potential of a discharge facility to cause or contribute to exceedances of water quality standards, even if the receiving water body is not yet on a state's 303(d) list. *See* 40 *C.F.*R. § 122.44(d)(1)(i).
> Although a 303(d) listing could presumably establish that water quality standards are being exceeded, necessitating an appropriate permit limit, the Region is not constrained from acting where a water body has not yet been placed on the 303(d) list. *Id.; see also In re Upper Blackstone Water Pollution Abatement Dist., 14* E.A.D. 577, 599 (EAB 2010) (explaining that the NPDES regulations require a "precautionary" approach to determining whether the permit must contain a water quality-based effluent limit for a particular pollutant), aff'd. 690 F.3d 9 (1st Cir. 2012), *cert. denied*, 133 S. Ct. 2382 (2013).

In re City of Taunton at 38-39.

Third, there is the question of whether a permit writer can simply not include an effluent limit because to do so is challenging. Clearly the statute and regulations demonstrate that the answer is "no." Federal courts agree. Not long ago, the Second Circuit cited with approval its decision in *Waterkeeper,* 399 F.3d at 498, for the proposition that "NPDES permits 'may issue only where such permits *ensure* that every discharge of pollutants will comply with all applicable effluent limitations and standards.'" *NRDC v. U.S. EPA* 808 F.3d 556, 578 (2d Cir. 2015) (emphasis in original). Moreover:

> Even if determining the proper standard is difficult, EPA cannot simply give up and refuse to issue more specific guidelines. *See Am. Paper Inst., Inc. v. EPA*, 996 F.2d 346, 350 (D.C. Cir. 1993) (articulating that, even if creating permit limits is difficult, permit writers cannot just "thr[o]w up their hands and, contrary to the Act, simply ignore[] water quality standards including narrative criteria altogether

> when deciding upon permit limitations"). Scientific uncertainty does not allow EPA to avoid responsibility for regulating discharges. *See Massachusetts v. EPA*, 549 U.S. 497, 534 (2007) ("EPA [cannot] avoid its statutory obligation by noting the uncertainty surrounding various features of climate change and concluding that it would therefore be better not to regulate at this time.").

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

Fourth, there is a question as to whether in the absence of a Total Maximum Daily Load (TMDL) a permit must comply with the statute and regulations that require compliance with water quality standards. There is no question that it must; the lack of a TMDL is no defense for a failure to find reasonable potential and to establish a WQBEL. As the First Circuit has explained,

> TMDLs take time and resources to develop and have proven to be difficult to get just right; thus, under EPA regulations, permitting authorities must adopt interim measures to bring water bodies into compliance with water quality standards. *Id*. § 1313(e)(3); 40 C.F.R. § 122.44(d); *see also, e.g.*, 43 Fed. Reg. 60,662, 60,665 (Dec. 28, 1978) ("EPA recognizes that State development of TMDL's and wasteload [WLA] allocations for all water quality limited segments will be a lengthy process. Water quality standards will continue to be enforced during this process. Development of TMDL's . . . is not a necessary prerequisite to adoption or enforcement of water quality standards . . . .").

Upper Blackstone Water Pollution Abatement District v. U.S. EPA, 690 F.3d 9 (1st Cir. 2012), *cert. denied*, 133 S. Ct. 2382 (2013) n 8. The First Circuit also explained that waiting for the completion of exhaustive studies is equally unacceptable:

> [N]either the CWA nor EPA regulations permit the EPA to delay issuance of a new permit indefinitely until better science can be developed, even where there is some uncertainty in the existing data. . . . The Act's goal of "eliminat[ing]" the discharge of pollutants by 1985 underscores the importance of making progress on the available data. 33 U.S.C. § 1251(a)(1).

Id. Likewise, the EAB recently held the same:

> Where TMDLs have not been established, water quality-based effluent limitations in NPDES permits must nonetheless comply with applicable water quality

> standards. In discussing the relationship between NPDES permitting and TMDLs, EPA has explained that the applicable NPDES rules require the permitting authority to establish necessary effluent limits, even if 303(d) listing determinations and subsequent TMDLs lag behind. 54 Fed. Reg. 23,868, 23,878, 23,879 (June 2, 1989); *see also In re Upper Blackstone Water Pollution Abatement Dist.*, 14 E.A.D. 577, 604-05 (EAB 2010) (expressly rejecting the idea that the permitting authority cannot proceed to determine permit effluent limits where a TMDL has yet to be established) , *aff'd*. 690 F.3d 9 (1st Cir. 2012), *cert. denied*, 133 S. Ct. 2382 (2013).

In re: City of Taunton Department of Public Works, NPDES Appeal No. 15-08, slip op. at 11 (EAB May 3, 2016); *see also id.* at 40-41 (citing, *inter alia*, 54 Fed. Reg. 23,868, 23,879 (June 2, 1989) (clarifying in the preamble to 40 C.F.R. § 122.44 that subsection (d)(1)(vii) "do[es] not allow the permitting authority to delay developing and issuing a permit if a wasteload allocation has not already been developed and approved"); *see also* Ecology, *Water Quality Program Permit Writer's Manual* (Jan. 2015) (hereinafter "Ecology Manual") at 193 ("In the absence of a basin TMDL and the resultant WLA, the permit writer must develop an individual WLA.").[3]

In its Permit Writer's Manual, Ecology misstates the law by creating an exemption that is not justified or supported by the statute, federal or state regulations, or case law:

> If the pollutant is a far-field pollutant, is present in the discharge and is the subject of a TMDL in progress, the permit writer may defer any water quality-based limits on the pollutant until the TMDL is completed and a WLA is assigned. When the WLA is assigned the permit writer may modify the permit or incorporate the WLA at the next reissuance, depending on timing.

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[3] This statement is immediately contradicted on the next page in the Ecology Manual, which incorrectly asserts that a "basic principle" of permitting is that:

> A point source discharging to a water body with multiple sources (point and nonpoint) of impairment, which is a minor source of the impairment, and may gain relief from a TMDL is not required to have a final limitation as the numeric water quality criteria before a TMDL is completed.

Id. at 194. In fact, there is no such exemption for minor sources in the statute or the regulations nor is there any provision for a permit writer to determine whether a TMDL may provide "relief" to a discharger. Ecology cites no law to support its principle.

Id. at 196.[4] Similarly, the Ecology guidance states that if a TMDL has not been started yet, the permit writer may ask the question: "Can the effluent be treated or can the effluent or pollutant(s) be removed seasonally at a cost which is economically achievable or reasonable"? *Id*. at 197 fig. 23. This question and the options that flow from its answers are not supported in federal law. There is no provision in the statute or regulations for deferring needed WQBELs based on TMDLs' being in progress. In fact, delaying an effluent limit due to the time needed to develop a TMDL is parallel to allowing a compliance schedule to meet an effluent limit due to the time needed to develop a TMDL—an approach EPA has determined is prohibited.[5]

Fifth, in the absence of a TMDL, is the permit writer obligated to assess the individual discharger's responsibility to cease contributing to violations of water quality standards? Not only do the federal regulations explain that the answer is clearly "yes," as discussed above, but so has the First Circuit:[6]

> The Act's TMDL and interim planning process both contemplate pollution control where multiple point sources cause or contribute to water quality standard violations. 33 U.S.C. § 1313(d), (e). Under earlier legislation, including the 1965 Federal Water Pollution Control Act, when a water body failed to meet its state- designated water

[4] *See also, id.* at 177 ("Suspected water quality problems due to nutrients are best handled by a TMDL process conducted by the EA Program.") While this may very well be true, if Ecology does not develop TMDLs its permit writers must still meet federal and state regulatory requirements when issuing NPDES permits.

[5] *See* Memorandum from James A. Hanlon, Director, Office of Wastewater Management, EPA, to Alexis Strauss, Director, Water Division, EPA Region 9 Re: *Compliance Schedules for Water Quality-Based Effluent Limitations in NPDES Permits* (May 10, 2007) at 3 ("A compliance schedule based solely on time needed to develop a Total Maximum Daily Load is not appropriate, consistent with EPA's letter of October 23, 2006 to Celeste Cantu, Executive Director of the California State Water Resources Control Board, in which EPA disapproved a provision of the Policy for Implementation of Toxic Standards for Inland Waters, Enclosed Bays, and Estuaries for California.").

[6] Ecology has not even committed to using its modeling results for Puget Sound to develop a TMDL that would lead to wasteload allocations for dischargers such as this. *See, e.g.*, Ecology, *South Puget Sound Dissolved Oxygen Study Water Quality Model Calibration and Scenarios* (March 2014) at 22 ("Ecology may not conduct a TMDL if alternative management approaches are used to address violations."). The agency cannot simultaneously refuse to develop a TMDL and claim that it is waiting to complete a TMDL before it develops wasteload allocations for specific dischargers' NPDES permits.

> quality standards, pollution limits could not be strengthened against any one polluter unless it could be shown that the polluter's discharge had caused the violation of quality standards. *See EPA v. California ex rel. State Water Res. Control Bd.*, 426 U.S. 200, 202-03 (1976). This standard was ill-suited to the multifarious nature of modern water pollution and prevented the imposition of effective controls. *Id.* In 1972, Congress declared that the system was "inadequate in every vital aspect," and had left the country's waterways "severely polluted" and "unfit for most purposes." S. Rep. No. 92-414, at 3674 (1971). The CWA rejected the earlier approach and, among other things, introduced individual pollution discharge limits for all point sources. 33 U.S.C. 1311(b). To maintain state water quality standards, the Act establishes the TMDL and continuing planning processes, which target pollution from multiple sources. *Id*. § 1313(d), (e). . . . We thus reject the notion that in order to strengthen the District's discharge limits, the EPA must show that the new limits, in and of themselves, will cure any water quality problems.

Upper Blackstone Water Pollution Abatement District v. U.S. EPA, 690 F.3d 9 (1st Cir. 2012), *cert. denied*, 133 S. Ct. 2382 (2013). The law clearly establishes that an NPDES permit may not be issued for discharges that may cause or contribute to violations of water quality standards. While "cause" may be considered to refer to the sole source of a violation, "contribute" sweeps all sources of a pollutant into the regulatory requirements, including the permittees being considered for this potential Permit. Federal regulations provide only very limited exceptions. For example, 40 C.F.R. § 122.44(d)(1)(ii) requires that in determining reasonable potential a permit authority "use procedures which account for existing controls on point and nonpoint sources of pollution."

Last, there is a question related to whether the waterbody is impaired but is not currently listed on the state's EPA-approved 303(d) list.[7] The key here is impairment, not the technicality of 303(d) listing. *See In re: City of Taunton Department of Public Works*, at 38 ("NPDES

[7] Ecology's Permit Writer's Manual incorrectly states the law in asserting two "basic principles." The first assertion is that "[a] water body listed on the 303(d) list is not a presumption of impairment unless the listed section is the point of discharge." *Id.* at 194. While this statement is less than clear, it appears to suggest that a discharge to a non-listed segment that flows into a downstream listed segment is not a discharge that contributes to a violation of water quality standards. This is incorrect. Washington's water quality standards require that "[u]pstream actions must be conducted in manners that meet downstream water body criteria." WAC173-201A-260(3)(b); *see also* 40 C.F.R. § 131.10(b) ("the State shall take into consideration the water quality standards of downstream waters and shall ensure that its water quality standards provide for the attainment and maintenance of the water quality standards of downstream waters.").

regulations do not support the City's contention that a permit authority must include effluent limits only for the pollutants discharged into receiving waters that are identified as impaired on the state's 303(d) list."). Moreover, the finding of reasonable potential has repeatedly been deemed to be a low bar in order to ensure that NPDES permits protect water quality. EPA regulations require that NPDES limits "*must* control all pollutants" that "*may be* discharged at levels" that will cause or contribute to violations. 40 C.F.R. § 122.44(d)(1)(i) (emphasis added). The emphasis is regulation of discharges that *may* be a problem.

