# FACT SHEET - APPENDIX E

# RESPONSE TO COMMENTS ON DRAFT BRIDGE AND FERRY TERMINAL WASHING GENERAL NPDES PERMIT

Ecology received comments on the draft documents during the 30-day public comment period which ended on December 2, 2016. Below are the comments and Ecology's responses. In this appendix (Appendix E), Ecology provides responses to comments from each organization or agency that commented on the draft permit. The comments and responses are organized in sections that are named by the commenter's organization/agency. The original comments are available and posted on the Ecology web site.

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## Puget Soundkeeper Alliance

*Ecology received the following comments and statements from Puget Soundkeeper Alliance by email dated December 2, 2016. Below, comments are arranged by number and the page number the comment appears on the comment letter. Each comment is followed by Ecology's response.*

**Comment #1 - Page 1:** Currently, Soundkeeper is engaged in a case against the Washington State Department of Transportation (WSDOT) and its contractor, Hercules Painting Company, regarding the Aurora Bridge repainting project. On October 28, 2016, Soundkeeper sent these entities a Notice Letter regarding violations of Section 301(a) of the Clean Water Act. 33 U.S.C. §1311(a). That case is ongoing, and is a project that would fall under this permit. Accordingly, Soundkeeper has a well-informed perspective from which it offers these comments.

> **Response:** The Bridge and Ferry Terminal Washing General NPDES permit covers discharge of wastewater to waters of state. The Aurora project would not fall under this general permit since the abrasive blasting method used to remove old paint is not the same as the high-pressure water method in the permit. The abrasive blasting method to remove paint is conducted under full containment and there is no wastewater discharge associated with this method.

**Comment #2 - Page 2, Section IA**: The permit does not require AKART for each type of permitted activity. A filter tarp or other containment system should be required for all permitted activities, rather than just for preparatory washing. Ecology does not make clear what the basis is for the determination that the use of filter tarps or containment systems is not AKART for spot cleaning, maintenance washing, or painting. To the extent it exists, this AKART analysis should be provided or Ecology should provide information on where this analysis can be found. And more specifically, Ecology should point to the portion of the AKART analysis which justifies not requiring filter tarps or containment systems for all permitted activities.

> **Response:** WSDOT bridge and ferry terminal washing operations are currently covered by the individual NPDES permit no. WA0039039 effective since 2010. Based on a report prepared by Herrera Consultants in 2003[(1) (2)], Ecology determined AKART for the preparatory washing and the maintenance washing in that individual NPDES permit before its issuance. In development of this general NPDES permit, Ecology relied on its AKART determination made in the development of WSDOT's individual NPDES permit incorporating the BMPs from the individual NPDES permit in the General NPDES permit.
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> Ecology made the determination that AKART for preparatory washing incudes the use of filter tarp to capture chipped paint particles in the wash water that are scraped off the metal/steel bridge structures using pressure washers operating at about 3000 psi.
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> Maintenance washing uses relatively low pressure water typically between 90 – 120 psi. In addition, the permit requires the use of dry methods and equipment (scraping, sweeping, vacuuming) to remove loose paint particles and other particulates before flushing the structure. The requirement to clean the structure in dry prevents the majority of the debris and substances from entering waters of the state.
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> Under its individual NPDES permit, WSDOT conducted effluent sampling and analysis to characterize the discharge from the preparatory washing after treatment through filter tarp and from the maintenance washing without filter tarp. The analysis included measuring the concentration of the metals of concern (copper, lead, and zinc) in the effluents. Both total and dissolved metal concentrations were measured in effluents from preparatory and

maintenance washing discharges. The data collected show significant variability in the metals concentration in both the preparatory and maintenance washing discharges (Table 1 of Fact Sheet). However, based on the data collected, the concentration of metals in unfiltered maintenance wash water effluent are significantly lower than those in the preparatory wash water effluent after filter tarp.

In general, the total metal concentrations are also significantly lower in the unfiltered maintenance wash water effluent as compared with those in the preparatory washing effluent after filter tarp. Treatment with filter tarp does have an inherent limitation since its effectiveness in removing particulate material is constrained by the filter tarp sieve size. Particulate material smaller than the filter tarp sieve size (#100) can pass through the filter tarp rendering the treatment for removing small size particles rather ineffective. This limitation may make filter tarp particularly ineffective for treating maintenance wash water where the majority of the particles have already been removed through cleaning in dry, including scraping, sweeping, and vacuuming before flushing with wash water at a relatively low pressure. Considering the significant effort and costs associated with installation and hanging a filter tarp under the bridge, the safety concerns associated with it, and the tarp's ineffectiveness in removing smaller particulate metals in the maintenance discharge, Ecology concluded that requiring filter tarp for maintenance washing is not reasonable and does not constitute AKART.

**Comment #3 - Page 2, Section IA:** Allowing the permittee to flush remaining debris from dry cleaning into drains does not meet AKART. By allowing the discharge of this debris to waters of the state, the permit directly contradicts itself. Condition S6.A of the permit prohibits discharges of solid waste. Ecology should reconcile this discrepancy by disallowing the flushing of debris from dry cleaning. Additionally, Ecology should explain why flushing this debris meets AKART, rather than requiring the discharger to remove and properly dispose of this debris.

**Response:** S4.A requires the drains be plugged. The permit language has been clarified to state the following: "The Permittee must plug drains to prevent debris and substances from entering waters of state. The Permittee must prevent debris from accumulating in drains by removing them regularly. After removing the debris and substances from the plugged drains, the Permittee may unplug drains and flush any remaining debris with clean water to make the drains functional again."

**Comment #4 - Page 2, Section IB:** The mixing zones authorized in this permit are contrary to law. A mixing zone cannot be authorized unless the permittee is already meeting AKART. WAC 173- 201A-400(2). As will be discussed, Ecology's AKART determination appears to be incorrect. Ecology should explain why mixing zones were permitted despite the permit not requiring AKART.

**Response:** The requirements of WSDOT's current individual NPDES permit for bridge and ferry terminal washing constitute AKART. Those requirements are being used in this General Permit. Also, see Ecology response to comment #2.

**Comment #5 - Page 2, Section IB:** WAC 173-201A-400(4) states that "[n]o mixing zone shall be granted unless the supporting information clearly indicates the mixing zone would not have a reasonable potential to cause a loss of sensitive or important habitat, substantially interfere with the existing or characteristic uses of the water body, result in damage to the ecosystem, or adversely affect public health . . . ." Ecology admits in the fact sheet at section III.D on page 17 that a reasonable potential does exist for maintenance washing to cause exceedances of water quality criteria. Additionally concerning is Ecology's statement on page 3 of the fact sheet that

"there would likely be cases where the stream flows would be less than the minimum flows needed to adequate dilution of the wastewater within the mixing zone" and then noting that under these circumstances washing is limited to high flow seasons. Again Ecology is acknowledging that low flow scenarios exist in which there is a reasonable potential for harm to the water body. Ecology should explain its justification for authorizing a mixing zone despite this reasonable potential analysis.

