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October 25, 2024

Via Email Only

Torrie Shaul
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RE: Nisqually Delta Association's Comment Letter on the Determination of Nonsignificance (DNS) for the Draft General Permit

Dear Ms. Shaul,

The Nisqually Delta Association (NDA), a volunteer, non-profit organization dedicated to the protection of the Nisqually Delta and the surrounding region, offers the following comments on the DNS for the draft general permit.

As you are aware, NDA was the appellant in *Nisqually Delta Association v. Department of Ecology*, PCHB No. 22-057. In the commenting process and on appeal, NDA raised many issues that were not addressed by the PCHB. The PCHB ruled only on "Issue 8," which was the invalidity of Ecology's prior DNS SEPA determination. NDA therefore resubmits its prior comments, and its briefing on appeal, for consideration by Ecology and incorporation into the administrative record.

The general permit appears unchanged from the version at issue in PCHB No. 22-057. As detailed below, there is adequate data and risk to impose permit limits for microplastics and PFAS. NDA suggests that, even if Ecology believes there is too much uncertainty to impose restrictions, at a very minimum the General Permit should require sampling, testing, and monitoring of biosolids and application sites to evaluate contamination levels over time and have more robust data for future regulation. There is now an EPA-approved, affordable mechanism to test biosolids for PFAS, and representative samples of biosolids could be evaluated by Ecology or third-party laboratories for microplastics to gather more data.

To avoid repetition, these comments focus only on the new SEPA review of the environmental effects of PBDEs, PFAS, microplastics, and other contaminants of emerging concern. We note that PBDEs have generally been replaced in commerce with alternative brominated flame

retardants (as well as increased use of chlorinated phosphates) thus attention to these is also merited. We also note increasing science around the impacts of 6PPD Quinone to coho and other salmon at vanishingly small concentration. Given that 6PPD Quinone is present in stormwater, which is sometimes treated along with wastewater, consideration of 6PPD Quinone is merited.

General Comments

Lack of sampling, testing, and monitoring

A top concern with the General Permit and SEPA evaluation is that those documents do not contain a requirement for monitoring of PFAS, microplastics, or other contaminants of emerging concern. As such Ecology relies upon supposed uncertainty to avoid environmental review, while not taking measures to resolve that uncertainty. While Ecology mentions one pending study of PFAS in biosolids, it does not disclose any results or information from that study.

This approach is inconsistent with EPA guidance, which recognizes the clear risk posed by PFAS in biosolids. EPA designated perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS) as hazardous substances under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) in April 2024. This means that application sites risk becoming regulated under CERCLA and MTCA as cleanup sites. EPA also established legally enforceable levels, called Maximum Contaminant Levels (MCLs), for six PFAS in drinking water: PFOA, PFOS, PFHxS, PFNA, and HFPO-DA as contaminants with individual MCLs, and PFAS mixtures containing at least two or more of PFHxS, PFNA, HFPO-DA, and PFBS using a Hazard Index MCL to account for the combined and co-occurring levels of these PFAS in drinking water. EPA also finalized health-based, non-enforceable Maximum Contaminant Level Goals (MCLGs) for these PFAS.

These actions indicate a clear direction, recognizing the risks and need to regulate PFAS in the environment. Indeed, EPA has also initiated studies and screening tools specific to biosolids. “While these agency actions are underway, EPA recommends that states monitor biosolids for PFAS contamination, identify likely industrial discharges of PFAS, and implement industrial pretreatment requirements where appropriate. Doing so will help prevent downstream PFAS contamination and lower the concentration of PFAS in biosolids as described in Section C of EPA’s December 2022 memo entitled “Addressing PFAS Discharges in NPDES Permits and Through the Pretreatment Program and Monitoring Programs.”¹

EPA has also released “Joint Principles,” which state as a top priority that regulators should “**Protect communities.** Continue to research, restrict, and remediate PFAS. Ensure community health is central to the management of biosolids and expand monitoring efforts to identify where and at what levels PFAS may be present in biosolids. Support practices and decision making using the best available data and technologies.”

¹ <https://www.epa.gov/biosolids/and-polyfluoroalkyl-substances-pfas-biosolids>

Taking EPA's recommended approach here would be consistent with other Ecology permits. For example, the Puget Sound Nutrient General Permit,² where Ecology believed it needed more data concerning total inorganic nitrogen (TIN), it imposed a requirement on municipal wastewater facilities to sample, monitor, and report TIN discharges. Based on that information, Ecology set action levels and required plans to reduce discharges over time.

