

**BEFORE THE GOVERNOR OF THE STATE OF WASHINGTON  
THE HONORABLE JAY INSLEE**

In re: Appeal by

NORTHWEST ENVIRONMENTAL  
ADVOCATES

of a decision by the Washington Department of  
Ecology denying a petition for rulemaking

APPEAL

Pursuant to RCW 34.05.330(3)

**I. INTRODUCTION**

Northwest Environmental Advocates (“NWEA”) hereby appeals the January 11, 2019 denial by the Washington Department of Ecology (“Ecology”) of NWEA’s November 14, 2018 *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* (herein, “Petition”). The Petition and Ecology’s denial letter are attached hereto as Appendices A and B, respectively.<sup>1</sup> This appeal is brought pursuant to RCW 34.05.330(3), which provides that, following Ecology’s denial of a petition to amend a rule, the petitioner has 30 days to appeal that decision to the Governor.

NWEA’s Petition sought a rulemaking to establish technology-based effluent limits for the discharge of nutrients and toxics from municipal wastewater treatment facilities to Puget Sound and its tributaries. Specifically, the Petition asked Ecology to update its rules at WAC Chapter 173-221—which are now 31 years old and based on outdated, 100-year old technology—to reflect today’s science and technology. The current effluent limits are woefully inadequate to meet Washington’s requirement for use of All Known, Available, and Reasonable Treatment, also known as “AKART,” and to protect the marine environment of Puget Sound.

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<sup>1</sup> Appendix C hereto also contains all supporting materials submitted to Ecology in support of the Petition.

This appeal now seeks the Governor's action to direct that agency to initiate the requested rulemaking.

The need for the requested rulemaking is clear. As stated in the Petition, which we fully incorporate herein, Ecology has been studying the effects of excess nutrient pollution on Puget Sound water quality since the late 1980s. Despite the passage of 30 years, Ecology has yet to turn those studies into regulatory actions to protect the Sound from the discharge of nutrients in treated sewage. By 2008, Ecology and the U.S. Environmental Protection Agency ("EPA") had agreed that Ecology's requiring sewage treatment plants to use only 100-year old secondary treatment was out-of-date and did not reflect current advances in treatment technology. In 2010, Ecology and EPA demonstrated how nutrient removal technology also removes a wide variety of toxic pollutants, including pharmaceuticals and personal care products. In 2011—over seven years ago—Ecology published a technical and economic evaluation of using those advanced treatments at Washington's sewage treatment plants. Despite Ecology's concerns about Puget Sound water quality, its prediction of a significant increase in nutrients discharged to Puget Sound, and its conclusion that nutrient removal technology is readily available and often economical, Ecology has taken no action to update its outdated regulations and permit requirements as required by AKART.

In addition to AKART's being a legal requirement for all permitted dischargers, use of nutrient removal technology for human sewage is key to protecting water from nutrient pollution. *See App. A at 39 – 42, 47, 51 – 57.* Ecology's failure to implement AKART for discharges to Puget Sound and its tributaries has resulted in its not maintaining these waters to the highest possible standards as required by state law. Instead, the unrestricted discharge of nutrient pollution to the Sound has caused dangerously low levels of dissolved oxygen, increased algal

blooms, fundamental changes to the Sound's food web, and increased local acidification. In 2011, Ecology published its determination that municipal sewage discharges are the largest anthropogenic source of nitrogen to Puget Sound, responsible for 81 percent of the Puget Sound anthropogenic nitrogen loads in the summer and 59 percent annually. Moreover, Ecology has predicted that the significant increase in nutrient pollution discharged from municipal sewage treatment plants due to population growth—40 percent increase in nutrients discharged to Puget Sound from humans over the next several decades—along with the local effects of climate change, will increase the adverse impacts on Puget Sound.