**Response:** Ecology considered reasonable potential for water quality criteria according to established procedures. That is the reference noted in the fact sheet. 40 CFR 122.44(k) allows the use of BMPs in lieu of numeric limits when it is infeasible to calculate numeric limit. Where stream flows are below the thresholds identified in Section S4 of the permit, reasonable potential for the exceedance of water quality criteria was found and that is why BMPs are required prior to discharge. This does not conflict with WAC 173-201A-400(4). The permit requires implementation of BMPs for the various activities covered. For maintenance washing, these BMPs would include hand cleaning of the bridge surfaces prior to flushing, collecting and disposing of all solids off site, using low pressure water for flushing, and conducting maintenance washing during high flow seasons for smaller streams. Considering these activities are conducted over short periods of time (a few hours in most cases) and fairly infrequently (over yearly or greater intervals) the discharge following the BMPs required in the permit, Ecology found no reasonable potential for the loss of habitat, existing or characteristic uses, and other factors noted in WAC. These analysis are conducted separately from the water quality criteria analysis noted above, and often in conjunction with other processes such as the Hydraulic Project Approvals (HPAs) associated with both the construction of bridges and their maintenance.

Based on pilot studies conducted under WSDOT's individual NPDES permit for maintenance washing, where a structure has been washed within the past 12 months and the stream flows are greater than the thresholds identified in Section S4 of this permit, dry methods of cleaning is only required when the structure has nesting colonies of birds. A clarification is added in Section 4 that this requirement applies for bridges that have been cleaned within the past twelve months and the discharge is to surface waters with flows greater than the thresholds identified in the permit.

**Comment #6 – Page 2, Section IB:** No reasonable potential analysis appears to have been undertaken for sediment quality. Section III.G of the fact sheet indicates that no determinations have been made as to the effects of these activities on sediment quality. Ecology should explain why no such analysis was done, and if one was done, Ecology should provide those results. If no such analysis was done, a mixing zone cannot be permitted prior to such an analysis.

**Response:** The permit requires removal of debris and particulate substances to the maximum extent practicable before flushing the structure with water. The permit also requires the activity to discharge directly to surface water only when the stream bed under the structure is covered with flowing water. Through a review of the discharge characteristics and the BMPs in WSDOT's individual NPDES permit for bridge and ferry terminal washing, Ecology made the determination that this discharge has no reasonable potential to violate the Sediment Management Standards.

**Comment #7 – Page 3, Section IB:** Ecology should provide its mixing zone study that supports the selection of dilution factors. Ecology should point to its basis for selecting those dilution factors, as generally, the determination of such factors are done on an individual basis.

**Response:** The reasonable potential analysis was conducted using the appropriate spreadsheets accounting for the available dilution factor calculated based on typical wash water flow rates and for the various stream flows. Various stream flows were used for the 3 metals of concern (copper, lead, and zinc) to determine the dilution factor needed for each metal to have no reasonable potential for the exceedance of the water quality criteria for that metal outside of the authorized mixing zone. The largest dilution factor needed among the 3 metals ("zinc" was found to be limiting metal in all cases) was used to establish stream flow thresholds for western and eastern Washington streams.

**Comment #8 – Page3, Section IB:** The dimensions of a mixing zone must be defined in the permit. WAC 173-220-130(3)(c), WAC 173-201A-400(1). This permit does not contain proper mixing zone dimensions. Ecology should explain how "2.5% of the receiving water flow" and "20 feet around the point of discharge" meet the legal requirement for specifying the mixing zone dimensions.

**Response:** Section S3.C explains the mixing zone authorized. The use of the 2.5% and 20 feet are well within the maximums allowed for acute mixing zone in the Chapter 173-201A WAC.

**Comment #9 – Page3, Section IC:** The permit impermissibly allows discharges to low flow waterways, justifying these discharges by only allowing them during high flow seasons. Despite discharges being authorized only during high flow seasons, the permit is still authorizing discharges to low flow waterways, which contributes to violations of water quality. The permit also makes gross generalizations about the flow levels that might be appropriate for conducting permitted activities. For example, in section II.A of the fact sheet on page 7, Ecology states that "the volume of water used to clean a bridge for painting varies based on the size of the bridge structure." Ecology should explain how it accounted for this.

**Response:** See Ecology response to comment #2. In addition, for development of this general permit, Ecology made reasonably conservative assumptions and generalizations about the wastewater discharge characteristics and its potential to cause exceedance of water quality criteria. Based on the available data and conservative assumptions, Ecology conducted reasonable potential analysis and determined the receiving water flow thresholds below which there is reasonable potential for exceedance of water quality criteria and above which there is no reasonable potential for exceedance of water quality criteria.

**Comment # 10 – Page 3, Section ID:** Generally, the permit language is not clear and is contradictory in places. Many terms are undefined and others are written in a manner that is unenforceable. This lack of clarity leaves the permit open to varying interpretations. Most importantly, Condition S6.A requires the permittee to prevent the discharge of solid waste into surface water, while other permit conditions appear allow such discharges if certain conditions are met (which, in and of itself, violates state and federal clean water laws). Furthermore, Appendix B and its attachments are also confusing and unclear. And finally, the permit misses many opportunities to make its terms mandatory, rather than permissive.

**Response:** Thank you for your comment. We have modified the permit adding language that provides more clarity in the permit.

**Comment #11 – Page 3, Section IE:** As a whole, Soundkeeper finds that this permit should not be issued as a general permit, and should instead be an individual permit system. In order for this permit to apply generally, Ecology had to make unwarranted simplifications about appropriate stream flow rates, the number of pressure washers needed for permitted activities, the number of

gallons of water used, and others. The permit also makes generalizations about what might occur during each type of permitted activity. For example, the permit does not require a tarp or other containment system for maintenance washing, which means the permit is assuming that no such tarp or containment system is needed for these activities when in reality, some maintenance washing may require these while others may not.

**Response:** See Ecology response to comments #2 and #9.

**Comment #12 – Page 4, Section IF:** Contractors of WSDOT should be specifically designated as co-permittees by the permit. A co-permittee designation is appropriate in situations where a contractor has direct control over the activities regulated by the permit, as is the case with many bridge construction projects.

**Response:** The permit holds the Permittee accountable for any violations. The contractor does not need to be a co-permittee in order for Ecology to take enforcement action under RCW 90.48.

**Comment #13 – Page 4, Section IIA:** A filter tarp should be required for all permitted activities. The requirement to use filter tarps is applied inconsistently throughout the permit. The permit and fact sheet are unclear as to why some projects would be required to use a filter tarp and others would not. Specifically, condition S4.B.12, related to bridge spot cleaning, states that if the permittee uses a filter tarp containment system, it must be a #100 sieve tarp. Why isn't the use of a #100 sieve tarp simply required for all bridge spot cleaning? Conditions S4.C and S4.E do not include a filter tarp requirement at all for routine bridge or ferry terminal maintenance cleaning and washing. Why isn't a filter tarp required for these activities? Conditions S4.D.5 and S4.F.6 require a filter tarp for preparatory washing of bridges and ferry terminals. Condition S4.H.1.vi requires the use of drip tarps for painting activities. These distinctions appear to have no basis in fact. Please explain why a filter tarp is AKART for certain activities but not others.

Additionally, the permit fact sheet appears to contradict the permit on the issue of filter tarp requirements. For example, in section II.A on page 6 of the fact sheet, it indicates that spot cleaning involves "construct[ing] a containment system around the work: plywood or other work platforms or drip tarps/#100 sieve filter fabric." However, the permit does not require a containment structure or filter tarp for spot cleaning. It states only that if a tarp is used, it must be #100 sieve. Please clarify this discrepancy or include a filter tarp requirement for spot cleaning.