As the EAB observed of EPA's action of issuing a permit with nutrient limits,

> the Region observed that "[e]ven if the evidence is unclear that a pollutant is currently causing an impairment, a limit may be required if the pollutant has the reasonable potential to cause, or contribute to an exceedance of a water quality standard (i.e., the permit limit may be preventative)." Response to Comments at 36. The Region also noted that "the pollutant need not be the sole cause of an impairment before an NPDES limit may be imposed; an effluent limit may still be required, if the pollutant 'contributes' to a violation." *Id*. (citing *In re Town of Newmarket*, NPDES Appeal No. 12-05, slip op. at 54 n.23 (EAB Dec. 2, 2013), 16 E.A.D._). Ultimately, the Region concluded that the City's discharges cause, have a reasonable potential to cause, or contribute to nitrogen-related water quality violations in the Taunton Estuary and Mount Hope Bay. . . . As such, CWA regulations required the Region to impose a nitrogen limit in the Permit. *See* 40 C.F.R. § 122.44(d)(1)(vi)[.]

In re City of Tauton at 37.

b. *Water Quality Standards Applicable to Sources of Nitrogen Discharged to Puget Sound*

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

However, since that is not always possible, the task of evaluating whether standards have been met also requires an assessment of the impacts to designated beneficial uses. In *PUD No. 1 of Jefferson County v. Washington Department of Ecology*, 114 S. Ct. 1900, 1912 (1994), the U.S. Supreme Court underscored the importance of protecting beneficial uses as a "complementary requirement" that "enables the States to ensure that each activity—even if not foreseen by the criteria—will be consistent with the specific uses and attributes of a particular body of water." The Supreme Court explained that numeric criteria "cannot reasonably be expected to anticipate all of the water quality issues arising from every activity which can affect the State's hundreds of individual water bodies."

Id.[8] In short, a permitting agency cannot ignore the narrative criteria and use only numeric criteria where either numeric criteria do not exist or where the numeric criteria fall short of providing full support for designated uses.

Washington's water quality standards for marine waters including Puget Sound are intended to be "consistent with public health and public enjoyment of the waters and the propagation and protection of fish, shellfish, and wildlife, pursuant to the provisions of chapter 90.48 RCW." WAC 173-201A-010(1). As in federal law, Washington's regulations make the legal definition of a water quality standard very clear: "All surface waters are protected by numeric and narrative criteria, designated uses, and an antidegradation policy." WAC 173-201A-010(1)(a). In addition, the state rules clarify that:

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

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[8] EPA regulations implementing section 303(d) of the CWA reflect the independent importance of each component of a state's water quality standards:

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

40 C.F.R. § 130.7(b)(3). When EPA adopted these regulations it clearly stated the expectations it had of states:

> In today's final action the term "applicable standard" for the purposes of listing waters under section 303(d) is defined in § 130.7(b)(3) as those water quality standards established under section 303 of the Act, including numeric criteria, narrative criteria, waterbody uses and antidegradation requirements. In the case of a pollutant for which a numeric criterion has not been developed, a State should interpret its narrative criteria by applying a proposed state numeric criterion, an explicit State policy or regulation (such as applying a translator procedure developed pursuant to section 303(c)(2)(B) to derive numeric criteria for priority toxic pollutants), EPA national water quality criteria guidance developed under section 304(a) of the Act and supplemented with other relevant information, or by otherwise calculating on a case-by-case basis the ambient concentration of the pollutant that corresponds to attainment of the narrative criterion. Today's definition is consistent with EPA's Water Quality Standards regulation at 40 CFR part 131. EPA may disapprove a list that is based on a State interpretation of a narrative criterion that EPA finds unacceptable.

WAC 173-201A-010(4). The designated uses for marine waters are set out at WAC 173-201A-612, Table 612.

Currently applicable dissolved oxygen criteria applicable to Puget Sound waters are set out at WAC 173-201A-210(1)(d). In addition, the following standards apply:

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

WAC 173-201A-260(3)(b). The following narrative criterion also applies:

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

WAC 173-201A-260(2)(a) (hereinafter "narrative criterion").

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

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

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

B. Applicable State Regulations

1. Washington Requirements for General Permits

In state law, issuance of general NPDES permits is authorized by Ecology regulations at WAC 173- 226-050. This provision allows general permits where a category of dischargers meet "all of the following requirements":

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

WAC 173-226-050(3)(b). Ecology's regulations include other restrictions. First, general permits issued by Ecology "shall apply and insure compliance with . . . [t]echnology-based treatment requirements and standards reflecting all known, available, and reasonable methods of prevention, treatment, and control required under RCW 90.48.010, 90.48.520, 90.52.040, and 90.54.020[.]" WAC 173-226-070. This includes discharge standards contained in chapters 173-221 and 173-221A WAC, WAC 173-226-070(1)(b), which in turn requires that:

> Waters of the state shall be of the highest possible quality. Regardless of the quality of the waters of the state, all wastes and other materials and substances proposed for discharge into said waters shall be provided with all known, available, and reasonable methods of treatment prior to discharge. Even though standards of quality established for the waters of the state would not be violated, wastes and other materials and substances shall not be allowed to enter such waters which will reduce the existing quality thereof, except (1) in those situations where it is clear that overriding considerations of the public interest will be served, and (2) they receive all known, available, and reasonable methods of treatment prior to discharge.

WAC 173-221-020. Second, WQBELs in general permits "must control all pollutants or pollutant parameters which the department determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion of state ground or surface water quality standards." WAC 173-226-070(2)(b). And, WQBELs must include:

> [a]ny more stringent limitations or requirements, including those necessary to:

> (a) Meet water quality standards, sediment quality standards, treatment standards, or schedules of compliance established pursuant to any state law or regulation under authority preserved to the state by section 510 of the FWPCA;
>
> * * *
>
> (c) Implement any legally applicable requirements necessary to implement total maximum daily loads established pursuant to section 303(d) and incorporated in the continuing planning process approved under section 303(e) of the FWPCA and any regulations and guidelines issued pursuant thereto;

WAC 173-226-070(3). Finally, each general permit for domestic sewage treatment plants must specify "average weekly and monthly quantitative concentration and mass limitations, or other such appropriate limitations for the level of pollutants and the authorized discharge." WAC 173-226-070(6)(b).

2. Washington's AKART Requirements

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

AKART in Washington law is both a procedural and substantive requirement. The procedural requirement applies to Ecology. That agency must make an AKART determination each time it issues an NPDES permit to a discharger under section 402 of the Clean Water Act and RCW 90.48.162 authorizing a discharge of treated sewage to state waters. It must then establish effluent limits in the permit that are consistent with the AKART determination. RCW 90.48.520 ("In order to improve water quality by controlling toxicants in wastewater, the department of ecology shall in issuing and renewing state and federal wastewater discharge permits review the applicant's operations and incorporate permit conditions which require all known, available, and reasonable methods to control toxicants in the applicant's wastewater."). *See also* RCW 90.48.010 ("the state of Washington will exercise its powers, as fully and as effectively as possible, to retain and secure high quality for all waters of the state."); RCW 90.52.040 (the Director of Ecology "shall . . . require wastes to be provided with all known, available, and reasonable methods of treatment prior to their discharge or entry into waters of the state."); RCW 90.54.020(3)(b) ("wastes and other materials and substances shall not be allowed to enter such waters which will reduce the existing quality thereof, except in those situations where it is clear that overriding considerations of the public interest will be served.").

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

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

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

Notwithstanding this stated need for Ecology to evaluate engineering and economic issues pertaining to AKART at the individual facility level, the State of Washington has long relied on first defining AKART by classes of dischargers, particularly municipal dischargers. In 1977, Congress amended the Clean Water Act, to allow EPA to grant waivers from secondary treatment requirements to municipal sewage treatment plants discharging to marine waters. Clean Water Act § 301(h). Certain Washington dischargers sought these waivers, which gave rise to the Washington Attorney General's 1983 opinion in which it found that Ecology was prohibited from concurring in any such waivers by Washington's AKART requirements. *Attorney General 1983* at 6.

Despite the Attorney General's opinion, some municipalities continued to seek section 301(h) waivers. *See e.g.*, Ecology Memorandum from Art Johnson to Carol Fleskes, Re: *Comments on the Reapplication for a 301(h) Marine Waiver by the City of Tacoma for the North End Wastewater Treatment Plant* (April 10, 1984).[9] As Ecology persisted in asserting a generic determination, subject to individualized assessments, that AKART required secondary treatment, the Pollution Control Hearings Board (PCHB) upheld its discretion to do so:

> [Ecology's] response [to the Attorney General's 1983 opinion] was to make a generalized engineering determination, expressed in its municipal strategy document, that secondary treatment is ultimately required of all municipalities by

[9] *Available at* https://test-fortress.wa.gov/ecy/publications/documents/84e14.pdf (last accessed July 3, 2020).

> the State Standard [of AKART]. However, it provided for case-by-case evaluation of each municipal discharge to determine if the generalized determination is appropriate for that source at the time the question is asked. Thus, in its denial of concurrence [of the marine discharge waiver] here, [Ecology] stated that secondary treatment is "normally 'reasonable' unless compelling evidence to the contrary is presented."
>
> This approach essentially establishes a generic treatment level as appropriate for the entire class of municipal dischargers and, then, allows for a sort of variance from this level on a showing of "compelling evidence."

Port Angeles v. Ecology, PCHB No. 84-178, Final Findings of Fact, Conclusions of Law & Order (1985) at 22 - 23. Ecology subsequently adopted a new WAC Chapter 173-221, establishing discharge standards and effluent limitations based on secondary treatment for municipal sewage treatment plants. WSR 87-23-020 (Order 87-26) (filed Nov. 12, 1987). This chapter has not been revised since that date, over three decades ago.

Whether Ecology could rely solely on such discharge standards established by rule for a class of dischargers to ensure that AKART was met for each individual source at the time of permit issuance was addressed years later. In *Marine Environmental Consortium et al. v. State of Washington*, PCHB Nos. 96-257, 96-258, 96-259, 96-260, 96-261, 96-262, 96-293, 96-264, 96-265, 96-266, and 97-110, Second Order on Summary Judgment (1997), the PCHB addressed this issue with regard to net pens. *Id.* at 3. Citing *Weyerhaeuser* for its holding that a regulation cannot be considered in isolation and that an agency must still meet all statutory requirements, the PCHB held that simply establishing some requirements for an entire industrial sector did not relieve Ecology of ensuring that an individual source met the statutory AKART requirements. *Id*. at 6. Therefore, before Ecology can blindly rely on a regulation that purports to establish AKART, it must prove that it continues to represent "all known, available, and reasonable methods" of prevention, control, and treatment. Applying this standard here, the age of Ecology's municipal sewage treatment standards alone—33 years old—precludes any plausible argument that these discharge standards represent all known and available treatment technology.