Puget Sound is also suffering from high levels of toxic pollution that have poisoned the food chain resulting in, *inter alia*, the Southern Resident killer whales' having been found to carry some of the highest PCB and PBDE concentrations reported in animals worldwide. *See* App. A at 42 – 47, 48 – 51. In 2016, researchers estimated that 97,000 pounds per year of pharmaceuticals and other drugs are discharged through treated sewage to Puget Sound annually. Just last year, researchers identified reduced growth rates and metabolism disruptions in Puget Sound chinook as evidence of a pattern generally consistent with starvation and one that may result in early mortality or an impaired ability to compete for limited resources. Despite these and Ecology's own extensive studies on both regulated and unregulated toxic pollutants in Puget Sound—including pharmaceuticals, personal care products, endocrine-disrupting chemicals, nanomaterials, metals, and persistent organic pollutants— Ecology has established almost no effluent limits on toxics for discharges to Puget Sound and its tributaries. Yet, in 2010, Ecology and EPA evaluated the efficacy of nutrient removal technology to concurrently remove toxic pollutants from municipal sewage concluding that, while approximately 21 percent of the 172 compounds evaluated were reduced to below reporting limits by conventional secondary

treatment, a full 53 percent were reduced to below reporting limits by the use of at least one advanced nutrient-removal technology.

In violation of its long-standing statutory duty to apply AKART, Ecology routinely issues National Pollutant Discharge Elimination System (“NPDES”) discharge permits that require only the use of secondary treatment (a 100-year old technology) by the very sewage dischargers that Ecology has identified as the leading anthropogenic source of nutrient pollution in the Sound. *See App. A at 14 – 33.* As a result, dischargers to the Sound continue to use decades-old technologies that do not remove known pollutants. As we described in the Petition, over the last decades, tertiary treatment has become increasingly known, available, and economically feasible. *See App. A at 57 – 72.* Yet Ecology consistently fails to evaluate whether such advanced pollution treatment technology is required pursuant to AKART when it issues permits for the discharge of pollution to Puget Sound and its tributaries. Moreover, Ecology consistently relies on its own manifestly outdated technology-based regulations as the basis for not evaluating, let alone requiring, pollution reduction in municipal sewage beyond secondary treatment as required by AKART.

## **II. SUBJECT OF THIS APPEAL**

This appeal of Ecology’s denial of NWEA’s petition seeks an order by the Governor to Ecology to institute a formal rulemaking proceeding to define AKART for the approximately 107 municipal sewage treatment plants discharging to Puget Sound and its tributaries as year-round tertiary treatment to remove nutrient pollution and toxic contaminants, and to establish effluent limitations of 3.0 mg/L for total nitrogen and 0.1 mg/L (or lower) of total phosphorus. In its Petition, NWEA sought a rule that would establish a presumption that tertiary treatment is “reasonable” and the specific numeric limits are achievable unless Ecology affirmatively

demonstrates, through compelling evidence to the contrary, that the owner/operator(s) of an individual sewage treatment plant would face severe economic hardship if required to install such treatment technology, even on an attenuated compliance schedule. NWEA also sought an amendment to Ecology's rules that would provide the process and standards for rebutting the assumption that tertiary treatment is "reasonable" and establishing the alternative technology-based treatment standards that will be required in those rare instances when Ecology makes such a finding.

Although the discharge of nutrient pollution—primarily nitrogen and phosphorus—is a major concern with regard to sewage treatment facilities, wastewater treatment plants that employ conventional biological treatment processes designed to meet secondary treatment effluent standards typically do not remove total nitrogen or total phosphorus as needed to protect the waters of Puget Sound. Enhanced secondary and tertiary treatment, on the other hand, include biological, chemical, and physical means of removing nutrient pollution from sewage. The best technology that combines enhanced secondary and tertiary treatment for nitrogen and phosphorus will differ by facility. Nevertheless, there are typical effluent limits associated with advanced nutrient removal technologies that Ecology should adopt by rule as AKART for domestic sewage treatment because they are routinely achieved by sewage treatment plants across the country.

