The Port of Port Townsend

Please see attached letter from the Port of Port Townsend.

PORT OF PORT TOWNSEND

Serving all of Jefferson County

April 16, 2021

Washington State Department of Ecology
Attn: Mr. James Hovis
PO Box 47696
Olympia, WA 98504-7696

RE: 2021 Draft Boatyard General Permit

Dear Mr. Hovis:

Thank you for this opportunity to comment on the draft 2021 Boatyard General Permit (the "Permit" or "BGP") recently proposed by the Department of Ecology ("Ecology").

Originally formed following a vote of the people of Jefferson County in 1924, the Port of Port Townsend (the "Port") has long played an important role in our community. We are caretakers of very special public properties and are dedicated to safeguarding the natural environment and our community's historic character and cultural identity for current and future generations. We seek to lead by example.

Consistent with our statutory mission, we assist and support private-sector businesses and industries that provide employment opportunities that underpin the local economy. The Port's 30-acre Boat Haven facility in Port Townsend is the cornerstone of the County's marine-related industrial sector, supporting 1,154 jobs county-wide, more than 400 of which directly depend upon Boat Haven. The businesses and activities we host at Boat Haven are central to our community's maritime heritage and working waterfront character.

The issuance of this updated Permit comes at a time when the Port has made substantial recent strides in reducing copper and zinc in its Boat Haven stormwater discharges. In recognition of our obligations under the current Permit, as well as our commitment to environmental stewardship, the Port undertook extensive improvements to its stormwater infrastructure in 2017 and 2018, replacing media in perimeter sand filters and Aquip® treatment units, re-graveling extensive areas of the boatyard, and incorporating chitosan pre-treatment at selected locations.[1] We have also re-doubled our focus on source control and the implementation of best management practices (BMPs). Meeting the already low benchmarks in the current Permit, particularly for copper, has been daunting – but we are succeeding. The stringent benchmarks proposed in the draft Permit represent a major new challenge that will

[1] Since 2017 the Port has invested nearly $1,000,000 in Boat Haven stormwater system improvements.

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require significant capital investments for us to have any legitimate expectation of compliance, with no source of funding yet identified. In sum, the proposed new Permit leaves us questioning how we are going to sustain our Boat Haven operations.

Our concerns regarding the revised Permit may be summarized as follows:

- **Scientific Basis for Cu Benchmark:** The rationale for the dramatic change in the benchmark for copper is unclear, and in our view, lacks a persuasive scientific basis. This issue is fully addressed below.
- **No Clear Path to Fund Costly Improvements:** Even under the "adaptive management" approach for benchmark exceedances set forth in the revised Permit, meeting the new copper benchmark will demand substantial and very costly near-term changes to the Port's stormwater treatment system. Initial engineering cost estimates2 indicate that approximately $2,600,000 will be required to install a centralized and automated CESF (chemically enhanced sand filtration) stormwater treatment system to consistently meet the new benchmarks. We presently have no means to fund these improvements.
- **More Time is Needed to Achieve Compliance:** Assuming that the scientific basis for the proposed new copper benchmark can be provided, the adaptive management process set forth in the permit does not allow sufficient time to plan, engineer, permit and construct the necessary system improvements. Moving to a water-quality-based rather than technology-based benchmark value represents a seismic and unanticipated change from prior iterations of the Boatyard General Permit, which were based on "all known and reasonable methods of prevention, control and treatment" (AKART). Given the chasm between the current and proposed new copper benchmark, it is highly likely that each qualifying event during the upcoming sampling season at Boat Haven will result in benchmark exceedances. This will almost certainly leave the Port in a "Level 3" stormwater response position by the spring of 2022, with no apparent means of fixing the problem – while many families' in our community whose livelihoods depend upon Boat Haven infrastructure hang in the balance. If implemented, substantially more time, together with state funding support, will be needed to achieve the new standards.

Our comments on specific conditions of the draft Permit and on Ecology's accompanying Fact Sheet are set forth below. We consulted with both the Northwest Marine Trade Association (NMTA) and Joe Kalmar, PE of Landau Associates, to review Ecology's proposed changes to the 2021 draft Boatyard General Permit and assist in developing our comments.

S2.D, Table 2 Stormwater Benchmarks; Fact Sheet Page 24

Our primary concern is with the dramatic drop in the benchmark value for copper from 147 µg/L (with 50 µg/L as a seasonal average benchmark) down to 15 µg/L. Specifically, we are concerned that Ecology appears to have made invalid assumptions, or used invalid data, when calculating the water quality-based benchmark value. The Port understands that Ecology must select the lower of the water quality-based benchmark value and the technology-based benchmark value, but Ecology must have a valid scientific basis for its determination of the water-quality-based benchmark value before using that in

[2] Note: The Port obtained 3 independent engineering cost estimates that fall within a range of $2,500,000 to $2,600,000.

place of the developed technology-based benchmark value which has been in the current and prior BGPs.