In addition to this contradiction, the fact sheet also offers no basis for not requiring a filter tarp or containment structure for maintenance washing of bridges or ferry terminals. The fact sheet simply states "No containment is used during this activity to filter the water or catch debris." Section II.A, p. 6. No explanation is offered for this. On page 7 of the fact sheet, it states that a filter tarp is used for preparatory washing "because this type of washing removes paint." However, there is no indication that maintenance cleaning of bridges or ferry terminals would never remove paint other potentially deleterious materials from the structure. In fact, the fact sheet indicates on page 7 that a bridge is only scheduled for painting when it is "in the later stages of condition level 2 or at condition level 3." Condition level 2 means that "[p]aint is peeling or deteriorating, but no steel is exposed." So, conceivably, couldn't a bridge or ferry terminal be in early condition level 2 and have some peeling paint, not be scheduled to be painted, but still be washed in a routine maintenance cleaning? And couldn't that routine washing of an early condition level 2 structure result in paint chips entering the waterway if no containment system is used? Please explain the decision not to require a filter tarp for maintenance washing of bridges and ferry terminals as it appears to endanger water quality and people who live under and around these projects.

Furthermore, it would appear from the language in Appendix B that the decision not to require a filter tarp for maintenance washing came from a protocol prepared for WSDOT's previous NPDES permit. Appendix B states on page 40 that "WSDOT demonstrated from the data collected to date that dissolved metal concentrations in maintenance washing effluent do not have the potential to violate groundwater standards . . ." This sentence appears to indicate that WSDOT collected data indicating that maintenance washing for that project would not create effluent that would violate groundwater standards. Why was this finding, which is specific to groundwater, relied upon to conclude that no filter tarp or other containment system be required for maintenance washing?

**Response:** See Ecology response to comment #2.

**Comment #14 – Page 5, Section IIB:** As with the inconsistently applied tarp requirement, the permit also inconsistently applies requirements for containment structures. Conditions S4.D.10 and S4.F.11 require the use of a containment structure during bridge preparatory washing and ferry terminal preparatory washing. There is no clear reason why the use of a containment structure should not be required as AKART for all permitted activities, rather than just preparatory washing. Additionally, is a tarp a containment structure? Or must the permittee use both a tarp (where required) and a containment structure? Additionally, the permit language is that the permittee "must provide a containment structure capable of collecting all debris and substances." A clearer, less permissive way to state this would be to simply require the permittee to contain all debris and substances when it conducts work that may result in debris and substances from entering waters of the United States. The permit language should be clear and enforceable.

**Response:** See Ecology response to comment #2.

**Comment #15 – Page 6, Section IIB:** Another set of conditions relating to containment structures that do not meet AKART are conditions S4.D.11, S4.F.12. These provisions require the permittee to remove debris and substances from the containment structure "daily or whenever accumulations may place the containment structure at risk." These conditions do not meet AKART because of the addition of "whenever accumulations may place the containment structure at risk." By allowing the permittee not to remove accumulated debris and substances daily, the permit risks such debris and substances entering waters of the United States after working hours are over. For example, in Soundkeeper's Aurora Bridge case, the tarp being used to contain debris and substances is not emptied daily, so when workers leave for the day, the tarp blows in the wind, releasing the accumulated debris and substances to the water below. The permit should simply require daily removal (and proper disposal) of accumulated debris and substances.

**Response:** Language is added that requires daily inspection and removal of debris: "The Permittee must inspect the filter containment structure for accumulated debris and substances daily and remove the accumulated material whenever accumulations may place the structure at risk and whenever it moves or removes the structure."

**Comment #16 – Page 6, Section IIC:** Permit conditions S4.C.15, S4.D.14, S4.E.9, S4.F.15 allow the permittee to flush debris remaining from dry cleaning down a drain. This is not AKART and is contradictory to condition S6.A. While the permit requires permittees to prevent this material from accumulating in drains during dry cleaning, allowing the permittee to then flush any remaining debris does meet AKART, is not protective of water quality, and is not consistent with other permit requirements prohibiting discharges to surface waters unless certain

conditions are met. Instead, the permittee should be required to remove and properly dispose of this remaining debris, as the permittee is required to do in Condition S6.A.

> **Response:** S4.A requires the drains be plugged. The permit language has been clarified to state the following: "The Permittee must plug drains to prevent debris and substances from entering waters of state during the washing. After washing, the Permittee must remove the debris from the plugged drains to the maximum extent practicable using dry methods, the Permittee may flush any remaining debris with clean water and restore drain function."

**Comment #17 – Page 6, Section III:** No mixing zone should be authorized under this permit. A mixing zone cannot be authorized unless the discharger has fully applied AKART. WAC 173-201A-400(2). In section III.B of the fact sheet on page 13, Ecology makes a blanket statement that it "has determined that the treatment provided and the pollution prevention activities practiced [sic] Washington Department of Transportation meet the requirements of AKART (see "Technology based Limits)." As discussed above, Ecology's AKART determination appears to be incorrect and not based on any reasoned analysis. In the "Technology-Based Limits" section of the fact sheet on page 10, Ecology again makes generalized unsupported statements.

Most concerning, Ecology states:

> "Ecology has determined that critical discharge condition for the activities under this permit occurs during summer low flows (freshwater) and slack tide (marine) when there is low current velocity. To account for the critical discharge conditions, the permit establishes minimum stream flows for spot cleaning and maintenance washing. Where stream flows are less than the specified minimum stream flows, spot cleaning and maintenance washing must occur on bridges during high river flows, typically occurring in fall, winter, or spring." Id.

Soundkeeper interprets this statement to mean that while minimum flows have been established, if a water body is not meeting that minimum flow, spot cleaning and maintenance washing can still be conducted so long as they are conducted in a high flow season. So, the permit allows a discharge to occur despite the fact that a water body is not meeting minimum flow requirements simply because that discharge is occurring in a high flow season. And in fact, Ecology blatantly acknowledges that "there would be a potential for the exceedance of water quality criteria for maintenance washing of structures over streams with lower flows," but brushes this aside by stating this would occur infrequently. Fact sheet, section III.D, p. 17. Please explain how the mixing zone can be authorized despite these critical discharge conditions.

> **Response:** See Ecology response to comments #2 and #9.

**Comment #18 – Page 7, Section III: "**[n]o mixing zone shall be granted unless the supporting information clearly indicates the mixing zone would not have a reasonable potential to cause a loss of sensitive or important habitat, substantially interfere with the existing or characteristic uses of the water body, result in damage to the ecosystem, or adversely affect public health as determined by [Ecology]." WAC 173-201A-400(4) (emphasis added). As stated above, Ecology states in Section III.D of the fact sheet that there is in fact a reasonable potential for maintenance washing effluent to exceed water quality standards. Another highly concerning statement made in the fact sheet is on page 3, where Ecology states:

> "[A]s with many bridges over a variety of streams statewide, there would likely be cases where the stream flows would be less than the minimum flows needed for adequate dilution of the wastewater within the mixing zone allowed in the stream under this permit. Under such circumstances, this permit limits the washing operations to occur

during seasonally high stream flow periods . . . ."