The effluent levels sought by NWEA's petition are based on findings of various agencies and consultants. *See* App. A at 5 – 8. For example, over ten years ago, EPA's Science Advisory Board ("SAB") determined that existing technology was being used to achieve total nitrogen discharge concentrations of 3.0 mg/L. This was confirmed by Ecology in 2011 and again by an EPA consultant in 2016. The SAB also determined that achieving total phosphorus

concentrations as low as 0.1 mg/L or less constitute the best management practice for phosphorus removal at sewage treatment plants. EPA Region 10 subsequently found that total phosphorus concentrations achieved by some sewage treatment plants are consistently near or below 0.01 mg/L.

Tertiary treatment of municipal sewage also removes many toxic pollutants, including both regulated and unregulated toxics such as personal care products and pharmaceuticals that are harming Puget Sound. *See App. A at 42 – 47.* In 2016, researchers calculated that treated sewage discharged to the Sound contained an estimated 97,000 pounds of pharmaceuticals and other drugs per year. In 2018, they found that Chinook salmon and sculpin fed a diet of these toxics at the level found in the Puyallup River and Sinclair Inlet estuaries experienced growth and disruptions generally consistent with starvation. In 2010, Ecology and EPA Region 10 specifically evaluated nutrient removal technology for its efficacy in concurrently removing a wide array of toxic chemicals. This study showed that different nutrient removal technologies resulted in different levels of removal for three categories of toxics: pharmaceuticals and personal care products, hormones and steroids, and semi-volatile organics. Ecology concluded its results were consistent with other published studies on the ability of nutrient removal technologies to also remove pharmaceuticals and personal care products. Despite this research on the use of nutrient removal technologies to remove toxic contaminants from treated sewage discharged to Puget Sound where these contaminants are causing harm to aquatic species and threatening public health, Ecology has failed to issue permits with effluent limits for toxic pollutants. Adopting a rule as requested in the Petition would be a straightforward way of not only limiting nitrogen and phosphorus, but also these harmful toxic pollutants.

### III. AKART IS A LONGSTANDING WASHINGTON REQUIREMENT

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. 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. Washington Attorney General Opinion, AGO 1983 No. 23, at 14; *see also* App. A at 8 – 10. By 1987, Ecology had established 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.

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* App. A at 11 – 13. By requiring that dischargers implement and incorporate new technologies as they become available, AKART insures that water quality continues to improve as reductions in effluent limits are driven by advances in technology. By definition, technology that is known, available, and reasonable will change over time. In fact, the PCHB has already determined that tertiary treatment is AKART for municipal sewage discharges. *See Sierra Club v. Washington*, PCHB No. 11-184, Findings of Fact, Conclusions of Law and Order (July 19, 2013) at 9, 25.

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#### IV. NEED FOR THE REQUESTED RULE

The need for the proposed rulemaking is that, although AKART is required by state law, Ecology consistently refuses to apply that requirement to municipal sewage dischargers to Puget Sound and its tributaries. Instead, Ecology hides behind its current regulations that require only secondary treatment for the abatement of nutrient pollution—an old technology that is woefully outdated and that no longer represents all known, reasonable, and available methods of addressing Puget Sound’s nutrient and toxics problem.

##### **A. Ecology Consistently Fails to Implement AKART Requirements When Issuing NPDES Permits to Discharge Treated Sewage to Puget Sound and its Tributaries**

Despite Washington law’s unequivocal mandate to implement AKART through increasingly stringent technology-based requirements for permittees, Ecology consistently avoids its AKART obligations, resulting in sewage treatment plants’ discharging large quantities of nutrients that impair water quality of the Sound. *See* App. A at 14 – 33, 35 –38. As a result, the requested rule is needed to both clarify the requirements for the measures that wastewater treatment facilities must implement to comply with AKART, but also to ensure that Ecology meets its duty to ensure compliance with these requirements in each permitting decision. RCW 34.05.330(4)(b); WAC 82-05-020(1)(C)(ii).