Moreover, contrary to Ecology's assertion elsewhere that Ecology's class-based AKART regulations preclude its establishing AKART for individual sewage discharge facilities, *see e.g.*, Ecology, *Fact Sheet for NPDES Permit WA0030597 Skagit County Sewer District No. 2 (Big Lake Wastewater Treatment Plant)* (June 10, 2020) at 69 ("[WAC 173-221] does not include nutrient removal in the definition of AKART for domestic wastewater facilities. Nutrients are not included in the WAC for AKART."), more recently Ecology's attorney has stated that "the regulation only establishes minimum requirements, and Ecology remains free to set more stringent requirements for the pollutants addressed by the regulation, and to set limits for pollutants not addressed by the regulation," *Northwest Environmental Advocates v. State of Washington, Department of Ecology*, Court of Appeals, Division II, No. 54810-1, State of Washington, Department of Ecology's Response Brief at 22–23. Ecology's attorney has further stated that "[n]othing in WAC 173-221-040 prevents Ecology from requiring the specific

treatment technology NWEA requested [in its petition to update the AKART regulations for nutrients and toxics] if that technology satisfies the AKART requirements at a particular facility." *Id*. at 23.

AKART is also a substantive requirement that applies to all dischargers: "Regardless of the quality of the waters of the state, all wastes and other materials and substances proposed for entry into said waters shall be provided with all known, available, and reasonable methods of treatment prior to entry." RCW 90.54.020(3)(b); *see also* WAC 173-201A-500 ("it shall be required that all activities which discharge wastes into waters within the state, or otherwise adversely affect the quality of said waters, be in compliance with the waste treatment and discharge provisions of state or federal law.").[10] AKART applies to all discharges including those from sewage treatment plants. *See* WAC 173-201A-020 ("The concept of AKART applies to both point and nonpoint sources of pollution."); *see also* RCW 90.48.010 (AKART applies to "industries and others"); RCW 90.52.040 (no exceptions to AKART); RCW 90.54.020(3)(b)(3) (no exceptions to AKART other than municipal sewage treatment dischargers located on five enumerated rivers); *Attorney General 1983*, at 13-14 ("All waste proposed for discharge into public waters must be provided with 'all known, available, and reasonable methods of treatment' prior to being discharged into those waters—regardless of the quality of the waters."); *In the Matter of City of Bellingham v. Washington Ecology*, PCHB No. 84-211 Final Findings of Fact, Conclusion of Law and Order 27 (June 19, 1985) ("RCW 90.52.040 applies to municipalities.").

In order to implement AKART, Ecology must require dischargers to use increasingly more stringent treatment as technological advancements become known, available, and reasonable in order to prevent, control, and abate the discharge of pollutants. *See* WAC 173-201A-020 ("AKART shall represent *the most current* methodology that can be reasonably required for preventing, controlling, or abating the pollutants associated with a discharge.") (emphasis added); *see also Attorney General 1983* fn. 19 (citing *Weyerhaeuser v. Southwest Air Pollution Control Authority*, 91 Wn.2d 77, 586 P.2d 1163 (1978)) ("The use of the encompassing word 'all' [in AKART] indicates to us that the existing 'state of the art' or 'best available' treatment technologies are required to be used."); *Puget Soundkeeper v. State*, 102 Wash. App. 783, 789, 892, 895 (2000) ("[T]he statutory scheme envisions that effluent limitations will decrease as technology advances."). By requiring that dischargers implement and incorporate new

[10] AKART applies as a technology-based requirement, regardless of the quality of the receiving water. *See* RCW 90.52.040 (Ecology shall require AKART "regardless of the quality of the water of the state to which wastes are discharged or proposed for discharge, and regardless of the minimum water quality standards established by the director for said waters"); RCW 90.54.020(3)(b) ("Regardless of the quality of the waters of the state, all wastes and other materials and substances proposed for entry into said waters shall be provided with all known, available, and reasonable methods of treatment prior to entry."); RCW 90.48.520 (Ecology is required to incorporate permit conditions that require AKART "regardless of the quality of receiving water and regardless of the minimum water quality standards."); *Attorney General 1983* at 7.

technologies as they become available, AKART ensures that water quality continues to improve as "reductions in effluent limits are driven by advances in technology." *Id.*; *see also Attorney General 1983* at 14 (AKART "include[s] but [is] *not limited* to 'secondary treatment'") (emphasis added). By definition, technology that is known, available, and reasonable will change over time.

In fact, the PCHB has already determined that tertiary nutrient removal treatment technology is AKART for municipal sewage discharges, concluding that:

> The advanced tertiary treatment technology employed at the [Spokane] Facility is AKART and will result in high quality removal of PCBs, as well as address the requirements of the DO TMDL and the 1998 Dissolved Metals TMDL. By providing tertiary treatment, the Facility offers the most advanced treatment of effluent available and deploys the best currently available treatment technology to reduce the discharge of PCBs to the Spokane River at potentially undetectable levels.

Sierra Club v. Washington, PCHB No. 11-184, Findings of Fact, Conclusions of Law and Order (July 19, 2013) at 9 (internal citations omitted), *id.* at 25 (reiterating that "state of the art tertiary treatment works . . . constitutes AKART"). The treatment technology determined to be AKART for Spokane County was a "step-fed nitrification/denitrification treatment system with membrane filtration and chlorination, also referred to as advanced tertiary treatment." *Id*. at 9.

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

II. ECOLOGY HAS IDENTIFIED NUTRIENT DISCHARGES FROM SEWAGE TREATMENT PLANTS AS CAUSING OR CONTRIBUTING TO VIOLATIONS OF WATER QUALITY STANDARDS IN PUGET SOUND

Ecology has already determined that nutrient discharges from sewage treatment plants discharging to Puget Sound are causing or contributing to violations of water quality standards in Puget Sound. In fact, this determination is the basis for the proposed Permit in which Ecology states that these sources are "significantly contributing" to such violations. This determination is extensively documented, including at page 34 of the fact sheet for this permit. *See, e.g.,* Northwest Environmental Advocates, *Petition for Corrective Action or Withdrawal of Authorization from the State of to Issue National Pollutant Discharge Elimination System Permits* (Feb. 13, 2017) ("NWEA AKART Petition"); Northwest Environmental Advocates, *Petition for Rulemaking to the Department of Ecology Seeking a Total Maximum Daily Load and Wasteload Allocations for Nitrogen in Puget Sound* (Oct. 10, 2017); Northwest Environmental Advocates, *Petition for Rulemaking to Adopt a Presumptive Definition of "All Known, Available, and Reasonable Treatment" as Tertiary Treatment for Municipal Sewage Dischargers to Puget Sound and its Tributaries* (Nov. 14, 2018).[11]

What Ecology has not done is to interpret and apply its narrative criteria with regard to the effects of nitrogen pollution in Puget Sound. Ecology concedes that the narrative criteria are applicable. *See* Fact Sheet at 20. Beyond that, Ecology says nothing. The discussion in Section I above makes clear that permits must demonstrate compliance with narrative criteria; this is not optional. Washington's narrative criteria clearly apply to the impacts of nitrogen in Puget Sound. When issuing a discharge permit, Ecology must take into account, for example its evaluation of deteriorating Puget Sound benthos; increases in extensive algal blooms including but not limited to harmful algal blooms; increases in jellyfish masses and loss of herring populations; increased local ocean acidification; and a shifting food-web structure—all of which are the result of increased loading of nitrogen and all of which represent violations of Washington narrative criteria.

Ecology has evaluated the deteriorating condition of Puget Sound benthos, summarized in one of many studies where data were compared to a 1997–2003 baseline:

- Increased levels or spread of toxicity (net decrease in the Toxicity Index).
- Large increases in the spatial extent of adversely affected benthic invertebrate communities.
- Deterioration in overall sediment quality, primarily reflecting the contribution of the Benthic Index to the Triad Index.

[11] These documents and their attachments are all in Ecology's possession.

Ecology, *Sediment Quality in Central Puget Sound, Changes Over a Ten-Year Period* (May 2013) at 8. Ecology scientists believe that one likely contributing factor is nutrient pollution, summarized as follows: "Long-term increases in nitrogen concentrations and shifting nutrient ratios suggest human nitrogen inputs to Puget Sound. Yet, decreasing phytoplankton biomass in our monitoring network suggests large-scale changes in lower trophic levels of the pelagic food web that match a decline in the marine benthos." Ecology, *Changes in nutrient ratios drive changes in pelagic and benthic assemblages, and benthic-pelagic coupling in Puget Sound: A compelling hypothesis* (2014) (internal citations omitted).

Ecology has,

> frequently document[ed] extensive algal blooms, Noctiluca blooms, and jellyfish masses at the surface. Many of the phytoplankton blooms show high abundances of autotrophic flagellates. In contrast, depth-integrated algal biomass (chlorophyll a) shows a significant steady decline from 1999 to 2011. These seemingly opposing observations - high algal biomass and Noctiluca at the surface and decreasing biomass below the surface - could be clues to a shifting food-web structure and nutrient fluxes in Puget Sound.

Laura Friedenberg*, et al*., *Increasing nutrients, changes in algal biomass, and large Noctiluca blooms in Puget Sound: Is eutrophication fueling the microbial food web?,* Publication No. 13-03-019 (April 2013) (citations omitted) (hereinafter "Friendenberg Publication"). Ecology has confirmed that nitrogen discharges to Puget Sound are responsible for violations of the narrative criteria:

> Excessive nutrients flowing into marine waters can lead to profound consequences for the ecosystem. In addition to low levels of oxygen, some effects include:
> - Acidification, which can prevent shellfish and other marine organisms from forming shells.
> - Shifts in the number and types of bottom-dwelling invertebrates.
> - Increases in abundance of macroalgae, which can impair the health of eelgrass beds.
> - Seasonal reductions in fish habitat and intensification of fish kill events.
> - Potential disruption of the food web.

Ecology, *Puget Sound Nutrient Source Reduction Project: Vol. 1: Model Updates and Bounding Scenarios* (Jan. 2019) at 9.

Excess nutrients cause algal blooms, particularly in combination with warm temperatures and sunlight. These harmful algal blooms in Puget Sound may have been increasing over the last two decades. Among the findings by Ecology are the following:

- Although ocean boundary conditions significantly drive water quality in Puget Sound macro-nutrients have continued to steadily increase independent of ocean variability.
- Changes in the silicate to dissolved inorganic nitrogen (Si:DIN) ratio are considered a sign of human nutrient inputs.
- A decline in the Si:DIN ratio paired with the measured increase in nitrate will increasingly favor the growth of non-silicified phytoplankton species such as the dinoflagellate Noctiluca.
- Over the last two years, the Department of Ecology's Eyes Over Puget Sound reports (EOPS) have documented extensive near-surface blooms of Noctiluca and other dinoflagellates in Puget Sound.
- Noctiluca is frequently associated with eutrophication of coastal environments.
- Noctiluca blooms reduce chlorophyll a concentrations in the water column. The impact of Noctiluca grazing on phytoplankton biomass appears in Ecology's Victoria Clipper ferry transect data.
- Despite large, frequent surface blooms of dinoflagellates, chlorophyll a concentrations have significantly declined and sub-surface clarity has significantly increased.
- Changes in the lower food web structure may have much larger implications for ecosystem functioning.

See Friedenberg Publication. Ecology's models also predict algal blooms:

> The April model predictions include algal blooms in Sinclair Inlet, Oakland Bay, and Totten Inlet. EOPS [Eyes Over Puget Sound] aerial photos show a red phytoplankton bloom in Sinclair Inlet, brown algal bloom in Oakland Bay, and red-brown bloom in Totten Inlet. The June model predictions include algal blooms in Port Madison (Central Puget Sound), Filucy Bay (near McNeil Island), and Henderson Inlet. EOPS aerial photos show a Noctiluca (a dinoflagellate) bloom in Port Madison accumulating at surface in filaments following large eddies, phytoplankton bloom in Filucy Bay across from McNeil Island in colors of green and brown, and green and red phytoplankton bloom in Henderson Inlet. The EOPS photos represent ground truth of algal blooms in these two periods as predicted by the model.