The apparently invalid technical basis for determining the copper benchmark is especially problematic in view of the anti-backsliding provision of the NPDES permit development process, such that a change to an erroneously low benchmark value for copper would never be allowed to increase back to a properly derived value, even if later there are determined to be flaws or shortcomings with how that value was calculated.

The basis for the water-quality-based benchmark value for copper should be more carefully evaluated for such parameters such as the dilution factor of 5, the ratio of dissolved copper to total copper (i.e., translator value), and the overall statistical method that was used as part of the Industrial Stormwater General Permit (ISGP) benchmark development. For example, considering that the 4.8 µg/L water quality criterion for copper in marine water per WAC 173-201A-240 is only for dissolved copper [emphasis added], and with most all boatyards having previously installed stormwater treatment to meet the current copper benchmarks (147 µg/L daily maximum and 50 µg/L seasonal average), it is expected that virtually all of the truly dissolved (i.e., in ionic form and biologically available) copper has been removed by the multimedia filtration. The filtration media has effective bonding sites to remove positively charged copper ions from stormwater, and the copper measured in the total copper analytical testing of the discharged stormwater is likely to be in a very small particulate form or in another non-ionic chemically complexed form that is not biologically available, even if it can pass through a 0.45-micron filter as part of the standard dissolved metal testing protocol. Further, it is likely that the small particulate or chemically complexed copper—which is less reactive to the adsorptive media and which passes through the multimedia filter—is resistant to leaching or breakdown to ionic form in the receiving water within a short timeframe. This brings into question Ecology's use of both a dissolved copper translator value and the use of a low dilution factor of only 5. Rather than use copper translator values that are derived from dissolved to total copper ratio measurements in Washington State receiving water bodies (with that average ratio appearing to be high at approximately 0.82 based on the EIM database), Ecology should perform additional testing and analysis to better determine the actual form of copper and bioavailability/toxicity in treated stormwater from boatyards, or at a minimum allow the boatyards to conduct such a study, prior to implementing the new Permit. To implement the new Permit without conducting further testing and analysis is to risk the drastic consequences which may follow from assumptions that lack a proper scientific basis and which fail to correspond with the actual characteristics of treated stormwater from boatyards.

Accordingly, we believe that the upcoming Boatyard Permit cycle should be used to investigate and identify more appropriate translator values, use a scientifically valid basis for developing water-quality-based copper benchmark for boatyards, and to determine if such a benchmark would in fact be lower than the technology-based benchmark value. Collecting valid and applicable data within a 5-year permit cycle **before** establishing a new effluent standard for a new permit is a standard practice in the NPDES permit program and should be accomplished in this instance.

Beyond potential errors in the dissolved copper translator value, there are concerns with other elements of the copper benchmark calculation. In its method for determining the copper benchmark value, Ecology relies on and repeats the calculation method from a 2009 report entitled *Water Quality Risk Evaluation for Proposed Benchmarks/Action Levels in the Industrial Stormwater General Permit* (Herrera, February 9, 2009). This report notes:

> *"The actual risk level that is deemed acceptable for exceeding water quality standards is **a policy issue** that must be resolved by Ecology with input from other stakeholders associated with the ISWGP. In connection with ongoing discussions between Ecology and the external stakeholder workgroup, proposed benchmarks and action levels are being considered based on a dilution factor of 5, and a 10 percent risk threshold for exceeding the applicable water quality standard for each metal"* [emphases added].

Given the very large logistical and financial impact to boatyards from this proposed copper benchmark change, it is incumbent upon Ecology to avoid using arbitrary and/or excessively conservative criteria that have no clear basis in federal or state laws or regulations. To effectively penalize boatyards by mandating response actions based on a stormwater copper discharge concentration just slightly above 15 µg/L, which even by Ecology's conservative and likely inappropriate calculation has little more than just a 10 percent chance of temporarily exceeding the state water quality criterion, is excessive and unjustified.