Historically, Ecology has incorrectly and misleadingly cited its own municipal sewage discharge regulations in WAC Chapter 173-221 for the proposition that secondary treatment is adequate to meet the AKART mandate. The rules, however, do not establish discharge standards for nutrients, such as nitrogen and phosphorus, or toxic contaminants that represent AKART for municipal sewage treatment plants. Therefore, reliance on these 31-year-old rules is illogical. In fact, Ecology itself already published an extensive analysis of the technological and operational

upgrades that would be required for eight general categories of existing municipal sewage treatment plants to achieve effluent concentrations of 3.0 mg/L total nitrogen and 0.1 mg/L total phosphorus. *See Washington Nutrient Removal Evaluation 2011, supra* n. 2, at ES-2 (referring to those effluent levels as “generally accepted performance of established nutrient removal technologies”).

Ecology has even failed to make an AKART determination for municipal dischargers that have already installed technological treatment well beyond the federal secondary treatment standards incorporated at WAC Chapter 173-221. *See* App. A at 22 – 30. For example, despite Pierce County’s 2017 completed upgrade of its Chambers Creek sewage treatment plant, Ecology used the same boilerplate AKART determination when it issued an NPDES permit to the facility that requires only secondary treatment in compliance with the federal minimum. Other municipal dischargers to Puget Sound have evaluated options for installing nutrient removal technology without any apparent direction from Ecology and certainly without Ecology’s establishing any regulatory requirement. As Ecology has shown no inclination to revise permits to include nutrient removal, however, these efforts appear to have come to a halt. King County, for example, completed an evaluation of nutrient removal at its South Plant eight years ago. Despite this report, there are no indications that King County is planning to install nutrient removal technology. And, notwithstanding the results of the county’s evaluation demonstrating that nutrient removal technology is both known and available and providing an analysis that Ecology could use to determine whether it was reasonable, five years later Ecology issued its most recent permit for the South Plant. King County operates two facilities that employ “advanced treatment,” namely filtration. But the effluent limits for these facilities

established by Ecology are still based on secondary treatment, representing technology that is over 100 years old.

**B. Benefits to Washington Policy Initiatives and the Washington Economy from Using Known and Available Treatment for Nutrient Pollution**

The State of Washington has asserted numerous policy initiatives pertaining to protection of Puget Sound resources, resources that would be supported by a rulemaking to determine that tertiary treatment is required by the state's AKART mandate. *See* App. A at 47 – 57. These policy initiatives include: the Governor's Washington Shellfish Initiative; the Governor's Southern Resident Killer Whale Task Force; the Governor's Washington State Blue Ribbon Panel on Ocean Acidification and the Washington Legislature's Marine Resources Advisory Council; the Legislature's creation of the Governor's Salmon Recovery Office; and Ecology's Puget Sound Nutrient Source Reduction Project. In addition, the Washington Department of Fish and Wildlife and the National Marine Fisheries Service recently ranked Puget Sound chinook stocks that are important to the recovery of endangered Southern Resident killer whales as the highest on the West Coast. Each of these initiatives could potentially address significant parts of the nutrient and toxic problems in the Sound. However, to date, they have collectively reflected the lack of action and progress necessary to truly address these issues, and therefore serve to do little more than further demonstrate the need for the concrete, specific steps called for in NWEA's Petition at issue in this appeal.

The rule sought by this appeal would also positively affect the following people or groups: (1) people who recreate on or near Puget Sound and whose business interests depend upon recreational uses; (2) people who rely upon good water quality and habitat in Puget Sound for commercial purposes; (3) people who depend on Puget Sound for cultural and spiritual purposes; and (4) people who pay for sewage treatment. *See* App. A at 72 – 89. These needs

translate into a “water-dependent economy” that provides hundreds of thousands of jobs and over a trillion dollars for the agriculture and food industry, maritime industry, and outdoor recreation industry combined. Removal of nutrient pollutants from municipal sewage prior to discharge to Puget Sound and its tributaries will reduce depressed levels of dissolved oxygen, reduce algal blooms including harmful algal blooms that produce toxins, reduce food web effects, and reduce the discharge of toxics, both regulated and unregulated, all of which adversely affect water-dependent recreation, life, and employment.