Ecology, *South Puget Sound Dissolved Oxygen Study Water Quality Model Calibration and Scenarios* (March 2014) at 76.

Poor water quality is also associated with increases in jellyfish that are associated with declines in fish. *See* Greene C, *et al., Forty years of change in forage fish and jellyfish abundance across greater Puget Sound, Washington (USA): anthropogenic and climate associations*, Mar Ecol Prog Ser 525:153-170 (2015). This study involved a 40-year evaluation of jellyfish and forage fish abundance in Puget Sound that found trends in abundance of all forage species in four subbasins of the Sound. The historically-dominant forage fishes (Pacific herring and surf smelt) have declined in surface waters in two subbasins (Central and South Puget Sound) by up to two orders of magnitude. While two other species of forage fish (Pacific sand lance and three-spine stickleback) increased in all four of the subbasins, jellyfish- dominated catches increased three- to nine-fold in Central and South Puget Sound, and abundance positively tracked human population density across all basins. The strongest predictors of forage fish declines were human population density and commercial harvest. Forage fish support salmonids, sea birds, and marine mammals; jellyfish do not. This trend in relative declines/abundance may explain plummeting populations higher in the food chain, such as Chinook salmon and orca whales. Regardless, the abundance of jellyfish is itself a violation of the narrative criterion. Ecology's failure to consider the narrative criteria, antidegradation policy, and designated uses when developing its 303(d) list cannot excuse its permit writers' failure to establish permits that comply with all aspects of water quality standards.

Nitrogen is also causing increased acidification of Puget Sound. *See* Richard A. Feely, *et al., The combined effects of ocean acidification, mixing, and respiration on pH and carbonate saturation in an urbanized estuary*, 88 Estuarine, Coastal and Shelf Science 442 (May 15, 2010). While part of this effect is from the ocean, it is also from anthropogenic sources within the Sound. *Id*. at 448 ("[I]t may be possible to mitigate the continued development and impacts of corrosive conditions by addressing and reducing the regional-scale anthropogenic stressors that contribute to their formation, such as additional nutrient inputs associated with development and urbanization.") Washington State has already taken a position that nutrient discharges from point and nonpoint sources require restrictions. In 2012, Governor Christine O. Gregoire issued an Executive Order responding to recommendations from the 2012 Blue Ribbon Panel on Ocean Acidification. Executive Order 12-07, *Washington's Response to Ocean Acidification* (Nov. 27, 2012). The Order required the Director of Ecology to:

> Reduce nutrients and organic carbon in locations where these pollutants alone, or in combination with other pollutants, are causing or contributing to multiple water quality problems in our marine waters. . . . In implementing this directive, Ecology with its partners shall prioritize watersheds with the most significant water quality problems, regardless of the source(s) – urban storm water, septic tanks, large and small sewage treatment facilities, or rural runoff from agricultural

lands. This effort shall be carried out in consultation with other agencies, affected local and tribal governments, federal agencies, landowners, and the environmental community. These efforts shall:

i. build on existing programs;
ii. utilize, where appropriate, the voluntary stewardship program established by RCW 36.70A.710; and
iii. utilize other approaches, including technical assistance, funding, permitting and enforcement, where most appropriate and effective.

Id. at 4.

III. A GENERAL PERMIT IS NOT THE CORRECT VEHICLE TO ADDRESS 58 INDIVIDUAL NPDES-PERMITTED SOURCES

A. Use of a General Permit for Nutrient Pollution Discharges from Sewage Treatment Plants to Puget Sound is Inconsistent with Federal and State Law

Ecology's proposed permit will apply to 58 sewage treatment plants that discharge directly to Puget Sound should those facilities choose to seek coverage under the permit. Each of these treatment plants is causing or contributing to violations of water quality standards in Puget Sound. In some instances, an individual sewage treatment plant or group of sewage treatment plants are likely known—due to Ecology's modeling exercises—to have a particular impact on the water quality of, for instance, a specific inlet or bay. For example, Ecology knows, based on its development of a TMDL for Budd Inlet and other studies it has conducted, that the sewage treatment plants that discharge to Budd Inlet are contributing to violations of water quality standards in the inlet. *See e.g.,* Ecology, *South Puget Sound Dissolved Oxygen Study South and Central Puget Sound Water Circulation Model Development and Calibration* (April 2014); Ecology, South Puget Sound Dissolved Oxygen Study Water Quality Model Calibration and Scenarios (March 2014). In addition, all the facilities contribute varying amounts of nutrient pollutants to the whole of or substantial portions of Puget Sound at this time.

Ecology has asserted its intent to use the Permit to address nutrient pollutants without meeting the federal and state laws discussed above that prohibit the issuance of a permit—individual or general—that authorize a discharge or discharges that will cause or contribute to violations of water quality standards. As Ecology has already asserted its intent to limit the Permit to "near-term" issues such as and including data collection, optimization of treatment, and long-term planning—none of which is a WQBEL as required by federal and state law—it is impossible to tease apart the general notion of Ecology's *intent* to use a general permit from *how* Ecology intends to use a general permit. It is certainly irrelevant that Ecology states that some day, a future version of this general permit will include numeric effluent limits. Federal and state law do not include any exception for future regulatory efforts.

As set out above, general permits may only regulate sewage treatment plants as a category of sources if all of the sources meet five criteria. 40 C.F.R. § 122.28(a)(2)(i)(A)–(E). While all sewage treatment plants discharge the same type of waste and involve the same or substantially similar types of operations and could—if Ecology chooses to—require the same or similar monitoring, there is nothing in the information before Ecology that suggests that all of these sources will "[r]equire the same effluent limitations, [or] operating conditions," 40 C.F.R. § 122.28(a)(2)(i)(D), or that even if put into different categories, "the sources in that specific category or subcategory shall be subject to the same water quality-based effluent limitations," 40 C.F.R. § 122.28(a)(3). While Ecology has agreed that "a water quality-based approach is necessary to address dissolved oxygen impairments caused by excess nutrient loading to Puget Sound and its tributaries," it has already asserted recently that nutrient controls are "no[t] necessary for all wastewater treatment plants" and that the Salish Sea Model "will inform the spatial water quality response from different discharges located throughout Puget Sound." Letter from Maia Bellon, Ecology Director, to Nina Bell, NWEA Re: Petition for Rulemaking to Adopt a Presumptive Definition of "All Known, Available, and Reasonable Treatment" as Tertiary Treatment for Municipal Sewage Dischargers to Puget Sound and its Tributaries (Jan. 11, 2019) (hereinafter "AKART Denial Letter") at 1, 2. That is, Ecology has stated that not all facilities will need nutrient removal and that the facilities will need different levels of nutrient removal.

Moreover, Ecology has not stated in its preliminary determination for this Permit that it will have completed the "[f]urther model iterations . . . to define discharger-specific nutrient loading limits based on localized and far-field impacts" that it stated were necessary in the AKART Denial Letter in time to issue this Permit such that it might be able to establish various subcategories of discharger that were subject to the "same water quality-based effluent limitations," as required by federal law. In fact, the timeframe for completing a draft Permit for public comment—"Fall 2021"—is approximately when Ecology will be completing its "Year 1"modeling scenarios by basin, according to the *McCrea Presentation* at 15 and the Ecology, Puget Sound Nutrient Forum Packet for July 17, 2019 at 2.

Likewise, where a general NPDES permit has already been issued, the basis for a permitting agency to require an individual permit instead of coverage under the general permit includes that the "discharge(s) is a significant contributor of pollutants." 40 C.F.R. § 122.28(b)(3)(G). As set out above, this determination may include evaluating the location, size, and quantity and nature of the pollutants contained in discharge(s). 40 C.F.R. § 122.28(b)(3)(G)(1)–(3). Here, Ecology has already determined that collectively sewage treatment plants "significantly contribut[e] to low oxygen levels in Puget Sound," *Focus On* at 1, therefore it stands to reason that at the very least, the largest among them are significant contributors of pollutants that should be covered under individual permits. The obvious reason for this distinction is that larger sources are contributing more loading and a general permit is a one-size-fits-all approach that is inappropriate to establishing water quality-based effluent limits that are required for

NPDES permits. Ecology concedes this in determining that one group of permittees constitutes the "dominant" loaders of nitrogen to Puget Sound. *See e.g*. Fact Sheet at 34.

But nowhere is this problem of significance more evident than the overwhelmingly large contribution of nitrogen from King County and Tacoma facilities. *See* Permit at Tables 5, 6. These discharges by any reasonable evaluation are "significant." Instead of removing these most significant facilities from the proposed general permit and issuing individual permits, Ecology takes steps that are intended to mask their individual significance by putting them together in a "bubble," where their combined loads are evaluated for "action triggers." Ecology does not provide any rationale or explanation for its concept of bubbled loads. *See* Fact Sheet at 34, 41, 47 (describing but not justifying bubbled loads). It certainly does not justify this bubble treatment in light of applicable regulations governing the use of general permits.

B. Capping Nitrogen Discharges at Current Levels in Lieu of Issuing WQBELs is Both Illegal and is Inherently a Matter for Individual NPDES Permits

Ecology has asserted its intent to "cap" discharges of nitrogen to Puget Sound. *See, e.g.*, *Focus On* at 2. Since the intent of a cap—as Ecology is discussing it—is to maintain current levels of a pollutant, *see e.g., AKART Denial Letter* at 2, by definition "a cap" varies with the individual sources, each of which has a different estimated loading of nutrient pollution. *See e.g.*, Ecology, Potential Permittee List for a Puget Sound Nutrients General Permit (Aug. 7, 2019). Putting aside whether a cap at current loading is a WQBEL or can serve in lieu of a WQBEL, the fact that each covered sources will have its own cap by definition precludes the use of a general permit. Likewise, were Ecology to determine WQBELs consistent with state and federal law, which it has not done here, because each source requires "average weekly and monthly quantitative concentration and mass limitations, or other such appropriate limitations," WAC 173-226-070(6)(b), each source would have a different numeric effluent limit for the level of nutrients authorized, which likewise precludes the use of a general permit.

In its response to NWEA's AKART petition, Ecology stated that it would "through the individual permitting process . . . [s]et nutrient loading limits at current levels from all permitted dischargers in Puget Sound and its key tributaries to prevent increases in loading that would continue to contribute to Puget Sound's impaired status." *AKART Denial Letter* at 2. Unless Ecology can demonstrate that it will be setting nutrient pollutant caps as the same effluent limit for each facility or even subcategories of facilities, a general permit is not the appropriate vehicle in which to issue numeric permit limits in the form of different caps for 58 different sources because they are not "the same or substantially similar effluent limitations." WAC 173-226-050(3)(b)(i); *see also* 40 C.F.R. § 122.28(a)(2)(i)(C). Here, Ecology intends to establish caps that are not WQBELs in the meaning of federal law, a general permit that includes such caps is not consistent with federal law and should not be issued.