Again, Ecology is transparently acknowledging that some low flow streams cannot meet the flow requirements necessary for water quality protection, but attempts to justify this by asserting that requiring these activities to take place in high flow seasons mitigates this issue. Per WAC 173-201A-400, a mixing zone cannot granted given these analyses, and no authority exists that would allow Ecology to grant the mixing zone because the exceedances might be infrequent or take place in a high flow season. Please provide the authority for authorizing a mixing zone despite this reasonable potential analysis.

**Response:** Chapter 173-201A-400 WAC allows granting of an extended mixing zone, after application of AKART, when it is necessary to accommodate important economic or social development and that the extended mixing zone would not have a reasonable potential to cause a loss of sensitive or important habitat, substantially interfere with the existing or characteristic uses of the water body, result in damage to the ecosystem, or adversely affect public health.

**Comment #19 – Page 8, Section III:** It appears that a reasonable potential analysis was not done for sediment. Sediment analysis is important in the context of these permitted activities because the permitted activities discharge large amounts of particles which are likely to reach the sediment. Compliance with sediment management standards of WAC 173-204 is necessary for compliance with the state's water quality standards. WAC 173-201A-010(4). Section III.G of the fact sheet on pages 18 and 19 appears to indicate that Ecology has not made any determinations as to the effect of these activities on sediment quality. If Ecology has done such an analysis, please specify what this analysis was. If Ecology has not conducted this analysis, a mixing zone should not be authorized as there is no supporting information that clearly indicates that the mixing zone would not result in damage to the ecosystem in relation to sediment.

**Response:** See Ecology response to comment #6.

**Comment #20 – Page 8, Section III:** The dimensions of a mixing zone must be defined in the permit. WAC 173- 220-130(3)(c), WAC 173-201A-400(1). The size and physical characteristics of allowable mixing zones are prescribed by statute. WAC 173-201A-400(6) (14).

This permit does not contain proper mixing zone dimensions. Condition S3.C which authorizes mixing zones allows an "acute mixing zone of 2.5% of the receiving water flow" for fresh water and an "acute mixing zone of 20 feet around the point of discharge" for marine waters. "2.5% of the receiving water flow" is not a dimension. "20 feet around the point of discharge" is also not a proper dimension because it is unclear how this "dimension" would be applied. This designation presumes the identification of the discharge point, which is not possible to provide in a general permit. These projects are unlike stormwater discharges where an outfall can be identified. In these cases, the entire bridge or ferry terminal could be considered a "discharge point." The permit cannot clearly provide a definition of a discharge point given its nature as a general permit. A mixing zone should not be permitted, but if a mixing zone was permitted, these "dimensions" offered by the permit are inadequate.

**Response:** The use of the 2.5% and 20 feet are well within the maximums allowed for acute mixing zone in the Chapter 173-201A WAC. As mentioned in the comment, the discharge is not through a single pipe or point of conveyance. The discharge is spread across the length of the structure. Spreading the discharge across a greater width of the receiving water would likely help achieving a better mixing of the discharge thereby reducing the pollutants concentration and their impact within and outside the mixing zone.

**Comment #21 – Page 8, Section III:** The permit fact sheet references a mixing zone analysis which produced the dilution factors found in the permit. This mixing zone analysis should be provided or its location should be made plain. From the fact sheet and the permit, it is unclear what Ecology's basis for the dilution factors is. Furthermore, the calculation of a dilution factor is an individualized analysis not suitable for a general permit. Ecology's Water Quality Program Permit Writer's Manual (Dec. 2011 Rev.) states at Chapter 6, 2.1.1 that "a permit writer must know or be able to estimate the amount of mixing which occurs inside that area to determine the potential for a violation of the water quality standards and to derive effluent limitations if necessary." For a general permit like this one, Ecology should explain how it is possible for Ecology to have estimated the amount of mixing which could occur at any given water body for any given project.

**Response:** Appendices C and D of the fact sheet contain reasonable potential analysis calculations for preparatory and maintenance wash water discharges.

**Comment #22 – Page 9, Section IV:** Another illustration of why a general permit is inappropriate for these activities is in section II.A on page 7 of the fact sheet, where Ecology states, "The volume of water used to clean a bridge for painting varies based on the size of the bridge structure." How is this variance accounted for in the permit? Similarly, on page 3 of the fact sheet, it states that the permit considers "discharge flows typically generated in bridge washing operations." (emphasis added). The use of the word "typically" illustrates the problem. What if the permitted project is not "typical?" Doesn't the permit apply the same to a typical project as it does to an atypical one?

**Response:** See Ecology response to comment #9.

**Comment #23 – Page 10, Section VA:** In places where the permit uses the word "minimize," the language "to the maximum extent practicable" should be added. Conditions S4.B.9, S4.C.9, S4.D.6, S4.D.17, S4.E.5, S4.F.2, S4.H.1.i. The permit occasionally uses this language (as in S4.C.15, S4.E.9), but does not do so consistently. The word "minimize" by itself is open to various interpretations, and very difficult to enforce. But when the "maximum extent practicable" language is included, the term is given a clear, enforceable meaning.

**Response:** The suggested language "to the maximum extent practicable" is added to the sections in the permit.

**Comment #24 – Page 10, Section VA:** Permit condition S4.A.2 allows the permittee to use existing parking lots and open managed fields as staging areas. Is separate coverage under the Industrial Stormwater General Permit required for this staging activity or are these activities covered under this permit as well?

**Response:** Staging consists of short term parking for tanker truck carrying water and the U-bit bucket truck for carrying crews to wash the bridge and its underside. The permit includes measures to prevent pollution of the stormwater. The Permit requires blocking the bridge drains during washing to prevent the discharge of dirt and debris to waters of state. All debris scraped from the structure by hand are collected, typically in the buckets. When buckets are full, they are then exchanged with empty buckets.

**Comment #25 – Page 10, Section VA:** Conditions S4.B.6, S4.C.6, S4.D.2, S4.E.11, S4.F.4 requires permittees who do not have hydraulic project approval to contact Washington Department of Fish and Wildlife and "comply with any other requirements related to fish habitat protection." First, it is unclear whether this permit terms requires every permittee to obtain

hydraulic project approval. And, if the permittee has a hydraulic project approval, must they comply with its terms to comply with this NPDES permit? The permit is not clear about this. And finally, what are the "other requirements related to fish habitat protection" and where might these requirements be found?

**Response:** Washington Department of Fish and Wildlife (WDFW) is charged with the protection of fish habitat through issuance of HPA. Permittees that have obtained the approval of WDFW for their activity, they will be in compliance of this section of the permit.

**Comment #26 – Page 10, Section VA:** "Minimum water pressure necessary," used in S4.B.13, S4.C.14, and S4.E.8 is an unenforceable term. The permit should instead use some numeric limit. Permit condition S4.D.3 attempts to do this, while other permit conditions regarding water pressure seemingly do not. However, condition S4.D.3 suffers from its own problems in that it is an attempt to make a generalization about water bodies and what may or may not be an appropriate flow rate for permitted activities, when in reality, no water body is the same and such generalizations cannot be made. Condition S4.F.5 also attempts to place a more enforceable limit by limiting the number of pressure washers based on flow rates. But again, this is a gross generalization about the permitted project activity and the waterbodies over which such activity may be taking place.