Further Context on Concern over an Inappropriately Determined Water-Quality-Based Benchmark

With the proposed dramatic lowering of the copper benchmark to 15 µg/L, Ecology appears to have entirely abandoned the joint agreement between Northwest Marine Trade Association (NMTA) and Puget Soundkeeper Alliance (PSA) in 2007 and the associated research study that provided a technical assessment of applicable stormwater treatment technologies. The technology assessment report was entitled "*Boatyard Stormwater Treatment Study*" and was produced by Taylor Associates, Inc. in 2008. That study demonstrated multimedia filtration as being effective for copper and zinc removal from stormwater. As stated by Ecology in the draft Fact Sheet, "*In 2010, Ecology deemed the level of performance from multimedia filtration as AKART,*" (i.e., all known, available and reasonable methods of prevention, control and treatment). Ecology appears to want to align the Boatyard General Permit with the conditions in the Industrial Stormwater General Permit (ISGP). But there is a clear reason why the Boatyard Permit is separate and distinct from the ISGP: because the pollutant sources, applicable Best Management Practices (BMPs), and stormwater treatment needs are significantly different for a boatyard facility compared to the typical ISGP facility. In August 2008, following the treatment study report, the NMTA and PSA sent a draft permit to Ecology that they said was mutually acceptable, and with which Ecology agreed and subsequently incorporated and adopted.

Like many boatyards, following the results of the 2008 AKART study, the Port of Port Townsend planned and implemented stormwater treatment improvements that incorporated the treatment technology identified to meet AKART, which was filtration through granular metals-adsorptive media, specifically the Aquip® filter produced by StormwateRx®. That treatment technology allowed for a distributed treatment approach at Boat Haven which included the installation of 2 separate Aquip® units, the modification of perimeter sand filters with enhanced metals-adsorptive media, and the installation of biochar media filters for roof drain downspouts.

It should be acknowledged that despite the results and conclusions presented in the 2008 study, at the Port's Boat Haven yard (where site soil is not conducive to asphalt paving and thereby pavement sweeping is not a viable source control option) the Aquip® units were not able to consistently achieve the **current** benchmarks for copper and zinc. In response, we subsequently added coagulation pretreatment to attain the current Permit benchmarks.

However, if the proposed and scientifically unsubstantiated 15 µg/L copper benchmark is allowed to become final, then the Port (and many other boatyards) will be required to undertake major stormwater conveyance and treatment infrastructure modifications to install a centralized active stormwater treatment system. The cost for the infrastructure modifications/additions and for the treatment itself are significantly and erroneously understated in Ecology's *Small Business Economic Impact Analysis* (February 2021, Publication 21-10-004). As described in our general comments above, the actual cost to the Port (and likely to other boatyards as well) will be significantly greater.

Even if the Port itself is not considered to be a small business, the Port hosts many small marine trades businesses which rely on the Port's boatyard and associated Permit coverage to conduct their business. Those small businesses would see the Port's increased costs necessarily passed on to them. Consequently, the proposed Permit change represents an existential threat to myriad small marine-trades businesses in Port Townsend, as well as to the Port's Boat Haven operation overall.

The Economic Impact Analysis report gives a range of annualized cost for "*stormwater treatment technology*" of $23,161 to $62,079 for a "*small boatyard*" and $46,322 to $124,162 for a "*large boatyard.*" The treatment technology is not identified in this report, and these cost ranges do not capture the capital costs for the infrastructure upgrades and cost for purchase and installation of active treatment systems that would likely be necessary at many boatyards. The Economic Impact Analysis report and the draft Permit Fact Sheet do not adequately spell out what infrastructure improvements and treatment technologies were used to develop that estimated range of costs. As described above, consistent attainment of the proposed copper benchmark will require the Port to install a single centralized automated system with a treatment train of process steps including a combination of one or more of the following technologies: chemically enhanced sand filtration; electrocoagulation; granular activated carbon (or alternative adsorptive multimedia filtration); and ion exchange resin. The estimated capital cost alone for the conveyance and treatment infrastructure needed to consistently meet the proposed copper benchmark for our facility exceeds $2.5 million, without factoring the increased annual costs of system operation and maintenance.

Even with the inaccurately low-cost estimate used, the conclusion of the Economic Impact Analysis was that the annual cost per employee for a small business from the proposed Permit would be $3,663 to $8,742. This is an unacceptably large cost increase. Moreover, and despite the inaccurately low estimated cost for treatment, when comparing the relative compliance costs for small and large businesses the report concludes that "*it is likely that the costs of compliance with the draft permit are disproportional.*" Despite this conclusion, and the associated general permit rule (WAC 173-226-120), which requires that disproportionate economic impacts of general permits on small businesses be reduced when it is both legal and feasible to do so, Ecology appears to have disregarded that rule and made no reasonable effort to more closely examine its basis for deriving the proposed water-quality-based copper benchmark, or to collect a truly representative set of data for that derivation (or to make other potential cost-reducing changes as discussed below).

S7. Inadequacy of Adaptive Management Provisions

Conducting 6 stormwater sampling events within an 8-month monitoring period as proposed in the Permit does not afford adequate time between sampling events to complete a Level One response. Even with diligent implementation of pollutant source controls at our boatyard, along with diligent attention to proper operation, maintenance, and optimization of our installed stormwater treatment system, the Port would almost certainly exceed the copper benchmark during each monitoring period

and trigger a Level 3 response within the first year of the new Permit. Thus, the adaptive management strategies outlined in the Permit would be of no use in delaying or avoiding the imminent need to design, permit and install costly new conveyance and treatment system infrastructure.