In its denial of the NWEA AKART petition, Ecology also stated that "[f]or treatment plants that already use a nutrient removal process, [it would] require reissued discharge permits to reflect

the treatment efficacy of the existing plant by implementing numeric effluent limits used as design parameters in facility specific engineering reports." *AKART Denial Letter* at 2. It is our understanding that 16 facilities that Ecology proposes to cover under this general permit have installed nutrient removal capacity and that all but one, Pierce County's Chambers Creek, have placed this equipment into operation. In this permit, Ecology proposes to ignore both of these facts. With regard to Chambers Creek, not placing a nitrogen effluent limit on this facility not only puts the lie to Ecology's earlier commitment but it is contrary to law. Chambers Creek will not turn on its equipment until Ecology issues a permit that requires it, a permit with a numeric WQBEL. This Permit merely establishes a trigger level cap that is equivalent to current levels of nitrogen discharged by the facility, when Ecology is fully capable of determining whether the previously-approved nitrogen removal system constitutes AKART for that facility. Ecology must establish a WQBEL that reflects the treatment technology at the facility and determine if more is required to meet water quality standards and issue a compliance schedule if that is true. At the very least, within the perspective of Ecology as set out in this permit, the full use of the installed nitrogen removal equipment must be a required BMP for this facility. Again, such a specific requirement along with the significance of its contribution of nitrogen militates against this facility's being regulated by a general permit.

Another of the 15 facilities is LOTT. Lott currently has a numeric nitrogen WQBEL in its permit yet Ecology proposes to both cover LOTT under this general permit as well as exempt it from some permit provisions. *See* Condition S4.E. Moreover, Ecology asserts that it will be completing the off-postponed and abandoned Budd Inlet TMDL in "early 2022" that "will require compliance with the individual facility wasteload allocation upon EPA approval." Fact Sheet at 48. The fact sheet does not explain why Ecology proposes to include LOTT, which has a numeric WQBEL for nitrogen in its individual permit, in this general permit nor does it explain why replacing that WQBEL would not be a prohibited form of antibacksliding. *See* CWA § 402(o); 40 C.F.R. § 122.44(l). At a minimum, Ecology must explain why it believes that replacing a numeric effluent limit with a trigger level, *see* Permit Table 5, is not antibacksliding and why it, apparently, believes that such a change is within a listed exemption from the prohibition on backsliding, and consistent with antidegradation policies and water quality standards. In addition, Ecology should in plain language, explain why the sole facility to have a numeric WQBEL for nitrogen should be covered under this general permit.

With regard to the remaining 14 facilities with installed and operating nitrogen removal capacity, first Ecology should identify them and provide any AKART evaluation that Ecology has completed or approved for those facilities, if any. It must, at a minimum, explain why the engineering and economic analyses used by those facilities cannot be used for an AKART evaluation now. Second, Ecology must explain in the fact sheet why it should not do what it asserted that it would do, namely "reflect the treatment efficacy of the existing plant by implementing numeric effluent limits used as design parameters in facility specific engineering reports." Third, Ecology must explain why setting effluent limits that reflect the existing engineering reports for these facilities is not "feasible."

Likewise, Ecology must treat permittees that have already completed engineering and economic analyses differently than those that have done nothing. For example, Ecology provided funding to King County and Tacoma to evaluate nutrient removal at their facilities. *See* NWEA AKART Petition at 27–29 (discussing nitrogen removal studies done completed in 2011 and 2012, respectively). There is no reason why these and any other such facilities should be on the same protracted timeframe as others that have taken no steps to evaluate nitrogen removal technology upgrades.

The use of action trigger level caps is also inconsistent with the antidegradation policy in Washington's water quality standards. As explained above, the purpose of this policy includes "restor[ing] . . the highest possible quality of the surface waters of Washington," WAC 173-201A-300(2)(a), which means "[f]or waters that do not meet assigned criteria . . . the department will take appropriate and definitive steps to bring the water quality back into compliance with the water quality standards." WAC 173-201A-310(2). Capping a pollutant or pollutants at current levels known by Ecology to be causing or contributing to violations of water quality standards is not taking appropriate and definitive steps to bring the waters back into compliance with those standards; it is merely maintaining the status quo.

C. Ecology May Not Use a General Permit to Target the Lowest Common Denominator for All Permittees

In choosing to use a general permit to regulate the discharge of nitrogen from 58 sewage treatment plants, Ecology is making the choice to regulate these sources to the lowest common denominator in terms of both timing of nitrogen reduction actions and the levels of nitrogen discharged. Chambers Creek, discussed above, is an example of both timing and pollutant levels. Ecology cannot lawfully issue a permit that does not require permittees that have installed nitrogen reduction controls to turn those controls on; the permit impermissibly does not include an effluent limit for Chambers Creek. And there may be other facilities in the next five years that choose to install nitrogen controls in advance of Ecology's regulatory requirements, as demonstrated by the actions of 15 facilities to date. Put another way, Ecology's policy choice to let some facilities off the hook because others have done nothing is contrary to law. The same is true of the BMPs discussed below, where Ecology makes no provisions to ensure that their use is as soon as possible, a regulatory requirement. Ecology appears to be intent on ensuring that no facility has to act prior to any other facility, an intention inconsistent with the requirements of the Clean Water Act.

IV. PROVISIONS OF THE NUTRIENT GENERAL PERMIT ARE CONTRARY TO LAW

In addition to the problems discussed in section III above, many other provisions of the proposed permit are contrary to law.

A. Use of Narrative Provisions in Lieu of Numeric Effluent Limitations

1. The Narrative Water Quality Condition is Insufficient to Meet Legal Requirements

Ecology has proposed to use a combination of narrative conditions and so-called BMPs in its proposed permit. The narrative conditions consist of two paragraphs, the first of which is broad and all-encompassing, and the second of which is vague but clearly has the purpose of removing whatever water quality protection was conferred by the first:

> A. Discharges must not cause or contribute to a violation of surface water quality standards (Chapter 173-201A WAC), sediment management standards (Chapter 173-204 WAC), and human health-based criteria in the Federal water quality criteria applicable to Washington (40 CFR Part 135.45). This permit does not authorize discharge in violation of water quality standards.
>
> B. Ecology presumes that a Permittee complies with water quality standards unless discharge monitoring data or other **site**-specific information demonstrates that a discharge causes or contributes to a violation of water quality standards, when the Permittee complies with the following conditions. The Permittee must fully comply with all permit conditions, including planning, **optimization**, sampling, monitoring, reporting, waste management, and recordkeeping conditions.

Permit at 11–12 (Condition S3).

a. *The Boilerplate Prohibition is Not Adequate*

A narrative requirement that discharges meet water quality standards is not sufficient to ensure compliance with water quality standards, as the Clean Water Act and federal regulations require. As the Second Circuit court explained in a case pertaining to the U.S Environmental Protection Agency's general permit for vessel discharges,

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

Nat. Res. Def. Council v. U.S. E.P.A., 808 F.3d 556, 578 (2d Cir. 2015) (quoting *Waterkeeper Alliance, Inc. v. U.S. E.P.A*., 399 F.3d 486, 498 (2d Cir. 2005)).

Likewise, Ecology's use of a narrative limit that merely cites to the water quality standards in Condition S3 fails to, "in fact, not only in principle," regulate discharges from the 58 sources it seeks to regulate. *Id*. The Second Circuit elaborated:

> Even if determining the proper standard is difficult, EPA cannot simply give up and refuse to issue more specific guidelines. *See Am. Paper Inst., Inc. v. EPA*, 996 F.2d 346, 350 (D.C.Cir.1993) (articulating that, even if creating permit limits is difficult, permit writers cannot just "thr[o]w up their hands and, contrary to the Act, simply ignore[ ] water quality standards including narrative criteria altogether when deciding upon permit limitations"). Scientific uncertainty does not allow EPA to avoid responsibility for regulating discharges. *See Massachusetts v. EPA*, 549 U.S. 497, 534, 127 S.Ct. 1438, 167 L.Ed.2d 248 (2007) ("EPA [cannot] avoid its statutory obligation by noting the uncertainty surrounding various features of climate change and concluding that it would therefore be better not to regulate at this time.").

Id. at 578. This is particularly true when what it means to not violate water quality standards is complex and involves interpretations of the narrative criteria. *See also Washington State Dairy Fed'n v. State*, 490 P.3d 290 (Wash. Ct. App. 2021) ¶ 96 ("the broad condition that CAFOs must not discharge in violation of water quality standards is not an adequate effluent limitation where the permit could have imposed additional requirements."). As with the permit in *Washington Dairy Federation*, "The issue with this vague condition is compounded by the fact that Ecology did not explain how the permit meets surface water quality standards . . . in the fact sheet as required under WAC 173-226-110(1)(j)(ii)." *Id.* at ¶ 96.

b. *The Ecology Presumption that Removes the Protection the Narrative Condition Confers is Contrary to Law*

The second part of Condition S3 is clearly intended to take away whatever protection Ecology has conferred on Puget Sound waters with the first part of the condition. Ecology provides extraordinarily little insight into the basis for this provision and the meaning of the actual words. The fact sheet merely states that "Ecology considers compliance with the narrative conditions in the draft permit (e.g., action levels, optimization, planning, monitoring, and any necessary corrective actions) as adequate control necessary for dischargers to meet applicable water quality standards during the permit term." Fact Sheet at 35. This is another way of saying that Ecology's inclusion of Condition S3.A is intended to be entirely superfluous. But Ecology cannot render Condition S3.A superfluous because it needs that condition to demonstrate that the permit is consistent with the Clean Water Act. The provision in Condition S3.B is also illogical. Ecology has already stated that current loadings of nitrogen are causing and contributing to violations of water quality standards. *See id.* at 32. It cannot also conclude the opposite: that

maintaining current loading is "adequate . . . to meet applicable water quality standards." *Id.* at 35.

Ecology's Condition S3.B goes on to say that its presumption holds "unless discharge monitoring data or other **site**-specific information demonstrates that a discharge causes or contributes to a violation of water quality standards." Condition S3.B. Again, the fact sheet contributes literally no insight into the meaning of these words. Regardless, they are nonsensical. Ecology's entire basis for not including numeric effluent limits for nitrogen in this permit is that "modeling is not complete." Fact Sheet at 34; *see also id*. at 33 ("In a receiving water as complex as Puget Sound, the modeling work necessary to develop numeric WQBELs for each discharge is comprehensive and requires extensive internal and external review."). It seeks to rely on this modeling because "circulation within the inner basins of Puget Sound distributes pollutant throughout the waters in the Puget Sound region. The circulation patterns showed how discharges in one basin can affect the water quality in other basins." *Id.* at 32. Ecology cannot both rely on a model that demonstrates a discharge contributes to far-field violations of water quality standards that are not at the "site" and establish a condition that limits the definition of "cause or contribute to violations of water quality standards" to near-field violations that are at the "site." We discuss this permit condition further, in Section V.

c. *The Boilerplate Prohibition is Required by Law*

The boilerplate prohibition established in Condition S3.A is required. *See In Re City and County of San Francisco*, Order Denying Review (December 1, 2020), citing *In Re City of Lowell*, 18 E.A.D. 115, 175-88 (EAB 2020) (EPA did not err by including a narrative prohibition because EPA had the legal authority, the prohibition was necessary, and the permittee had fair notice of the meaning of the prohibition). Here, in order to issue the Permit, the remaining terms of which Ecology acknowledges will not ensure that water quality standards will be met, the boilerplate prohibition is required because it is necessary. The very fact that Condition S3.A is necessary means that Ecology cannot also adopt a further narrative condition through Condition S3.B that removes the protection the prohibition in Condition S3.A establishes.