**C. Tertiary Treatment Technology is Both “Known” and “Available” But Not Reflected in Rules Over Three Decades Old**

Tertiary treatment to remove nutrients from wastewater is a well-known technology. *See App. A at 57 – 64.* In 2004, EPA stated that over 30 percent of sewage treatment systems in the United States use greater levels of treatment than secondary. In 2007, EPA urged use of nutrient removal technologies in reports that showed tertiary treatment was used at nearly 100 plants in the United States, and concluding that there was no technical or economic reason that precluded other facilities from using any of the tertiary treatment technologies that were used at those studied.

Nitrogen removal treatment technology is also known to Puget Sound dischargers. *See App. A at 22 – 29, 62 – 64.* Pierce County, LOTT, King County, Tacoma, and Bellingham are examples of Puget Sound area municipalities that have used or evaluated the numerous existing nutrient removal technology options to achieve effluent levels of 3.0 mg/L total nitrogen. None of the engineering reports completed for these municipalities has concluded that the technology to achieve this level does not exist. Likewise, on the eastern side of Washington, Spokane County uses tertiary treatment. Because facilities in Washington and across the United States already use enhanced secondary and tertiary treatment, the latter of which has been determined

by the PCHB to be AKART, it is beyond contention that treatment technology to remove nitrogen and phosphorus beyond the discharge quality achieved by secondary treatment is both “known” and “available” in Washington State.

**D. Tertiary Treatment is “Reasonable” for Most Sewage Treatment Plant Discharges**

NWEA’s petition requested that Ecology make a rebuttable determination that tertiary treatment is AKART, allowing for municipal dischargers to demonstrate to the contrary. Information currently exists to support a finding that tertiary treatment is reasonable. *See* App. A at 64 – 67. In 2010, Ecology commissioned the development of Washington-specific calculations for installing tertiary treatment. These were estimated to cost a weighted average increase in sewer fees of between \$7.29 and \$28.43 per month, the equivalent in 2018 dollars of \$8.48 to \$33.08. In comparison, the Washington PCHB found that fee increases significantly higher than this range were found to be a “reasonable method[] of treatment” in upholding Ecology’s requirement that the City of Bellingham install secondary treatment as AKART in the 1980s. *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). In *Bellingham*, the PCHB found that an additional high cost estimate of \$27.38 per month in fee increases—equivalent to \$65.44 in 2018 dollars—to implement secondary treatment at a facility would not “involve significantly greater costs than for others obliged to obtain the same treatment” nor was it beyond the city’s ability to bear the costs and was therefore reasonable within the meaning of AKART. *Id.* at 15. Existing Ecology and EPA assessments of the cost of installing tertiary treatment and the PCHB’s holding in *Bellingham* establish a credible basis upon which to conclude that in most cases Ecology will find that tertiary treatment is reasonable on a cost basis alone, even without considering the benefits of its installation.

**E. Ecology Previously Identified the Need for AKART Rulemaking**

Ecology's years of investment in studying the effects of nutrient discharges to Puget Sound and possible use of existing nutrient removal technologies on these discharges demonstrates that this issue is a top priority of Ecology's. Far from being a new enterprise, rulemaking to establish AKART for municipal sewage treatment plants based on all known and available treatment technologies would correspond identically with Ecology's priorities and investments. Given that there are two, and only two, approaches to regulating pollutants in discharges from NPDES-permitted facilities—the technology-based and the water quality-based approaches—and Ecology has asserted that it cannot yet pursue the latter, if indeed it ever chooses to, that leaves only the technology-based approach. Given that Ecology repeatedly identifies its rules at WAC 173-221 as precluding its identification of AKART as anything beyond secondary treatment, the rules must be amended to reflect the reality of all known and available treatment technologies.

Using the AKART approach in Washington to address Puget Sound pollution is not a novel idea. *See* App. A at 67 – 72. In 2007, EPA Region 10 made the case for an AKART-based approach to nutrient controls by pointing out the slow pace associated with implementing the water quality-based approach and the urgency of addressing the nitrogen loads from an increasing population. In 2008, Ecology and EPA proposed that EPA fund an evaluation of establishing AKART for nutrient removal, pointing out that at that time only one of the 65 direct discharges of wastewater into the Puget Sound provided treatment to remove nitrogen and that that discharger removed over 90% of the nitrogen at an affordable cost to utility users.