**Response:** Hose water pressure associated with maintenance washing is in the range of 90 – 120 psi. This is considerably lower than the water pressure for preparatory washing using pressure washers which operate at about 3000 psi. The potential for stripping paints is greatly reduced at the low water pressures associated maintenance washing. Please also see Ecology response to comment #9.

**Comment #27 – Page 11, Section VA:** Conditions S4.C.15, S4.D.14, S4.F.15 reads "The Permittee must prevent debris from accumulating in drains to the maximum extent practicable during dry cleaning and may flush any remaining debris with clean water." As discussed above, this is not AKART. But additionally, this language is unclear. Is the "remaining debris" the remaining debris from the dry cleaning? Or is it the "remaining debris" the remaining debris from the entire operation? The permit should specify. And as will be discussed below, this permit term is also inconsistent with other permit terms.

**Response:** The permit language has been clarified to state: "The Permittee must plug drains to prevent debris and substances from entering waters of state during the washing. After washing, the Permittee must remove the debris from the plugged drains to the maximum extent practicable using dry methods, the Permittee may flush any remaining debris with clean water and restore drain function."

**Comment #28 – Page 11, Section VA:** Condition S4.D defines bridge preparatory cleaning and washing as using high pressure washers to remove paint from metal structures to prepare them for painting. However, this definition is not inclusive enough. As an example, the Aurora Bridge case currently being pursued by Soundkeeper involves the use of sand blasting to remove paint. This permit condition should encompass all possible paint removal techniques.

**Response:** The permit language has been clarified as follows: "The requirements of this permit do not apply to bridge painting operations that involve abrasive blasting which are designed and carried out with full containment to ensure there is no waste discharge to surface water or ground."

**Comment #29 – Page 11, Section VA:** Permit conditions S4.D.13 and S4.F.14 require the permittee to "routinely" inspect and repair any containment or filter structure "as necessary." These are unenforceable terms. The permit should instead establish an inspection and repair schedule or require the permittee to develop such a schedule. Similarly, condition S4.E.6 requires the permittee to reduce discharges through "regular sweeping." Rather than this, the permit should establish a sweeping schedule or require the permittee to establish such a schedule to be submitted to Ecology. Another similarly unenforceable provision is condition S7.4 which requires the permittee to "check" certain equipment "regularly" for drips and leaks to prevent spills. What does "check" mean and what is "regularly?" Again, a schedule should be established or the permittee should be required to establish such a schedule. "Check" should be changed to "inspect" for consistency.

**Response:** The permit language has been modified to state: "The Permittee must inspect the filter structure daily at the start of pressure washing operation and repair any containment or filter structure as necessary to ensure its proper function."

Means and methods for regular sweeping are up to the Permittee. Ecology conducts site inspections to determine the adequacy of the methods in use.

The permit language "Check" is changed to "Inspect."

**Comment #30 - Page 11, Section VA:** Condition S4.E.6 requires the permittee to use "methods and tools" to minimize removal of creosote or treated wood fibers when removing marine growth. What methods and tools? The permit should give a specific list of such methods and tools, or point the permittee to a document where such methods and tools are listed.

**Response:** The Permittee must use non-abrasive methods and tools. Clarification added in S4.E.6.

**Comment #31 - Page 11, Section VA:** Condition S4.H requires the permittee to prepare a "spill prevention and response" prior to conducting painting activities. The permit does not make clear what a "spill prevention and response" is. Is it a written plan that must be submitted to Ecology? Or something different? Is the permittee required to implement this plan? The permit does not say. And finally, are the conditions listed in S4.H.1.i-ix mandatory? The permit is unclear on this.

**Response:** The language in the permit requires the Permittee to prepare a spill prevention and response for painting operations as outlined in S4.H prior to conducting the activity. S4.H also requires a "copy of the spill prevention and response plan must be kept on site and made available to Ecology upon request."

**Comment #32 - Page 11, Section VA:** Condition S4.H.1.vii requires the permittee to treat paint and solvent spills as oil spills. However, the permit does not specify what treating these spills as oil spills means. Should the permittee treat these spills as oil spills as defined by some statute or other regulation? The permit should be more specific.

**Response:** The permit requires treating paint and solvent spills as oil spills and prevent their discharging into waters of the state. Such spills must be immediately reported to Ecology Regional Office as required in S7 and G3.

**Comment #33 - Page 12, Section VA:** Condition S4.H.1.viii requires the project engineer or inspector to be on site or on call and be "readily accessible" when painting activities are occurring that may affect the "quality of surface water." The permit does not define what

"readily accessible" means, and as such, this permit term is unenforceable. The permit also does not specify what affecting the "quality of surface water" means. This term is also unenforceable.

**Response:** The permit is modified as follows: "The project Engineer or Inspector must be on site or on call at all times while cleaning and painting activities are occurring that may have the potential to cause water quality violations."

**Comment #34 - Page 12, Section VA:** Condition S4.H.1.ix states "As applicable, other spill prevention and control measures in Condition S6 of this permit." This condition, a sentence fragment, does not require the permittee to do anything and does not specify what other "spill prevention and control measures" it is referring to in the permit. This condition is unenforceable.

**Response:** Thank you for your comment. The special condition number should have been S7 and not S6. The permit is modified as follows: "The permittee must also apply any other applicable spill prevention and control measures in Condition S7 of this permit."

**Comment #35 - Page 12, Section VA:** Condition S5.A.4 requires the permittee to report the "total volume (gallons) and estimated average flow rate (gallons per minute) of water discharged." The permit does not specify if this is the total volume in gallons used for the entire project, the total volume per day, or some other measure. The permit also does not specify whether the flow rate is the average flow rate over the length of the project or some other measure.

**Response:** Clarification is made that the Permittee must report the total volume used to wash the bridge and the average flow rate discharged during the washing operation.

**Comment #36 - Page 12, Section VA:** Condition S5.B.1.i requires WSDOT to collect a representative composite sample of effluent "per Ecology approved protocol." What is this protocol and where can it be found? The permit is not clear. Conditions S5.B.2.i, S5.B.3, S5.B.4 also requires WSDOT to use "ecology approved protocol" and again, the permit does not state what this means. Condition S5.D perhaps provides meaning to "ecology approved protocol" by pointing to 40 CFR 136, but it is not clear. Conditions requiring use of "ecology approved protocol" could cite to condition S5.D as defining the proper sampling and analytical procedures.

**Response:** Sampling protocols[3][4][5] have been developed by WSDOT and approved by Ecology under WSDOT's individual NPDES permit for bridge and ferry terminal washing which can be obtained by contacting Ecology and/or WSDOT. Any modification to the sampling protocol must be approved by Ecology.

**Comment #37 - Page 12, Section VA:** Condition S7.2 presumably requires the permittee to deploy containment measures in instances where visible sheen is observed. However, as written, the condition says that "it" must deploy containment measures. "It" should be changed to "the permittee."

**Response:** Clarification is made and "It" is changed to "The Permittee".

**Comment #38 - Page 12, Section VA:** The permit should clearly define was "discharge" means in the context of permit terms related to discharging to 303(d) listed waterways. This includes permit conditions S4.B.2, S4.C.2, and S4.D.1. To illustrate why this is an important clarification, Soundkeeper's case regarding the Aurora Bridge involved a question of whether the painting operation was causing discharges to 303(d) listed waters for lead. The border of the 303(d) listing for lead is not directly under the bridge, but instead lies less than 200 feet to the west side of the bridge. Practically speaking, the material from the painting operation obviously discharges

to water within such a close proximity, but it is difficult for Soundkeeper to discern whether the Aurora Bridge is "discharging" to a 303(d) listed waterway. Are permittees discharging to category 4 and 5 waters when those water are downstream from or directly adjacent to the permitted activity? This issue also illustrates the problem with a general rather than an individual permit for these activities. Please clarify what "discharge" to a 303(d) waterway means.