2. Ecology Incorrectly Determines Numeric WQBELS Are Infeasible

Ecology asserts that numeric WQBELs are not included in the Permit because they are "infeasible" to calculate. Fact Sheet at 17. Ecology cites several court cases that purportedly support its determination. The first, *Natural Res. Def. Council, Inc. v. EPA*, 673 F.2d 400 (D.C. Cir. 1982), is irrelevant to the question of whether numeric WQBELs are feasible to calculate as it merely supports the concept that not all permit restrictions are numeric. The second case, *Natural Res. Def. Council, Inc. v. Costle*, 568 F.2d 1369 (D.C. Cir. 1977), is also not instructive:

> Of course, when alternative techniques are available, Congress intended to give the discharger as much flexibility as possible in choosing his mode of compliance. See, e. g., H.Rep.No.92-911, 92d Cong., 2d Sess. 107, reprinted in Legislative History at 794. We only indicate here that when numerical effluent limitations are

> infeasible, EPA may issue permits with conditions designed to reduce the level of effluent discharges to acceptable levels. This may well mean opting for a gross reduction in pollutant discharge rather than the finetuning suggested by numerical limitations. But this ambitious statute is not hospitable to the concept that the appropriate response to a difficult pollution problem is not to try at all.

Id. at 1380. This case pertained to EPA's attempt to exempt certain classes of point sources from the permit requirements of CWA section 402, including many silviculture, agriculture, and stormwater sources, that is *atypical* sources of pollution that have a diffuse origin even if they ultimately discharge through pipes, or as the court characterized them: "the special characteristics of point sources of runoff pollution." *Id*. This decision does not stand for the proposition that Ecology can claim infeasibility for calculating numerical WQBELs for *typical* sewage treatment plants that in no way raise the same calculation feasibility difficulties as point sources of runoff pollution. Perhaps more to the point, the court pointed out that the CWA "is not hospitable to the concept that the appropriate response to a difficult pollution problem is not to try at all," a comment that would describe Ecology's assertion of infeasibility here. And, Ecology appears to have missed the part of the court's decision where it states that non-numeric conditions may be relied upon in a permit so long as they are "designed to reduce the level of effluent discharges to acceptable levels." *Id*. Ecology has already concluded that current levels of nitrogen are not acceptable levels and that current discharges of nitrogen are causing and contributing to violations of water quality standards. Therefore, Ecology's reliance on this case is misplaced because its non-numeric conditions do not achieve the goal of ensuring acceptable levels of nitrogen in Puget Sound or in individual effluents. Ecology's citation to *Waterkeeper*, 399 F.3d 486, is similarly inapt as it merely concludes that BMPs are effluent limitations under the CWA, which does not answer the question of when BMPs may be used in lieu of numeric effluent limits.

Last, Ecology cites *Citizens Coal Council v. United States Environmental Protection Agency*, 447 F3d 879 (6th Cir. 2006). In *Citizens Coal*, responding to an amendment to the Clean Water Act, EPA established new *technology-based* effluent limitations for two new subcategories of coal mining with BMPs in lieu of numeric pollution limits for the specific purpose of allowing coal remining that would otherwise be "not economically and technically feasible because industry becomes liable for treating the preexisting water discharges under stringent national effluent guidelines." *Id.* at 885. EPA's effluent limitation guidelines allowed permittees to select BMPs for a site-specific pollution abatement plan. Once again, at issue was an *atypical* source of runoff pollution, vastly unlike discharges from sewage treatment plants. For example, the court noted EPA's position that "numeric limits based on sedimentation ponds are infeasible in arid areas because precipitation is sporadic, intense, and isolated, thereby making it extremely difficult to evaluate overall performance of BMPs." *Id*. at 902. The court held that the use of a plan "which 'must be designed to reduce the pollution load from pre-existing discharges and must identify the selected best management practices (BMPs) to be used'" was consistent with the amendment that required the coal plant operator to demonstrate that there was some "potential for improved water quality from the remaining operation." For the permit at issue here, there is no statutory goal to allow a polluting activity that would otherwise not be feasible,

the issue is not a technology-based effluent guideline, and the regulated activity is far from being an atypical discharge. Ecology's reliance on *Citizens Coal* is misplaced.

The issue here is not whether BMPs can be effluent limitations but whether it is infeasible for Ecology to calculate numeric effluent limits such that BMPs are the only means by which the state can regulate nitrogen in sewage discharges. Where no numeric criteria exist for a pollutant, such as with nitrogen in Washington State, "[the permit writer] is required to establish WQBELs that ensure compliance with narrative criteria, designated uses, and antidegradation policies that comprise state water quality standards." *Natural Resources Defense Council v. U.S. E.P.A*., 808 F.3d 556, 565 (2015). Here, Ecology does not specifically address the infeasibility of calculating nitrogen limits based on water quality standards. It merely asserts that it is infeasible because nitrogen is a far-field pollutant with a long averaging period and a model is needed to determine the limits. *See* Fact Sheet at 32–33. Ecology further asserts that it will continue to run the model, subject it to internal and external review, determine allocations, and then "[i]t is anticipated that for the second iteration of this permit the approach will shift to working towards compliance with those numeric limits." *Id*. at 33. It may be anticipated but, then again, it may not take place in time for the second iteration of this permit, or frankly ever. Ecology has not explained why, after spending many years developing and perfecting this model, it still cannot use the model to establish numeric limits. Ecology does not not have the means by which to determine numeric limits; it simply does not have the inclination to work fast enough to generate them using its highly perfected model. And the model is never good enough, it seems, to support NPDES permitting. Failing this, Ecology must use another method of determining the WQBELs for the permittees or it should work faster. As explained in Section I above, not having TMDL, which is the reason a model was constructed in the first place, is not a legitimate legal basis for avoiding a WQBEL in an NPDES permit.

Moreover, Ecology has decided that it will not issue the results of its modeling exercise as a TMDL but, instead, it will issue it as a plan. As an alternative to a TMDL, the so-called wasteload allocations in the plan will not be required to be used as the basis for WQBELs because they will not, in fact, be wasteload allocations. *See* 40 C.F.R. § 122.44(d)(1)(vii)(B) (NPDES permits must be consistent with the assumptions and requirements of any *EPA-approved* wasteload allocations). In fact, it is entirely possible that the plan will not establish individual wasteload allocations for sewage treatment plants but, instead, make bubble allocations of loadings from groups of sources that will have to be translated into effluent limits by permit writers. *See* Fact Sheet at 31 ("Following that review, Ecology will use the draft Puget Sound Nutrient Reduction Plan (NRP) to assign the applicable allocations, possibly at the basin level.") (emphasis added). This process too, may be deemed to be "infeasible" by Ecology in future iterations of this general permit. *See id.* at 33 ("The [Nutrient Reduction Plan] NRP will include draft allocations for point sources[.]") (emphasis added). Or Ecology may decide not to rely on the wasteload allocations made in the plan and, because it has chosen to not issue the plan as a TMDL, those allocations will not be binding, thereby supporting future assertions of the infeasibility of establishing numeric limits.

In addition, the model is not perfect and it can and likely will be argued that its results are not a sufficient basis upon which to establish effluent limits that ensure the discharges will not cause or contribute to violations of *all* water quality standards. The model contains areas where it is not capable of generating accurate results. These so-called "masked areas" are extensive, particularly because they include the highly nutrient sensitive embayments of Puget Sound. Reliance on the model will not ensure protection of the masked areas, leading to two possible outcomes. First, Ecology may simply rely on the model and not establish effluent limits that ensure protection of water quality in the embayments. Or, second, Ecology may assert that it must improve the model as it pertains to embayments, much as it has been working on to support the Budd Inlet TMDL for many years now, and use that assertion as the basis for, once again, concluding that deriving numeric effluent limits is not yet feasible.

In addition, the model is not perfect because in its current form it restricts itself to projecting the dissolved oxygen results of nitrogen discharges. But meeting water quality standards includes more than dissolved oxygen as nitrogen has many negative impacts to water quality that are violations of water quality standards. Specifically, as discussed above, nitrogen discharges cause and contribute to violations of narrative criteria, support of designated beneficial uses, and Tier I of the antidegradation policy. If Ecology were to conclude in future that it must ensure that numeric WQBELs will not cause or contribute to violations of narrative criteria, it might yet again determine that such WQBELs are infeasible.

3. Even if Numeric WQBELs are Infeasible, the Provisions of This Permit are Inconsistent with Federal Law

a. *The "Action Level" is Not a BMP*

Ecology proposes to establish "action levels" as one of the BMPs. Fact Sheet at 33. For Dominant dischargers, Ecology has established that:

> a facility specific action level that represents the current discharge condition and drives corrective actions when the level is exceeded for two consecutive years or three times during the permit term. If the dominant loader triggers the corrective action, they must reduce their effluent load by 10%. If a jurisdiction with a bubbled action level triggers a corrective action, the 10% reduction applies to the bubbled total. Unless the corrective action selected by the Permittee includes a design previously approved by Ecology, qualifying Permittees must submit an abbreviated engineering report or a technical memo signed and stamped by a professional engineer detailing the proposed solution with the Annual Report submittal following the initial action level exceedance.

Id. at 34. An action level, however, is not a BMP. BMPs include "schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce . . . pollution." 40 C.F.R. § 122.2. As the Second Circuit explained,

> BMPs typically involve requirements like operating procedures, treatment requirements, practices to control runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage; they can also be structural requirements including tarpaulins, retention ponds, or devices such as berms to channel water away from pollutant sources, and treatment facilities. Examples of BMPs that have been accepted as substitutes for effluent limits include: nutrient management plans for concentrated animal feeding operations, *see Waterkeeper All.*, 399 F.3d at 497, 502, filtration of stormwater runoff from ditches before it enters rivers and streams (by timber companies), and constructing roads with surfacing that minimizes sediment in runoff (by timber companies), *see Decker v. Nw. Envtl. Def. Ctr.*, —— U.S. ——, 133 S.Ct. 1326, 1338, 185 L.Ed.2d 447 (2013).

NRDC, 808 F.3d at 579. The court went on to hold that the boilerplate prohibition "does not qualify as a BMP, as it neither a practice nor a procedure." *Id*. The same rationale applies here. An action level that triggers "additional nutrient reduction actions" in the future if it is exceeded is not a BMP. Fact Sheet at 33. The purported BMP is the facility's choosing of a corrective action(s), a corrective action that may merely be the submission of an engineering report or the implementation of a previous engineering report. In either case, there is no required timeframe for implementation of the corrective action nor is there a compliance schedule for doing so. It is not plainly evident that the resulting effluent limit after the 10 percent reduction required by Condition S4.D.1.c is an enforceable limit. And there is no connection between a 10 percent reduction in current levels of nitrogen discharged and the necessity of the permit's ensuring that the discharges not cause or contribute to violations of water quality standards. Indeed, Ecology has already demonstrated that all sources of nitrogen will have to be reduced well below 10 percent of existing levels. *See* Ecology*, Puget Sound Nutrient Source Reduction Project Volume 1: Model Updates and Bounding Scenarios* (January 2019) at 11 (reductions at all municipal sewage treatment plants would result in a roughly 50 percent improvement in compliance area for dissolved oxygen standards), 18 (the reductions were set at effluent levels of 8 mg/L).

b. *BMPs that Are Currently Available Are Required to Be Used Immediately*

The use of a purported BMP of "corrective action" that is triggered by an action level demonstrates that that very same BMP is available to be used by the permittees and required by Ecology in the permit at the time of the permit's issuance. For this reason, if the permit establishes BMPs that must be implemented as the result of triggering an action limit, the permit must require its use in the permit, not just as a future action that could be taken if effluent loads are increased from their currently unacceptable level. "The point of a permit is to prevent dischargers that violate water quality standards before they happen." *NRDC*, 808 F.3d at 579. As Ecology has already determined that current nitrogen loads cause and contribute to violations of water quality standards, it is precluded from issuing a permit that requires the use of known and viable BMPs only after an increase in loading has been measured. *Waterkeeper*, 399 F.3d at 498. And, as the Washington Court of Appeals held recently, a broad prohibition on violating

water quality standards "is not an adequate effluent limitation where the permit could have imposed additional requirements." *Washington Dairy Federation* at ¶97

c. *Use of "Trigger Levels" in Lieu of Numeric Effluent Limitations is Contrary to Law*