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## V. ECOLOGY'S RESPONSE TO THE NWEA PETITION

On January 11, 2019, Ecology denied NWEA's petition because it "does not agree that revising Chapter 173-221 WAC to define AKART as tertiary treatment for municipal discharges into Puget Sound and its tributaries is a reasonable approach to address Puget Sound water quality impairments." App. B at 1. In its response, Ecology sets out four rationales for rejecting the Petition, namely that: (1) Ecology believes a water quality-based approach is "necessary," App. B at 1; (2) Ecology believes that a water quality-based approach is "more appropriate" than the technology-based approach of AKART, App. B at 2; (3) further Ecology modeling is necessary before water-quality based actions to reduce nitrogen can be taken, App. B at 2; and (4) no actions should be taken because of EPA's National Study of Nutrient Removal and Secondary Technologies, App. B at 2. None of these responses address the content of the NWEA petition, or otherwise rebut the need for the requested rulemaking.

First, AKART is not optional—it is a foundational requirement of Washington statutory law, and Ecology must require every sewage treatment plant to comply with its mandate. *Weyerhaeuser v. Southwest Air Pollution Control Authority*, 91 Wn.2d 77, 586 P.2d 1163 (1978). Thus, Ecology's statement that a water-quality based approach is "more appropriate" has no basis in law. Ecology must require AKART for all dischargers. *See* App. A at 8 – 14.

Second, NWEA agrees that a water quality-based approach to reducing nitrogen loading to Puget Sound is "necessary." In fact, NWEA petitioned Ecology to develop a Total Maximum Daily Load ("TMDL") for Puget Sound and conduct associated rulemaking because TMDLs are the prescribed Clean Water Act mechanism for restoring impaired water quality and determining the respective load reductions required for multiple pollution sources. *See* NWEA, *Petition for Rulemaking to Adopt a Total Maximum Daily Load and Wasteload Allocations for Nitrogen in*

*Puget Sound* (Oct. 10, 2017). Ecology rejected this petition on the basis that more data and more analysis are required before developing a TMDL, if at all. Letter from Maia D. Bellon, Director, Ecology, to Nina Bell, Director, NWEA Re: *Petition for Rulemaking to Adopt a Total Maximum Daily Load and Wasteload Allocation for Nitrogen in Puget Sound* (Dec. 8, 2017) (hereinafter “Ecology Response to TMDL Petition”).

But as the Clean Water Act makes clear, technology-based and water quality-based approaches are intended to work together; they are not alternatives. The technology-based approach is a form of pollution prevention that applies regardless of the effect of discharged pollution on water quality. It is a baseline treatment requirement that applies to all similar facilities and is designed to require facilities to ratchet down their pollution levels over time as technology advances. Technology-based effluent limits are always based on treatment technologies that already exist, even if used in a different industry. In contrast, the water quality-based approach requires (in theory) any additional treatment that is needed to prevent a discharge from causing or contributing to violations of water quality standards. The water quality-based approach may require advances in treatment technology beyond what already exists.

As discussed in the NWEA petition, AKART is a higher standard than the Clean Water Act’s technology-based limitations. *See* App. A at 8–14, 17–18; *ITT Rayonier, Inc. v. DOE*, PCHB No. 85-218, at 7 (1986) (AKART as a more stringent state law requirement is “not . . . the equivalent of any federal formulation, but rather as an independent criterion.”). In any case, the technology-based and water quality-based approaches are not mutually exclusive. Therefore, an Ecology determination that the water quality-based approach is “necessary” does not preclude, but only builds on, use of the technology-based approach to control pollution. Nor is it logical for Ecology to determine that a water quality-based approach is “more appropriate,” because the

two approaches—under both the federal Clean Water Act and Washington law—are intended to work in tandem. Finally, Ecology’s purported reliance on the water quality-based approach is disingenuous because it has not used this approach for NPDES permits to date. *See App. A. at 67 – 68.*