A similar approach is feasible here, as opposed to simply deeming the impacts too uncertain to evaluate or mitigate. EPA finalized EPA Method 1633 and released it on January 31, 2024.³ Most environmental labs are already using it and have been for some time. It includes 40 PFAS compounds and is included in many state's NPDES permits already. Labs we are familiar with charges of about \$365-\$450 per sample. These are affordable levels for periodic sampling.

Testing and monitoring must be required for biosolid application. Indeed, many states require monthly or quarterly "sample and report" PFAS levels in biosolids using Method 1633 for one year and then propose that they will determine frequency based on individual WWTP results. Michigan requires all WWTPs that land apply their biosolids to test and report PFAS levels at the beginning of every year and prior to planting season. Requiring testing of land application sites would help to identify background levels and also to address cumulative impacts over time.

In the response to comments, we request that Ecology review the testing, monitoring, and reporting requirements from other states' biosolids regulation and explain why or why not it can impose similar requirements here.

Terminology, the PCHB Order, and SEPA requirements for uncertainty

The environmental review documents distinguish between "pollutants" and "contaminants," which creates confusion throughout the documents and improperly suggests that "contaminants" lack a significant environmental effect. Microplastics, PFAS, and other modern chemicals are "pollutants" for the Clean Water Act and for purposes of plain language reference.

To avoid confusion, we suggest distinguishing only where necessary between "pollutants" as an umbrella term and specifying "pollutants currently regulated in biosolids by EPA" where necessary.

The DNS is not fully responsive to the PCHB's Order on Summary Judgment, and in some cases fails to comply with the PCHB's order. The DNS pulls out one paragraph from the decision, which concerns how to address uncertainty and information gaps in environmental analysis. However, that paragraph was the PCHB's rejection of an Ecology defense. The substance of the ruling was far broader. The Board ruled that "Omitting analysis for a reasonably foreseeable impact renders the DNS clearly erroneous....The dearth of discussion or even information on PFAS, PBDEs, and microplastics in the SEPA Checklist and DNS is at odds with the information that was available in many of the above enumerated documents, and evinces an

² <https://ecology.wa.gov/regulations-permits/permits-certifications/nutrient-permit>

³ <https://www.epa.gov/system/files/documents/2024-01/method-1633-final-for-web-posting.pdf>

inadequate evaluation of the impacts from biosolids storage, transfer, land application, and disposal that is authorized by the General Permit.” *See* Order at 16-17.

The Board further ruled that Ecology failed to account for increasing biosolids production over time with population growth, and that “[i]ncreased production of biosolids will logically increase discharges of pollutants contained in them, including PFAS, PBDEs, and microplastics, yet the SEPA Checklist simply excludes the impacts of increased biosolids production from population growth.”

Finally, the Board rejected each of Ecology’s three defenses, which it characterized as “1) the General Permit does not on its own entirely authorize land application of biosolids; 2) Ecology lacks the authority to prohibit beneficial reuse of biosolids; and 3) the General Permit requires SEPA review each time Ecology grants coverage under the General Permit to a new facility.” The Board concluded, in summary, that the General Permit does authorize land application, that Ecology does have authority to limit or mitigate impacts of biosolids (and even if it did not have such authority, it would not change the SEPA obligation to evaluate environmental effects), and that SEPA requires review at the earliest possible time.

Ecology’s new checklist is not fully responsive to the Board’s direction. It focuses on why there is insufficient information available to regulate PBDEs, PFAS, and microplastics, without providing a full analysis of reasonably foreseeable environmental impacts, or assessing increased discharges of pollutants over time. While describing uncertainty, it fails to comply with SEPA disclosure requirements or the process set forth in WAC 197-11-080(3).

The SEPA rules next state that an agency may proceed in the absence of information “[i]f information relevant to adverse impacts is important to the decision and the means to obtain it are speculative or not known.” WAC 197-11-080(3). And finally, if the agency proceeds, “it shall generally indicate in the appropriate environmental documents its worst case analysis and the likelihood of occurrence, to the extent this information can reasonably be developed.” WAC 197-11-080(3). Here, the means of obtaining the information (testing biosolids in Washington for presence of contaminants) are known, and appear to be underway. However, Ecology fails to disclose the results of that testing. Ecology also fails to provide a worst-case analysis, instead simply asserting that a worst-case outcome is unlikely to occur.