We explained to Ecology in an earlier letter that the use of trigger levels in lieu of numeric effluent limits is contrary to law. As the Second Circuit explained, in rejecting EPA's argument that "[a boilerplate prohibition that] WQBEL standards will be sufficiently maintained because EPA can take 'corrective actions' *after* the permittee becomes aware of a violation," "[t]he point of a permit is to prevent discharges that violate water quality standards *before* they happen." *NRDC,* 808 F.3d at 579 (emphasis original). The EPA permit challenged in *NRDC* required an assessment of corrective actions where a triggering event took place. Here, Ecology is already aware that the level of discharge it proposes to allow—nitrogen at current levels—causes and contributes to violations of water quality standards. Setting a corrective action that is triggered by a discharge that goes beyond these current unacceptable levels does not prevent even those excess loadings from occurring *prior* to a violation, the intent of a permit. That is to say that the trigger level is not a prohibition on the excess loading but, rather, a response to it, rendering the permit inconsistent with federal law. And establishing a corrective action that addresses only further loadings but not the underlying loadings that are already known to cause and contribute to violations of water quality standards clearly does not ensure that the permit will achieve compliance with those standards. While the court in *NRDC* noted specifically that "'[c]orrective action' is not an effective remedy in an invasive species context," *id*., neither is a corrective action that addresses only additional loading an effective remedy for underlying pollutant loads that are causing or contributing to violations of water quality standards. The trigger levels are, therefore, inconsistent with the CWA requirement that NPDES permits ensure compliance with the Act.

d. *Use of Bubbled Trigger Levels*

Ecology proposes that some permittee's loads will be "bubbled" for purposes of triggering actions levels and corrective action responses. *See* Condition S4.A, B, Table 6. The fact sheet describes the way in which Ecology intends the bubble action levels to work. Fact Sheet at 34, 41, 47. The fact sheet does not, however, explain why the facilities in the bubble are to be assessed together. Just as each facility is given its own individual permit, this General Permit must ensure that each facility does not cause or contribute to violations of water quality standards. There is no rationale to treat the bubbled facilities as one nor does Ecology provide an explanation for doing so. The rationale for putting together the very largest sources of nitrogen must also be addressed as the policy purpose for doing so is unclear.

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e. ***The Optimization and Early Planning Conditions of the Permit Amount to an Impermissible Form of Self-Regulation That Are Not Enforceable Limitations***

The General Permit identifies optimization and the submission of an annual Nitrogen Optimization Plan as BMPs that are intended to ensure that the discharges do not cause or contribute to violations of water quality standards. *See* Fact Sheet at 42. Ecology further states that:

> This permit does not differentiate between the tiers of optimization requirements leaving the Permittee to determine what strategies are best suited for reducing nitrogen with the existing treatment process.
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> Permittees may exclude optimization strategies that exceed a reasonable implementation cost or timeframe. . . . Ecology attempted to collect feedback on what Permittees would evaluate when making decisions about applicable optimization approaches and their financial impact during the preliminary draft stage. No clear response emerged from the comments received on that permit draft.

Id. at 43. Allowing permittees to choose their own forms of nitrogen control "to stay below the facility specific nutrient action level and to reduce nitrogen to the greatest extent possible during the permit term" amounts to an impermissible form of self-regulation. As the Second Circuit stated:

> The Environmental Petitioners broadly indict the CAFO Rule as countenancing the creation of an "impermissible self-regulatory permitting regime." More precisely, the Environmental Petitioners argue that the CAFO Rule is unlawful because: (1) it empowers NPDES authorities to issue permits to Large CAFOs in the absence of any meaningful review of the nutrient management plans those CAFOs have developed; and (2) it fails to require that the terms of the nutrient management plans be included in the NPDES permits. We agree with the Environmental Petitioners on both counts.

Waterkeeper, 399 F.3d at 498. As the Ninth Circuit held earlier, in remanding the self-regulatory program established by the Phase II stormwater rule to EPA,

> Nothing in the Phase II regulations requires that NPDES permitting authorities review these Minimum Measures to ensure that the measures that any given operator of a small MS4 has decided to undertake will *in fact* reduce discharges to the [statutory requirement of the] maximum extent practicable. . . . Therefore, under the Phase II Rule, nothing prevents the operator of a small MS4 from misunderstanding or misrepresenting its own stormwater situation and proposing

> a set of minimum measures for itself that would reduce discharges by far less than the maximum extent practicable.
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> No one will review that operator's decision to make sure that it was reasonable, or even good faith. Therefore, as the Phase II Rule stands, EPA would allow permits to issue that would do less than require controls to reduce the discharge of pollutants to the maximum extent practicable.

Environmental Defense Center v. EPA, 344 F.3d 832, 855 (2003). The court concluded: "EPA is still required to ensure that the individual programs adopted are consistent with the law." *Id*. at 856. Here, there is nothing in the general permit that ensures the meaningful review of the plans it requires, whether the Nitrogen Optimization Plan and Report in Condition S4.C or the Nutrient Reduction Evaluation in Condition S4.E, plans upon which the permit relies to meet legal requirements. Ecology has not suggested any method by which it will ensure that these plans will be consistent with the law. There is no provision that requires Ecology to review the submitted plans before the issuance of permit coverage that concurrently regulates and provides a shield to the permittees. As there is no assurance in the permit terms that these plans will require compliance with water quality standards, agency review is essential. Moreover, the permit does not clearly make the implementation of the plans an enforceable limit, which is required if Ecology seeks to rely on them to ensure compliance with the Clean Water Act. *See e.g*., Condition S4.C.1.c (permittee is required to "select at least one optimization strategy prior to implementation."). Not only is the permittee, under these terms, not required to carry out the strategy it selects, but it is only required to select one strategy, despite the fact that the one strategy may or may not ensure compliance with water quality standards. And, "[i]f the permittee makes the wrong choice, Ecology has no responsibility, under this scheme to rectify the situation in a timely manner," thus creating an impermissible scheme of self-regulation. *Puget Soundkeeper Alliance et al. v. Ecology*, 2003 WL 21391316, at *6 (PCHB June 6, 2003).

Among other methods, meaningful review is ensured by allowing public comment on any plans that the permit considers to be enforceable effluent limits. *See Waterkeeper*, 399 F.3d at 502; *Washington Dairy Federation*, 490 P.3d at ¶ 119 ("Because a nutrient management plan is a type of effluent limitation, the CWA requires that Ecology ensure that the public has an opportunity to participate in its development. *Community Ass'n for Restoration of Env't v. Dep't of Ecology*, 149 Wn. App. 830, 849-50, 205 P.3d 950 (2009)."); ¶ 125 ("Ecology has reimagined the permitting process such that the public does not have an opportunity to comment on site-specific issues. 40 C.F.R. § 22.42(e)(1)(viii),122.42(e)(1)(vi), 122.42(e)(5). Ecology maintains that it amended the permitting scheme as a matter of practicality and efficiency, but it provides no legal support for its decision to depart from the federal regulations."). In *Environmental Defense Fund*, the Ninth Circuit held that the Phase II stormwater rule's failure to provide for public participation on the Notices of Intent (NOI) for coverage was "contrary to the clear intent of Congress" because "it is the NOIs, and not the general permits, that contain the substantive information about how the operator of a small MS4 will reduce discharges to the maximum extent practicable." *Id*. at 857. Here, with regard to the proposed general permit, the optimization plan includes the permittees' selection of "at least one optimization strategy for

implementation" in Condition S4.C.1.c. This self-regulatory scheme of choosing the means by which a permittee will purportedly meet the requirements of the Clean Water Act and maintain compliance with Condition S3—noting the presumption in Condition S3.B relies on optimization—makes the plans the means by which the operator will reduced discharges, and therefore it is the plans that must be subject to public comment.

f. *BMPs That Are Not Immediately Applicable Require Compliance Schedules*

Ecology defines the BMPs in this permit that ensure compliance in lieu of a numeric effluent limit to include: (1) optimization; (2) an action level; (3) responses to triggering the action level; and (4) "early planning." *See* Fact Sheet at 33. Effluent limits that are not immediately applicable require compliance schedules. 40 C.F.R. § 122.47. Compliance schedules must require compliance "as soon as possible." *Id*. § 122.47(a)(1). Moreover, any compliance schedule that exceeds one year in length must have interim requirements, with dates, that do not exceed one year in length. *Id*. § 122.47(a)(3), (a)(3)(i). Specific reporting requirements apply to compliance schedules. Id. § 122.47(a)(4).

In this permit, Ecology has not demonstrated that the four years it has granted to Dominant loaders in Condition S4.E.1 to submit Nutrient Reduction Evaluation reports that are key to actions related to reducing nitrogen is "as soon as possible." A finding of "as soon as possible" will likely vary between facilities, another reason that a general permit is not an appropriate vehicle for regulating these sources. Some facilities, other than the LOTT facility excluded under Condition S4.E.1, have already done planning or face more or less complicated planning scenarios based on facility location and current engineering that require varying times to complete. In addition, the general permit does not establish any interim dates. Ecology cannot both rely on this plan as an BMP in lieu of a numeric effluent limit and avoid the requirements that apply to all effluent limits, including compliance schedule regulations.

Similarly, the Nitrogen Optimization Plan and Report required by Condition S4.C that requires a permittee to choose one optimization strategy does not include a compliance schedule that requires compliance as soon as possible. Choosing one strategy and foregoing others requires a compliance schedule if such strategies are permit limits. Instead, the permit refers to this scheme as "apply[ing] an adaptive management approach." *Id*. Ecology has not cited anything in the statute or federal regulations that establishes an NPDES permit can take an "adaptive management" approach to meeting water quality standards. In fact, as explained in Section I above, such an approach is the polar opposite of ensuring that a source not cause or contribute to violations of water quality standards. Finally, while the permit requires that the permittee document implementation of a chosen strategy, it does not make the chosen strategy enforceable. *See* Condition S4.C.2.

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B. All Known, Available and Reasonable Treatment Technologies

1. *Ecology Cannot Rely on a Future AKART Evaluation*

In the fact sheet, Ecology has acknowledged that secondary treatment is no longer the presumptive definition of AKART. *See* Fact Sheet at 18 ("While Ecology believes that the requirements in Chapter 173-221 WAC do constitute a level of treatment that is reasonable for domestic WWTPs, the concept of Washington's AKART rule for domestic WWTPs has started to evolve. This is primarily due to advancements in treatment technology that are capable of removing some pollutants at a higher level than traditional secondary treatment."). It then proceeds to require an AKART analysis in the future, under certain conditions. Specifically, it refers to a future AKART analysis as a BMP[12] that will be required to be included in a Nutrient Reduction Evaluation for both Dominant and Small Facilities. *See* Fact Sheet at 35, 36; *see also* Permit at 18 (Condition S4.E.1) (Nutrient Reduction Evaluation required by December 31, 2025); *id*. (Condition S4.E.2) (AKART analysis required in Nutrient Reduction Evaluation); *see also* Permit at 24–25 (same for Small Facilities). It also requires the use of just one of what are potentially multiple optimization strategies when the requirement to implement AKART includes "the most current methodology that can be reasonably required for preventing, controlling, or abating the pollutants associated with a discharge." WAC 173-201A-020. Ecology's approach fails to meet state law requirements.