**Response:** The permit does not allow discharge of wash water to these waters. Determining if a discharge is to listed waters is site-specific and must be determined on a case-by-case basis. The general permit allows a case-by-case determination of discharge to listed waters in the same way an individual permit would.

**Comment #39 - Page 13, Section VB:** Condition S6.A states, "The Permittee must handle and dispose of all solid waste material in such a manner as to prevent its entry into state ground or surface water." S4.A.3 and 4 also do not allow debris and substances to enter waters of the state. In complete contradiction to these permit terms, and to state and federal clean water laws, conditions S4.B.4, S4.C.4, S4.C.15, S4.D.14, S4.E.7, S4.E.9, S4.F.8, and S4.F.15 appear to allow the discharge of solid waste into waters of the United States. These permit conditions are inconsistent, and the later are arguably illegal.

The phrase "debris and substances" is used several times in the permit. However, it is defined in several different ways, and the permit only sometimes directs the reader to the definition section for the designated permit definition of these words. Conditions S4.D.10 and S4.F.11 state that "debris and substances" include but are not restricted to dirt, abrasive blasting medium, old paint chips, and new paint. The definition of "debris and substances" in the definition section defines debris and substances as materials entrained in wash water as a result of cleaning operations including but not limited to birds nests and fecal matter; dirt, moss, and sediments; rust, old paint chips and residue; petroleum products; cement chips; construction materials; chemicals or any other deleterious substances. First, this definition of "debris and substances" limits itself only to materials associated with wash water from cleaning activities. Clearly there are other permitted activities besides cleaning which result in the creation of "debris and substances" as this phrase is used for each type of permitted activity. The definition in the definition section should not be restricted to its current definition. At a minimum, the definition should include abrasive blasting medium and new paint, as the term is defined in S4.D.10 and S4.F.11.

**Response:** WSDOT's current practice for removing paint is to use abrasive blasting technique instead of relying on high pressure washers (about 3000 psi) used in preparatory washing to remove paint from metal structures. The abrasive blasting technique relies on full containment of this operation without generating a discharge. Since there is no discharge associate with the abrasive blasting technique, a wastewater discharge permit would not be required. WSDOT provides contract specifications to contractors for removing paint from bridge structures in preparation of new paint. WSDOT contract specifications also include containment specs that contractors must use. These contract specifications along with references to the relevant spec sections are available from WSDOT web site at:

*http://www.wsdot.wa.gov/publications/manuals/fulltext/M41-10/2016Amended2017-01-03.pdf*

- 6-07.3(2)D Hazardous Waste Containment, Collection, Testing, and Disposal Submittal Component
- 6-07.3(10)A Containment
- 6-07.3(10)F Collecting, Testing, and Disposal of Containment Waste
- 6-07.3(10)Q Cleanup

**Comment #40 - Page 13, Section VB:** Conditions S4.E.7 and S4.F.8 seem to be attempting to prohibit the same activity, and yet use slightly different language. There does not appear to be a reason for this inconsistency. S4.E.7 prohibits the discharge of removed marine growth where such marine growth would accumulate on the sea bed, whereas S4.F.8 prohibits such discharge where the marine growth would accumulate or be spoiled on the sea bed. "Or be spoiled" should be added to condition S4.E.7.

**Response:** The permit conditions in S4.E.7 and S4.F.8 were modified as follows: The Permittee must not discharge removed marine growth to waters of the state where such marine growth would accumulate on the sea bed.

**Comment #41 - Page 13, Section VB:** Conditions S4.D.11 and S4.F.12 requires the permittee to remove debris and substances from the containment structure "daily or whenever accumulations may place the containment structure at risk." For unknown reasons, S4.D.11 places this phrase in a parenthetical, while S4.F.12 does not. For consistency's sake, the parentheses should be removed from S4.D.11. In addition, as discussed above, the provision as written does not meet AKART, and as will be discussed below, these conditions are unenforceable as written.

**Response:** The parentheses are deleted. The permit conditions were modified as follows: The Permittee must inspect the filter containment structure for accumulated debris and substances daily and remove the accumulated material whenever accumulations may place the structure at risk and whenever it moves or removes the structure. In addition, the special condition numbers changed to S4.D.12 and S4.F.13 because paragraphs above them were added that provide specification for the filter tarp.

**Comment #42 - Page 14, Section VB:** Condition S5 designates monitoring requirements. There are sections with specific requirements for spot cleaning, routine maintenance, preparatory cleaning, and ferry terminal painting (S5.A-C). However, there is no corresponding section with monitoring requirements for bridge painting. There does not appear to be any reason for this. If the omission was a mistake, a section should be added with monitoring requirements for bridge painting. If the omission was not a mistake, please explain why there are no monitoring requirements for bridge painting.

**Response:** In the case of ferry terminal painting, the painted structure will eventually be in contact with water surrounding it. That is not the case for painting metal bridges.

**Comment #43 - Page 14, Section VB:** General condition G6 states that the "Permittee must take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health of the environment." As written, the permittee can simply minimize its discharges. This is inconsistent with permit requirements that do not allow the permittee to discharge at all, such as condition S6.A.

**Response:** The language is "minimize or prevent," which includes no discharge.

**Comment #44 - Page 14, Section VC:** Soundkeeper finds the attachment of Appendix B unnecessarily confusing. The reasoning behind excerpting portions of WSDOT Protocol for Wash water Effluent Disposal to Upland Areas From Bridge Painting and Preparatory Washing and Bridge Maintenance Washing Activities (Revised February 8, 2013) is unclear. Also unclear is why the permit utilizes the Herrera report titled WATER QUALITY IMPACT EVALUATION – Ground Disposal of Effluent from WSDOT Preparatory Bridge Washing, Herrera Environmental Consultants, Inc., January 2008.

First, the language of Appendix B is unclear. It states that "when applicable to the Permittees site" the recommendations in Appendix B must be followed. But Appendix B provides no guidance on when these recommendations would be applicable. When are the recommendations in Appendix B applicable?

**Response:** Appendix B has been modified to eliminate permissive language.

**Comment #45 - Page 14, Section VC:** Appendix B contains permissive language that makes its provisions very difficult to enforce. First, the term "recommendation" implies that the provisions are not mandatory. Next, numbered paragraph 2 states that "appropriate set-back requirements from nearby receiving waters should be developed based on the data presented in Table 19 [of the Herrera report]." The use of the phrase "should be" implies that this condition is not mandatory. This paragraph also states that "appropriate containment systems should be used to prevent the overland flow of bridge washing effluent." Again the use of "should be" makes this provision unenforceable. Third, numbered paragraphs three, four, and five also use the word "should" several times, implying that these paragraphs are not mandatory. If these provisions are mandatory, the word "should" should be removed and replaced with "must."