The DNS continues to largely forestall any meaningful analysis until potential future review in site-specific applications. This is inconsistent with the Board’s direction that SEPA review should be conducted at the earliest opportunity, and the Board’s observation that some biosolids uses do not entail future SEPA review.

In many places, the DNS reads as a defense of biosolids and critique of studies demonstrating risk of contamination and exposure. Contrary to the PCHB’s ruling, Ecology’s SEPA analysis does not disclose the range of potential environmental effects of PBDES, PFAS, and microplastics. That conclusion is untenable and noncompliant.

We respectfully request that Ecology conduct a revised analysis that includes the following:

- A robust and full disclosure of the results of biosolids testing in Washington and beyond with respect to microplastics, PFAS, and other contaminants of emerging concern, including the initial results of Ecology’s ongoing study of PFAS in biosolids.
- A discussion of the quantity of biosolids Ecology expects will be applied under the general permit.
- Based on biosolids testing results and relevant literature, quantification and knowledge of typical concentrations of different contaminants/pollutants, the range of likely presence of microplastics, PFAS, and other contaminants of emerging concern.
- Evaluation of how these contaminants/pollutants may have accumulated and continue to accumulate over time.
- Evaluation of how these contaminants/pollutants may pose cumulative effects in addition to other exposures
- A meaningful evaluation of the range of direct, indirect, and cumulative environmental effects (including, but not limited to, human health effects) that are reasonably likely to occur based on the range of potential contamination, including a worst-case analysis.
- Careful consideration of mitigation measures. At a minimum, Ecology should impose testing, monitoring, and reporting of representative biosolid samples from each facility, and require testing and reporting to determine background levels of contamination/pollution of application sites.

While we acknowledge that there is uncertainty, that is not a reason to evaluate environmental effects. The correct approach is to acknowledge uncertainty and build in error bars and ranges that account for such uncertainty, and to take reasonable measures in the SEPA analysis and permit structure to reduce uncertainty over time.

SEPA Checklist

In the comments below, we respond to Ecology assertions and raise specific requests and questions to address in a revised Checklist or response to comments.

P 5-6. The referenced documents are largely outdated or focus on agricultural application. For example, the EPA biosolids rule and guidance are each 30 years old.

We encourage Ecology to review and incorporate updated documents focused on risks of pollution and contamination. EPA is carrying out significant work, including a screening tool for PFAS in biosolids, and a nationwide sewage sludge sampling program. Some of these efforts are detailed here <https://www.epa.gov/biosolids/and-polyfluoroalkyl-substances-pfas-biosolids>

Interim results should be incorporated, in addition to the “Joint Principles for Preventing and

Managing PFAS in Biosolids.”⁴

The Joint Principles note that:

“PFAS enter wastewater treatment systems through industrial, commercial, and domestic sources. These PFAS can end up in biosolids - the solid matter left at the end of the wastewater treatment process. The presence of PFAS in biosolids is the result of the continued manufacture and use of these compounds throughout society, including by households, as well as industrial discharges of PFAS to wastewater.

The three primary management practices for biosolids use and disposal are land application, incineration, and placement in solid waste landfills. The U.S. Environmental Protection Agency (EPA) estimates that in 2021, large publicly owned treatment works land applied 43% of their biosolids, landfilled 42%, and incinerated 14%. When biosolids are contaminated by PFAS, each management practice may pose potential risks.”

It goes on to list as the top priority to “**Protect communities.** Continue to research, restrict, and remediate PFAS. Ensure community health is central to the management of biosolids and expand monitoring efforts to identify where and at what levels PFAS may be present in biosolids. Support practices and decision making using the best available data and technologies.”

Ecology’s DNS and permit are inconsistent with this approach, in that they proceed in the face of alleged uncertainty and data gaps, prioritizing disposal over community health.

Please address how Ecology’s approach is consistent with EPA guidance on PFAS in biosolids, and if inconsistent, why.

P 7. The Checklist states that “additional or more stringent requirements to each individual facility and land application site as necessary...”