The Washington Court of Appeals recently ruled on the legal requirement that a permit apply AKART at the time a permit is issued. In *Washington Dairy Federation*, the court held that: "When issuing a general waste discharge permit, Ecology must ensure that the permit conditions "apply and insure compliance" with "[t]echnology-based treatment requirements" that reflect [AKART]." 490 P.3d at ¶ 33. There, the Pollution Control Hearings Board had evidence that Ecology did not have sufficient information about the condition of various treatment methods to impose an AKART requirement in a general permit. The court rejected Ecology's argument that an "information gathering condition" in the permit was an AKART requirement:

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

[12] Note that a BMP for AKART, which is a technology-based requirement, has little to do with BMPs that are needed to ensure that a facility does not cause or contribute to violations of water quality standards.

Id. at 16–17. The court further noted that the permit's granting of up to three and a half years after issuance without requiring a single action to prevent or abate the seepage of manure from lagoons was not AKART. *Id*. at 18.

Here, after admitting that secondary treatment authorized by the permit is not AKART, Ecology proposes to issue a general permit that not only does not include any pollution abatement prior to discharge that constitutes AKART but it does not require an AKART analysis to be completed for another four years. The result is plainly contrary to the holding in *Washington Dairy Federation*.

2. *Ecology Has Failed to Express Any Meaning of the Word "Reasonable" in the Required AKART Analysis*

Ecology states that an AKART analysis is required "to determine a reasonable level of treatment for nitrogen removal. The term 'reasonable', in the context of AKART directly relates to affordability of an engineered treatment solution. AKART reflects the level of treatment most suited to a technology based effluent limitation." Fact Sheet at 50. Other than instructing the permittees to evaluate certain levels of treatment technology, *id*., Ecology is silent on the meaning of "reasonable." *See id.* at 53 ("Ecology has not provided an effluent treatment target because each discharger must make the determination regarding what constitutes a 'reasonable' level of treatment for nitrogen removal."); *see also id*. at 50 (permittees must generate a cost per pound of nitrogen removed but no information is provided on determining what costs are "reasonable"). Leaving the determination of reasonableness with regard to the cost associated with treatment levels entirely to the permittee is an impermissible provision for self-regulation. *See Washington Dairy Federation*, 490 P.3d at ¶ 33 ("When issuing a general waste discharge permit, Ecology must ensure that the permit conditions 'apply and insure compliance' with '[t]echnology-based treatment requirements' that reflect 'all known, available, and reasonable methods of prevention, treatment, and control,' or 'AKART,' required under the WPCA, the Pollution Disclosure Act of 1971, ch. 90.52 RCW, and the Water Resources Act of 1971, ch. 90.54 RCW. WAC 173-226-070(1).") (emphasis added); *see also id*. ("AKART may be implemented through the use of effluent limitations or best management practices. WAC 173-226-070(1)(a), -070(1)(d). The phrase "[e]ffluent limitation" refers broadly to "any restriction established by the department or the administrator on quantities, rates, and concentrations of [discharges] from point sources into waters of the state." WAC 173-226-030(10)) (emphasis added).

3. *Ecology Cannot Maintain that its Sewage Treatment Rules No Longer Correctly Define All Known and Available Technology While Not Requiring a Case-by-Case AKART Evaluation*

Ecology states that due to the advancements in treatment technology—that it doesn't mention have been well underway for decades—"the concept of Washington's AKART rule for domestic WWTPs has started to evolve." Fact Sheet at 18. It further concludes that "[i]t is apparent that the agency must start to consider refining what constitutes AKART for this treatment category."

Id. It then states the obvious fact that AKART—because it is by definition a question of reasonableness of technology and economics—requires a case-by-case evaluation. *Id.* at 18–19. The General Permit, however, does not require AKART for each facility but, rather, merely the submission of a report pursuant to Permit Conditions S4.D, S5.D. *See* Fact Sheet at 19. (It is likely that the fact sheet is in error and meant to refer to Permit Conditions S4.E and S5.E.)

C. Ecology May Not Modify Expired Permits

Ecology is proposing with its Preliminary Draft permit to effectively modify some expired/administratively extended NPDES permits, an action that is prohibited by federal law. *See* Clean Water Act § 402(b)(1)(B); 40 C.F.R. §§ 122.6, 122.46(a), (b); 49 Fed. Reg. 27998 (Sept. 26, 1984).

D. The Provision on Discharges to Waters Covered by an EPA-Approved TMDL is Not Adequate

Condition S7 of the permit states:

> If EPA approves an applicable Total Maximum Daily Load (TMDL) for WWTPs owned and operated by the Permittee Ecology will address any permit requirements related to the approved TMDL in the Permittee's individual permit or through a modification of this permit.

The wording of this provision is odd because EPA does not approve TMDLs "for" permitted facilities; it approves TMDLs that include wasteload allocations that apply to facilities. But the content is more troubling. "Ecology will address" is not a provision that ensures that any future applicable wasteload allocation will be translated into a WQBEL at the earliest possible time. Given that the rationale for not including numeric WQBELs in this permit is the lack of model results, and a TMDL that would be based on such a model, this permit must include a reopener provision that requires Ecology to adopt numeric WQBELs based on any future EPA-approved TMDL with wasteload allocations. The permit cannot equivocate on how it will assure the timely adoption of numeric WQBELs by saying that it "may" do so through modification of this permit or of the permittee's individual permit. Moreover, if Ecology chooses now to execute this result by modifying an individual permit, it would be proposing that a facility be covered by two permits simultaneously, a bizarre outcome. Finally, if Ecology chooses now that it will modify an individual permit, it does not address how the numeric WQBEL will be advanced in a timely fashion if the underlying individual permit is administratively extended and therefore not subject to modifications. Ecology must decide now how it will address future EPA-approved wasteload allocations. This is not a hypothetical as Ecology is currently claiming that it will complete the Budd Inlet TMDL in "early 2022." Fact Sheet at 48.

In addition, the Condition S4.E.1 that excludes LOTT from submitting a Nutrient Reduction Evaluation is nonsensical. It is likely that LOTT will be subject to a wasteload allocation for nitrogen that requires further reductions, based on the Budd Inlet TMDL. The four-year

timeframe for submission, however, is inapplicable to a facility that is already well known for its advance planning. Likewise, the four-year timeframe for submission of such plans would be inadequate for any facility subject to any future EPA-approved TMDL with wasteload allocations.

V. THE PROPOSED PERMIT'S MONITORING AND REPORTING REQUIREMENTS ARE INADEQUATE

As the Washington Court of Appeals succinctly explained,

> Under the Clean Water Act, every NPDES permittee is required to "monitor its discharges into the navigable waters of the United States in a manner sufficient to determine whether it is in compliance with the relevant NPDES permit." *Nat. Res. Def. Council v. County of Los Angeles (NRDC)*, 725 F.3d 1194, 1207 (9th Cir. 2013) (citing 33 U.S.C. § 1342(a) (2); 40 C.F.R. § 122.44(i)(1)). "That is, an NPDES permit is unlawful if a permittee is not required to effectively monitor its permit compliance." *Id.*

Washington Dairy Federation, at ¶ 102. Citing the same Ninth Circuit case, the Second Circuit noted: "Enforcing compliance with a permit is the key to an effective NPDES program." *NRDC,* 808 F.3d at 581. In the proposed general permit, there is no way to derive from the monitoring information required by the permit whether the permittees are in compliance with the permit's purported effluent limits.

The monitoring provisions in the proposed general permit, Condition S6, consist of only influent and effluent sampling. Ecology has proposed no method by which to determine compliance with Condition S3, the requirement to ensure that permitted discharges do not cause or contribute to violations of water quality standards. Moreover, in Condition S3.B, Ecology has established a caveat to the prohibition established in Condition S3.A, one that is specifically tailored to "discharge monitoring data or other **site**-specific information [that] demonstrates that a discharge causes or contributes to a violation of water quality standards[.]" This is an "unless" clause. Without such data or information, "Ecology presumes that a Permittee complies with water quality standards . . . when the Permittee complies with [the other provisions of the permit]." Condition S3.B. This is a "when" clause. Therefore, this two-pronged caveat requires the monitoring and reporting of data and information to support both the "unless" clause and the "when" clause that are embedded in the presumption established in Condition S3.B.

Ecology has not explained in the fact sheet what it means by the "unless" clause language. This ambiguity alone condemns the provision but it also makes it impossible to know precisely what kind of data or information Ecology believes would demonstrate that its presumption in Condition S3.B was not applicable. At a minimum, it contemplates data and information that "demonstrate . . . a violation of water quality standards," which requires data from the receiving water for near-field violations and some other kind of data and information for far-field violations. There are no provisions for permittees to monitor receiving waters. Does Ecology

intend that virtual dye studies could be used to demonstrate far-field violations? *See e.g.,* Ecology, *South Puget Sound Dissolved Oxygen Study South and Central Puget Sound Water Circulation Model Development and Calibration* (April 2014) at 103 – 105 (figs. 72, 73). What about the Salish Sea model results coming out in September 2021? What about the existing results of its model from which it has concluded that all sewage treatment plants have a reasonable potential to cause or contribute to violations of water quality standards? *See* Fact Sheet at 30 ("The results from the [2019] Bounding Scenarios report led Ecology to make the reasonable potential determination for domestic WWTPs discharging directly to the Washington waters of the Salish Sea." "In addition to localized impacts from direct discharges, excess nutrients discharged from these domestic WWTPs in one location cumulatively contribute to DO impairments in other locations due to the water exchange that occurs between basins."). In other words, has Ecology already demonstrated that the "unless" clause has been met and, if not, why not, and what would suffice to make that demonstration? In any event, Ecology has not included monitoring and reporting provisions that relate to the "unless" clause, rendering the permit virtually if not literally unenforceable and therefore inconsistent with the law.

With regard to the "when" clause, Ecology states that a permittee is presumed in compliance with water quality standards so long as it is complying with all permit conditions "including planning, optimization, sampling, monitoring, reporting, waste management, and recordkeeping conditions." Condition S3.B. In its fact sheet, Ecology has not explained how complying with any or all of these provisions is the equivalent of Condition S3.A, the prohibition on violating water quality standards. Ecology has not explained how Condition S3.A adds anything to the protection ensured to water quality by the permit given the "when" clause in Condition S3.B. Putting those concerns aside, Ecology has not included monitoring and reporting provisions that allow the public and regulatory agencies to determine compliance with each of these provisions.

Conclusion

After many permit cycles, Ecology is finally taking some action to limit nitrogen discharges to Puget Sound, where the ever-increasing adverse impacts of that pollutant have been tracked by Ecology scientists for decades. Not only, however, is this general permit "too late," but it is far "too little" as—aside from some obvious throw-away provisions intended to make the permit look legal—it simply fails to regulate the existing nitrogen discharges that the agency has already determined to be "too much." The ways in which this "adaptive management" approach NPDES permit skirts the Clean Water Act are so numerous and so compounded that it defies the imagination to understand why Ecology believes that it is consistent with the law. Smoke and mirrors are not sufficient to meet the requirements of the Clean Water Act.

> **MIRRORS AND BLUE SMOKE, BEAUTIFUL BLUE SMOKE ROLLING OVER THE SURFACE OF HIGHLY POLISHED MIRRORS. . . . IF SOMEBODY TELLS YOU HOW TO LOOK, THERE CAN BE SEEN IN THE SMOKE GREAT, MAGNIFICENT SHAPES, CASTLES AND KINGDOMS, AND MAYBE THEY CAN BE YOURS.**

Jimmy Breslin, *How the Good Guys Finally Won: Notes from an Impeachment Summer* (1975)

Sincerely,

Nina Bell
Executive Director