Third, not only has Ecology not included a water quality-based effluent limit in any NPDES permit sufficient to protect Puget Sound, but Ecology has failed to develop a Puget Sound TMDL that would assign pollution allocations to each source of nitrogen to ensure the total allocations will not exceed allowable load. As Ecology and EPA concluded, waiting for TMDLs to be completed to implement nitrogen reductions could be a costly delay. *See App. A at 67 – 72.* Instead, Ecology only states that a TMDL “may be necessary,” and that its preference is to “actively work with Puget Sound stakeholders.” *Ecology Response to TMDL Petition.* Ecology continues to perfect its models that would underlie such a TMDL, as it asserts in its denial letter, with no end in sight, contrary to the intent of Congress. *See e.g., Idaho Sportsman’s Coal. v. Browner*, 951 F. Supp. 962, 967 (W.D. Wash. 1996) (“[t]he role of TMDLs in the CWA strategy for improving water quality confirms that they were to be developed quickly.”). *See also Alaska Ctr. for the Env’t v. Reilly*, 796 F. Supp. 1374, 1379 (W.D. Wash. 1992), *aff’d sub nom. Alaska Ctr. for Env’t v. Browner*, 20 F.3d 981 (9th Cir. 1994) (noting that “the intent of Congress clearly requires the Agency to act without undue delay” in developing TMDLs). Ecology’s purported preference for a water-quality based approach in lieu of AKART is both contrary to law and ignores the simple fact that Ecology is nowhere close to implementing its preferred approach. Instead, it continues to issue NPDES permits without either the required AKART determinations or the required water quality-based effluent limitations.

Finally, Ecology invokes EPA’s national study as a rationale for not conducting an AKART rulemaking. This “multi-phase” study is expected to last “four to five years.” EPA, *National Study of Nutrient Removal and Secondary Technologies*, available at <https://www.epa.gov/eg/national-study-nutrient-removal-and-secondary-technologies> (last accessed Jan. 14, 2019). Despite EPA’s stated interest in obtaining “comprehensive nationwide data on nutrient discharges and removal at POTWs,” *id.*, EPA has already concluded, as NWEA asserted in its petition, that “low or no-cost modifications ‘can be implemented at existing WWTPs to significantly reduce effluent nutrient discharges with minimal negative impacts on operations. In fact, in most cases, the secondary impacts are overwhelmingly positive and include energy efficiency, lower operational costs, and improved process stability,’” citing EPA’s 2015 report on the subject. *See* App. A at 59–60. Ecology’s citation to this new EPA study, just started in late 2018, suggests that Ecology has no intention of requiring even these low or no-cost improvements for some years to come, let alone the treatment technology upgrades that Ecology and EPA evaluated, and found initially reasonable, for all Washington sewage treatment plants in 2011. *See* App. A at 1, 21–22, 87–88.

Having now denied petitions to implement both the technology-based and the water quality-based approach to controlling nitrogen pollution and its effects on Puget Sound, Ecology asserts that it will take the following three actions through the issuance of some Puget Sound area NPDES permits, starting in mid-2019 and continuing for an indefinite period: (1) cap nitrogen discharges at current loads known to cause violations of water quality standards; (2) require permittees to initiate planning efforts to evaluate different nutrient effluent levels; and (3) for those few facilities that have installed nutrient removal, require them to actually use the treatment processes by including nutrient limits in any new permits. This is not enough to meet

the requirements of the Clean Water Act or Washington law. RCW 90.48.010; 33 U.S.C. § 1311(b)(1)(C). NWEA notes that Ecology has already required some significant permittees to initiate planning efforts, the outcome of which has been no action on the part of either the permittees or Ecology. *See e.g.*, App. A at 25–29. And, obviously, capping pollution at current loads may prevent some additional degradation in the future, but it does not ameliorate the already serious harm already being done by those discharges.