Please explain how this site-specific review, analysis, and requirements would occur with respect to PFAS, microplastics, and other contaminants of emerging concern. Does Ecology envision identifying certain wastewater sites as higher risk? Or certain sites? If so, what mitigation would be imposed?

P 12. Ecology notes that biosolids are not considered a solid waste under State law. However, this does not change their actual environmental risk or classification under federal law, including RCRA and CERCLA.

Please discuss in the SEPA checklist and threshold determination how RCRA and CERCLA regulation of PFAS may affect those who land apply biosolids over time.

P 17. Ecology asserts that issuing the permit is not likely to cause an increase in discharge or

⁴ <https://www.epa.gov/system/files/documents/2023-07/Joint-Principles-Preventing-Managing-PFAS.pdf>

release of hazardous substances. This is directly at odds with the PCHB's ruling. Please address the anticipated levels of discharge and release of PFAS, microplastics, and other contaminants/pollutants, the likely increases under the General Permit, and the direct, indirect, and cumulative effects.

P 20-21. Ecology notes that "PFAS compounds have been identified in influent, effluent, and sewage sludge or biosolids across the US, including Washington state, due to their persistence and extensive use." Thank you for acknowledging these facts.

The studies provided indicate persistence in land applied soils, some uptake into crops, and higher mobility with shorter-chain PFAS (which are created during wastewater treatment). These indicate at least three potential exposure pathways and risks, given that there is no healthy level of PFAS exposure.

Please elaborate on the degree to which new products use and wastewater treatment may create new shorter-chain PFAS, and what variable risks these pollutants/contaminants present.

Determination of Non-Significance

P 1-2. The DNS should acknowledge that the permit contains no provisions relating to PFAS, brominated flame retardants, microplastics, or other contaminant sources to biosolids. The DNS should further acknowledge that these are systemic issues, that are very unlikely to be addressed at a site-specific level, because without any testing or monitoring, there will be no way to know or address the contamination in biosolids to be applied at a given site.

Please explain under what conditions Ecology envisions addressing PFAS, microplastics, or other contaminants of emerging concern at a site-specific level.

P 2. The DNS relies heavily on the assertion that lack of PFAS manufacturers in Washington makes harmful levels of PFAS unlikely. This analysis fails to actually identify and assess environmental effects—the likelihood that they may be worse in other states does not inform what the effects are in Washington. Moreover, there are countless sources of PFAS that exist in Washington, including but limited to: products shipped to Washington from other states, paper production, military and aviation facilities, firefighting supplies, and other items.

P 3. Ecology's referenced study appears to focus on one facility, and again bases its analysis on "contamination generated biosolids with PFAS levels lower than those calculated from a national average of industrially impacted biosolids." A single facility or very limited study is not sufficient to disregard impacts. Moreover, being less than the national average does not indicate lack of environmental effects.

How do Washington's rates of biosolids application compare to national averages? The information presented seems to indicate Washington's rates are significantly higher. How does that affect overall level of PFAS contamination from biosolids?

Ecology's analysis often states that there is not enough Washington information to draw conclusions with respect to likely contamination. At the same time, it justifies the DNS based on comparison of a very small sample size to other states.

A more sound analysis would reason that given that PFAS is common in commerce, high levels of PFAS found in biosolids throughout the country supports the conclusion that there is a high risk that at least some biosolids in Washington will also have impactful levels of contamination.

Ecology relies on the observation that "... incineration at a sewage sludge incinerator will not effectively destroy PFAS, microplastics or any other contaminants of concern, and both release contaminants with environmental impacts as well." First, incineration can destroy microplastics and many other contaminants of concern. Its effect on PFAS requires investigation.⁵

Second, lack of economically attractive alternatives or possible greenhouse gas production are not acceptable policy rationales for redistribution of unregulated toxic contaminants to the environment.

Third, lack of acceptable policy alternatives is not a basis for a determination of non-significance. To the contrary, it is strong evidence that evaluation through an environmental impact statement with alternatives is called for and would be productive.

P 5. Ecology relies upon "A Plain English Guide to the EPA Part 503 Biosolids Rule." That document is now 30 years old and has no application to modern contaminants.

P 7. "Treatment works that generate biosolids are required to monitor for, and keep records of, regulated pollutants in the biosolids they produce." This statement is not true with respect to the pollutants/contaminants at issue. Brominated flame retardants, microplastics and PFAS are not monitored or recorded, although they should be.