Next, paragraph five states that "a project evaluation protocol should be developed for subsequent use by WSDOT's design and permitting teams." The permit does not specify who should develop this project evaluation protocol. The permit language as written implies that this protocol has not yet been developed. But then, in the last paragraph on page 37 of the permit, the permit states that excerpts of the protocol developed per paragraph 5 are included in Appendix B. The permit should make clear what it is referring to here.

**Response:** The last paragraph on page 37 of the public draft of the permit is modified to provide clarification as follows: Based on the above mentioned recommendations, WSDOT, through its consultants, developed Table 19, containing set-back requirements mentioned in recommendation number 2. In addition, WSDOT developed the protocol for upland wash water effluent disposal from bridge paint preparatory washing and bridge maintenance washing activities developed per recommendation number 5 above. Excerpts from the WSDOT protocol developed are included below.

**Comment #46 - Page 15, Section VC:** It would appear that the supposed WSDOT protocol referenced in paragraph 5 of Appendix B is excerpted starting on page 39 but it is unclear. Ecology should make more clear what these documents are.

**Response:** References to the documents are provided below**(6)(7)** at the end of the responses to comments from Puget Soundkeeper Alliance.

**Comment #47 - Page 15, Section VC:** The language in the excerpted protocol regarding 303(d) listed waterways on page 39, 40, and 41 is written in hypothetical terms. For example, it states, "In this scenario, the Permittee could discharge all the wash water to ground . . . In all cases, BMPs would be utilized, if necessary . . . ." and other such language. Clearly this is unenforceable as written. If these terms are meant to be mandatory, they should be changed.

**Response:** Edits made to Appendix B for activities over 303(d) listed waterways which are consistent with the requirements in the special condition S4.

**Comment #48 - Page 15, Section VC:** The section in the excerpted protocol on "Sufficient Surface Flow" references mixing zones "as outlined in the NPDES permit." But it doesn't specify which NPDES permit. The permit at issue here or some other NPDES permit? Also in this section, the permit states that discharge to surface water is allowed if "the protocol outlined

in the report are followed." However, the permit does not specify which report it is referencing, and additionally, that sentence contains a typo which makes it unclear if this is even what the permit means at all (permit says "or" the protocol is followed but likely means to say "if" the protocol is followed).

**Response:** Thank you for pointing out the typo. The text is corrected to read "if." In addition, clarifications are made to the section that the NPDES permit refers to this Bridge and Ferry Terminal Washing General Permit.

**Comment #49 - Page 15, Section VC:** In the "Spot Cleaning" section on page 41, the permit references the "groundwater plan or protocol developed for maintenance washing." The permit does not say what this is or where it can be found.

**Response:** References to the documents are provided below[(6)(7)] at the end of the responses to comments from Puget Soundkeeper Alliance.

**Comment #50 - Page 15, Section VC:** Soundkeeper is concerned about the section on page 41 entitled "Process for Establishing if Wash Water Effluents Can be Discharged to Uplands: Preparatory Washing." The permit states here that the "pertinent portions of the report will must [sic] be included in the contract specifications, including no discharge of effluent to impervious surfaces such as riprap adjacent to the waterbody and no discharge to any portion of a dry bed." Aside from the typo which should be corrected, the permit does not specify which "report" it is referencing and also does not specify what it means when it says that the portions of the report must be included in the "contract specifications." What are these "contract specifications?" Do they need to be submitted to Ecology for approval?

**Response:** Clarification is added that the report mentioned is the 2008 report referenced in the paragraph above it in Appendix B. The pertinent portions of the report are included in the same paragraph and they include: "… no discharge of effluent to impervious surfaces such as riprap adjacent to the waterbody and no discharge to any portion of a dry bed. In lieu of following the soil, grade, and distance criteria for infiltration, operators may elect to establish that the groundwater table is at least 1.5 feet below the surface where wash water would be disposed of in the upland areas. This is done through field verification by digging a series of holes deeper than 1.5 feet."

**Comment #51 - Page 16, Section VC:** Soundkeeper takes issue with the subsection titled "Maintenance Washing and Spot Cleaning" on page 42. This section references the "bridge crew." Who is on the bridge crew? Presumably, this is another remnant of this excerpt having been prepared for the previous permit for which these documents were prepared which had a "bridge crew."

**Response:** Bridge crew refers to people charged with carrying out the actual maintenance work. The reference to "bridge crew" was changed to "Permittee" in the subsection.

**Comment #52 - Page 16, Section VD:** Condition S4.A.2 requires the permittee to use "measures" to prevent damage to vegetation in the riparian area. "Measures" is an undefined term that is difficult to enforce in practice. The permit should simply require the permittee not to damage vegetation in the riparian area.

**Response:** The language has been re-written deleting reference to the undefined term "measures."

**Comment #53 - Page 16, Section VD:** Conditions S4.B.3, S4.C.3, and S4.E.3 state that the permittee "must avoid" washing structures during high or low slack tide. Rather, the permit should read that the permittee must not wash structures during high or low slack tide."

**Response:** Avoiding washing during certain tidal cycle could create safety risks. WSDOT staff wash transfer spans and other walkways at ferry terminals as needed to protect the safety of the walk on ferry passengers as well as WSDOT employees. We agreed to use the terms "must avoid" to acknowledge that safety of workers and the public (at ferry terminal docks) would make a strict prohibition in conflict with public health and safety. The effect on mixing is negligible on those times when it cannot be avoided.

**Comment #54 - Page 16, Section VD:** Condition S4.B.7 and S4.C.7 state the permittees may discharge washwater into surface waters of the state only when the streambed is covered with flowing water. Rather than using this permissive conditional language, the permit should simply state that the permittee must not discharge washwater onto streambeds not covered in water."

**Response:** Thank you for the proposed alternative language. The language in the draft permit is modified accordingly.

**Comment #55 - Page 16, Section VD:** Conditions S4.B.11, S.4.C.13, S4.D.9, S4.E.4, and S4.F.10 state that the permittee may remove residual grease by hand provided none of the material enters waters of the state. This is confusing. Is this a requirement that the permittee remove residual grease by hand? If so, the permit should read that the permittee must remove residual grease by hand and that such material cannot enter waters of the state.

**Response:** Thank you for the proposed clarifying language. The permit language is changed to clarify that residual grease must be removed by hand and that degreasers on absorbent material can be used provided none of this material enters waters of the state.

**Comment #56 - Page 16, Section VD:** S4.C.11 uses the word "shall." "Shall" should be changed to "must." Another such condition is S4.F.3, which uses the word "may." This should be changed to "must."

**Response:** Thank you for the proposed alternative language. The proposed language is used in place of the language in the draft permit.

**Comment #57 - Page 16, Section VD:** Conditions S4.D.11 and S4.F.12 requires the permittee to remove debris and substances from the containment structure "daily or whenever accumulations may place the containment structure at risk." The addition of "whenever accumulations may place the containment structure at risk" makes this provision unenforceable. The permit should simply require debris and substances to be removed from the containment structure daily. In addition, as discussed above, the provision as written does not meet AKART.

**Response:** Clarification is made that the Permittee must inspect the containment or filter structure for accumulated debris and substances daily and remove the accumulated material whenever accumulations may place the containment structure at risk and whenever it moves or removes the containment structure.