S2.D. Monitoring Frequency; Fact Sheet Pages 20, 32

Ecology has presented no data or compelling rationale in its draft Fact Sheet as to why a 6th annual sampling event in March is a necessary addition to the Permit. Page 20 of the draft Fact Sheet states that "*Ecology has determined that the additional month of sampling in March is necessary to verify the effectiveness of best management practices during a month that typically sees high boatyard activity and rainfall.*" However, it seems that this objective would be more appropriately addressed by simply moving one of the other 5 monitoring months to March, without increasing the burden of permit compliance above and beyond that required of industries under the ISGP, which only requires sampling 4 times per year. Page 32 of the draft Fact Sheet states that "*the new permit has replaced the 'seasonal average' measurement and benchmark and replaced it* [emphasis added] *with an additional sampling month of March.*" However, this proposed change imposes new and additional costs associated with sampling, DMR reporting, as well as the not insignificant external lab costs associated with testing for an expanded number of benchmark parameters (i.e., 6). This cannot reasonably be considered a simple "replacement".

Onerous Conditions that are Disproportionate to Boatyards Versus other Industries

In apparently seeking to align the Boatyard General Permit with the ISGP, Ecology has incorporated changes to the proposed Permit that, perhaps unintentionally, make it disproportionately more difficult for boatyards to comply, as compared to industrial facilities under the ISGP. Examples of these disproportionate impacts are listed in the following table:

Permit Condition	ISGP	Draft Boatyard Permit
S2.D Sampling frequency	4 times per year, flexible selection of sampling months in the 4 quarters (other than the first fall sample)	6 times per year, specific sampling months dictated
S7.A Benchmark exceedances that count toward Level 2 or Level 3 response actions	Reset to zero each calendar year	"*...are counted during the effective term of the permit and do not reset annually.*"
S2.D Benchmark value for zinc	117 µg/L	90 µg/L
S2.D Benchmark value for pH	5-9	6-9
S2.D Sampling requirements for stormwater discharge to ground	None	6 samples per year, in selected months
S2.D Maximum concentration limits for infiltration to ground	None	Concentration limits for both copper and zinc
S2.D Pretreatment requirement for infiltration basin/trench	None	Absorptive media required
S2.D Ability to discontinue sampling for a parameter	"Consistent attainment" achieved after 8 consecutive samples meeting benchmark	No established path to discontinue sampling through "consistent attainment"

Given the more restrictive elements of the draft Permit compared to the ISGP, which will all come at additional cost to boatyards, how can the following statement in the Economic Impact Analysis be justified? *"Ecology has determined there is no opportunity to significantly reduce the costs of this permit"*[?]. . . " This would seem an obviously erroneous conclusion, and that, in fact, many reasonable pathways to reduce the costs of complying with this permit are available to Ecology. This error is compounded when one also considers the potentially inappropriate data and assumptions employed to determine the water-quality-based benchmark value for copper, as previously discussed.

Overall Adequacy of the Permit Fact Sheet

According to the US Environmental Protection Agency, the public is entitled to "*a clear and transparent record of the permit decision making process*." In Washington, a Permit Fact Sheet must include, among other things, "[*t*]*he legal and technical grounds for the draft permit determination*." WAC 173-220-060(1). According to Washington's Pollution Control Hearings Board, which oversees Ecology's permit development, Fact Sheets are provided to enable the public to actively participate in permit development. However, because the draft Fact Sheet lacks the details necessary to understand the data, assumptions, and methodology that Ecology is relying upon for the water-quality-based benchmark calculation for copper, we believe it fails to satisfy the requirements of WAC 173-220-060(1).

In closing, we would like to plainly state that we share Ecology's objective of keeping the marine waters of Washington State clean and healthy for aquatic life. The health and well-being of all Washingtonians depends upon healthy and intact eco-systems. However, we remain deeply concerned that elements of the draft Permit appear to lack sufficient scientific basis. We respectfully request that Ecology take additional time to gather supporting data, conduct additional analysis, and ensure that the new Permit conditions are reasonable and adequately supported. We further urge Ecology to modify the adaptive management provisions of the Permit to afford boatyards additional time to design, permit, fund, and install the improvements needed to achieve compliance with any new benchmarks.

Thank you for the opportunity to comment on the draft Boatyard General Permit. Please feel free to contact me if you have any questions or desire further clarification of our concerns.

Sincerely,

Eron Berg
Executive Director