P 18. "If new contaminants are identified, the EPA conducts a robust risk analysis to determine if regulation is necessary to protect human health and the environment." This assertion is not accurate with respect to the modern pollutants at issue. EPA has struggled to make any adjustments to the biosolids program for more than 30 years.

"Adoption of extremely low regulatory limits for contaminants before we understand if they pose a risk could have adverse consequences for biosolids recycling."

Again, consideration of policy implications or alternatives is not a justification for a determination of non-significance. Ecology's only role at this stage in the SEPA process is to evaluate probable, adverse environmental effects, and potentially to consider measures to mitigate such effects.

⁵ See: https://www.epa.gov/sites/default/files/2019-09/documents/technical_brief_pfas_incineration_ioaa_approved_final_july_2019.pdf

P 20. “Regulatory limits for PBDEs in biosolids have never been implemented because biosolids have not been found to constitute a significant pathway for release of PBDEs to the environment.”

PBDEs have largely been replaced in commerce with alternative brominated flame retardants (as well as increased use of chlorinated phosphates) thus attention to these is merited.

P 24. “Many studies on MPs make mention of our still minimal understanding of these compounds, including most notably our lack of standardized methodology for identification and quantification of MPs, which produces incomparable data.”

Existing methods underestimate the levels of microplastics as they fail to detect those <20 um. These smaller microplastics are likely the most abundant as they derive from the fragmentation of larger plastics. The DNS repeatedly relies upon lack of data, but provides no mechanism to account for data gaps, and does not engage in a probabilistic risk assessment or worst-case analysis. Like with other contaminants, Ecology raises the concern of potential impacts of regulation to biosolids industry and waste disposal—concerns that are not relevant to the DNS.

P 25. “Even though this proposal is not expected to result in increased release of pollutants.” This statement conflicts with the PCHB ruling. Continued, and likely increasing, land application of biosolids with some level of contamination will increase release of pollutants.

Response to Comments

General Permit for Biosolids Management

P 12. “The presence of a pollutant in biosolids, however, does not mean that it will reach groundwater. There are different mechanisms at work in the soil that affect how the pollutants move through and interact with soil.”

Please consider that absence of knowledge does not equate to absence of effect. The quotations and scenario about nutrients do not apply to PFAs and microplastics, which are far more mobile. Lack of consideration for soil and water contamination is not only an environmental threat. Application of these to soils in general and agricultural fields may cause significant liability for farmers or other landowners, and is difficult to impossible to remediate.

P 13. We agree that PFOS and PFOA are likely decreasing in commerce. But being highly persistent “forever chemicals” they will continue to circulate. Moreover, some PFAS have been replaced by lower molecular weight PFAS chemicals. These may have similar health impacts and exhibit greater mobility in the environment. Thus, they may enter water (ground and surface water) at greater rates.

P 21. “Especially considering that the public and regulated community tend to comment when they object to something, rather than when they feel neutral or see something as a positive. Ecology cannot make decisions based on opinions alone.”

Torrie Shaul
October 25, 2024
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These and other responses from Ecology suggest a deeply entrenched staff that sees public comment as attacks to be dismissed. While we appreciate the challenges of working with the public, the SEPA and environmental review process should seek to remain objective and constructive.

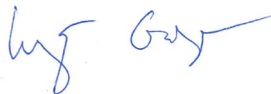
P 24. The response notes a biosolids application is 86% in WA. This is much greater than the national average, which also suggests higher risk of pollution/contamination. This should be addressed throughout the DNS, Checklist, and other evaluation.

P 317-319. "It may be that SEPA would require a determination of significance for the issuance of new biosolids general permit if scientific research had demonstrated that microplastics or chemical or microbial contaminants present at concentrations in municipal biosolids were causing significant adverse environmental impacts when applied in compliance with in Washington's biosolids permitting program. But that circumstance does not exist." Respectfully, NDA has presented such evidence and the PCHB agreed.

Thank you for your consideration of these comments. We are hopeful that Ecology will take the opportunity to embrace a more protective and informed approach to biosolids regulation.

Sincerely,

ZIONTZ CHESTNUT LLP

A handwritten signature in blue ink, appearing to read "Wyatt Golding".

Wyatt Golding

Attorney for Nisqually Delta Association