## **VI. A STUNNING LACK OF LEADERSHIP**

While Ecology continues to study but not reduce nitrogen pollution in Puget Sound, the actions of states at two other estuaries of national significance demonstrate how leadership produces results. In 2000, New York and Connecticut issued a TMDL for Long Island Sound calling for a 59 percent reduction in nitrogen, 42 percent of which was from permittees. By 2017, New York and Connecticut sewage treatment plants had exceeded their nitrogen reduction goal. In 2010, EPA issued a TMDL for nitrogen in Chesapeake Bay that called for a 25 percent reduction in nitrogen, 21 percent of which was from treatment plants. Since 1985, nitrogen discharges at the 472 treatment plants across six states and the District of Columbia have reduced nitrogen by 57 percent and met their 2025 clean-up target a full 10 years ahead of schedule.

In 2011, Ecology reported that sewage treatment plants in Puget Sound contribute 81 percent of the summer and 59 percent of the annual nitrogen pollution in Puget Sound. Yet, to date, Ecology has limited nitrogen discharges from only a single sewage treatment plant out of 107 sewage treatment facilities. Not only has Ecology persisted in issuing discharge permits with no nitrogen limits, it now asserts its intention to issue permits that merely cap nitrogen at current levels, when nitrogen reductions are required by law. In yet another modeling study issued just this month, Ecology now shows that use of seasonal (April through October)

biological nitrogen removal (achieving 8 mg/L for dissolved inorganic nitrogen) at 79 area sewage treatment plants would result in a 50 percent improvement in violations of the dissolved oxygen standard that applies to Puget Sound. *See Ecology, Puget Sound Nutrient Source Reduction Project: Volume 1: Model Updates and Bounding Scenarios* (Jan. 2019), available at <https://fortress.wa.gov/ecy/publications/documents/1903001.pdf>. That outcome has sent Ecology back to the drawing board, as it extends its modeling process indefinitely.

In short, Washington has displayed a stunning lack of leadership on this issue, and Ecology, in particular, has dragged its feet at imposing any meaningful standards to address the current nutrient problem that afflicts the Puget Sound marine environment. Washington should be first on this issue, not last.

## VII. CONCLUSION

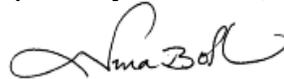
For decades, Ecology has failed to implement the statutory mandate to require the best known, available, and reasonable sewage treatment technology for sewage discharges to Puget Sound. Instead, it has indiscriminately endorsed the use of a century-old technology of secondary treatment as adequate for the Twenty-First Century. In issuing NPDES discharge permits, Ecology has repeatedly used boilerplate language asserting that AKART for all pollutants is the use of secondary treatment rather than making the determination required by statute, the agency's own rules, and case law.

As a result, the vast majority of municipal sewage dischargers to Puget Sound and its tributaries do not currently use any form of modern treatment technology prior to discharging treated sewage and have no plans to install upgraded technology. These dischargers currently do little or nothing to curtail the discharge of nitrogen pollution that causes—according to Ecology itself—significant ecological damage to the Sound. Ecology's failure to implement the AKART

requirement has placed Puget Sound at serious risk from the nutrient loading that is already severe and that Ecology expects to worsen further.

For these reasons, and for all of the reasons stated in our Petition, we respectfully request that the Governor direct Ecology to undertake a rulemaking to establish a presumptive AKART standard of year-round tertiary treatment to remove nutrient pollution and toxic contaminants, and to establish presumptive effluent limitations of 3.0 mg/L for total nitrogen and 0.1 mg/L (or lower) of total phosphorus. These technologies and limits are necessary and feasible. If any subset of facilities cannot meet them, NWEA's approach would still allow needed flexibility to rebut the presumptive standards. But Ecology has provided no justification for simply sticking with its 100-year old technology despite clear advances in technology, the clear needs of Puget Sound to reduce nutrient pollution, and the dictates of Washington's AKART requirement.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Nina Bell", written in a cursive style.

Nina Bell, Executive Director  
Northwest Environmental Advocates  
P.O. Box 12187, Portland, OR 97212

Dated this day, the 30th of January, 2019.