**Comment #58 - Page 17, Section VD:** Condition S4.E.7, S4.F.8 states that the permittee "may discharge removed marine growth to waters of the state provided the marine growth shall not accumulate on the sea bed." Rather, the permit should simply prohibit the discharge of marine growth to waters of the state where such marine growth would accumulate on the sea bed.

**Response:** Clarification is made that "The Permittee must not discharge removed marine growth to waters of the state where such marine growth would accumulate on the sea bed."

**Comment #59 - Page 17, Section VD:** General condition G6 states that the "Permittee must take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health of the environment." Rather, this condition should state the permittee must not discharge in violation of the permit. And, as discussed above, this condition as written is inconsistent with other permit requirements.

**Response:** The language is "minimize or prevent", which includes no discharge.

**Comment #60 - Page 17, Section VD:** The conditions regarding discharges to 303(d) listed waterways state that the permittee "may not" discharge to such waterways. Rather, the permit should read that the permittee must not discharge to such waterways."

**Response:** The term "may not" has been changed to "must not."

**Comment #61 - Page 17, Section VI:** Section III.E of the fact sheet states that the permit "does not require [whole effluent toxicity] testing for the activities covered under the permit because water quality criteria provide the needed protection without the complications of WET testing." Ecology also state that it concluded that monitoring for metals would be more useful than WET testing. As stated in the fact sheet, WAC 173-205-040 allows WET testing to be excluded from permits if all known pollutants have water quality criteria for aquatic life protection. However, nowhere in the permit or fact sheet does Ecology indicate that it did any pollutant source identification to identify all known pollutants. Was this done?

**Response:** Washwater effluent characterization was carried out as a part of WSDOT's individual NPDES permit development. The monitoring reports associated with WSDOT's individual NPDES permit showed copper, lead, and zinc are the potential toxicants present in the effluent.

**Comment #62 - Page 17, Section VI:** Section III on page 10 of the fact sheet states that Ecology does not "usually develop permit limits for pollutants that were not reported in the permit application but that may be present in the discharge. The permit does not authorize discharge of non-reported pollutants. If it is determined that an activity covered under this permit is discharging pollutants that are not typical of the bridge and ferry terminal washing activities discharge an at quantities of environmental concern, an individual permit may be required to address the issue." First, this is another clear illustration of the problem with a general permit, given that it requires an activity to be "typical." Second, again, did Ecology do any pollutant source identification to determine what these "typical" pollutants are? Soundkeeper is concerned about the limitation to "typical" pollutants in part because of its experience with the Aurora Bridge case. In that case, the blasting grit being discharged was tested and found to have high levels of lead. And finally, if the permit does not authorize discharges of pollutants not disclosed in the permit application, then the permit should say this. This language is only found in the fact sheet.

**Response:** Ecology has done extensive work to characterize typical pollutants in bridge washing discharges, both in coordination with WSDOT on active projects over the last several years, and broader research. Ecology conducted reasonable potential analysis on the metals of concern using conservative assumptions explained in response #9. The permit requires BMPs to control the full range of pollutants typically found in discharges covered by the permit. Abrasive blasting media is a good example. We have clarified in the language

that abrasive blasting operations for paint removal are not covered under this general permit. Abrasive blasting can generate high levels of metals in the blasting grit and these operations must be conducted under full containment with no discharge to waters of the state.

**Comment #63 - Page 18, Section VI:** Ecology once again acknowledges the issues posed here. Section II.B on pages 7 and 8 of the fact sheet states that "[s]ince there are large variability [sic] in the measured metals concentration and wide range [sic] of values, the general permit requires WSDOT to continue conducting more metals monitoring on representative samples of wash water from maintenance and preparatory washing activities . . . ." Requiring additional monitoring by WSDOT does not account for the fact that the permit authorizes discharges based upon these widely varying results that are by definition not suitable for use in a general permit.

**Response:** Data variability is a factor in the reasonable potential analysis that leads to a more restrictive permit limit. As more data is collected and the causes that contribute to the variability of the data are better understood, it may become possible for the Permittees to take appropriate measures that lead to lower concentration of metals in the discharge and a lower permit limit.

**Comment #64 - Page 18, Section VII:** The current reporting scheduled as defined by condition S8 makes this permit essentially unenforceable. Condition S8.1 requires the WSDOT to submit an annual discharge monitoring report (DMR) by February 28th of the calendar year following the year in which the activities covered in conditions S4 and S5 of the permit have been completed. In addition to the DMR, WSDOT must submit any additional monitoring requirements specified in condition S5 as an attachment to the DMR. Condition S8.3 requires permittees covered for a singular project to submit a DMR and S5 monitoring attachments by February 28th of the year following the completion of the activity or before the submittal of the notice of termination. Because the DMR and other monitoring requirements are not required to be submitted until after the permitted activity has been completed, enforcement of any violations of the permit reported in the DMR and attachments would be moot since the activity will have already been completed.

**Response:** The chemical monitoring requirements in this permit are for effluent characterization and not for compliance.

**Comment #65 - Page 18, Section VIII:** Soundkeeper would like to note that it approves of condition S8.D requiring WSDOT to notify the public of any planned activities and to keep the list current by adding additional activity when necessary. This condition should be retained as necessary to properly inform the public of activities that impact not only the waterways they use and eat from, but also their general health and welfare – especially when they live in the immediate vicinity of a project.

Soundkeeper also approves of general condition G4's definition of "severe property damage" in that it excludes "economic loss" from the definition. This should not be changed.

**Response:** Thank you for your comment, Ecology agrees and has retained the language.

## City of Seattle, Department of Transportation

*Ecology received the following comments from City of Seattle, Department of Transportation, by email dated December 1, 2016. Below, comments are arranged by number and the page number the comment appears on the comment letter. Each comment is followed by Ecology's response.*

**Comment #1 – Section S1.B:** It appears that this permit only authorizes discharges from washing of metal structures. If so, please state that in the permit.

**Response:** The permit covers activities noted in S1.B for all bridges and the ferry terminal structures noted, regardless of material. Most metal bridges have concrete components associated with the bridge structure. Concerns over washing these bridges are the debris and other substances that accumulate on the structure over time. Maintenance washing BMPs in this general permit require cleaning the bridge using dry methods and equipment such as scraping, sweeping, and vacuuming to prevent accumulated debris and substances including bird nests and fecal material from entering waters of state. After cleaning with dry methods then the structure can be flushed with clean water.

These BMPs also work for washing concrete bridges or bridges that have concrete components. Studies of the effects of concrete conveyance structures on the chemistry of the rain water being conveyed have shown that, for new concrete structures, the pH of the rain water to increase from about 6.4 to 7.4. This is within the water quality standard for pH of 6.5 – 8.5. Negligible change in pH was observed with older concrete conveyance structures.

Other than debris and particulate substances, concerns with washing the metal structure of the bridges include total and dissolved metals (copper, lead, zinc) coming off the structure. The additional conditions of this permit are intended to minimize the potential for exceedance of the state water quality criteria associated with the discharge of the wash water associated with the metal structures.

Note that coverage under this general permit is not required for the street and sidewalk wash water which are conditionally authorized in municipal stormwater general permits, including washing of streets and sidewalks on a bridge deck.

**Comment #2 – Sections S4.B.3 & S4.C.3:** Please explain what "during high and low slack tide" means. Does this mean a certain number of minutes before and after the high and low tide times? Does the permittee need to make observations to determine that the water at the discharge point is not stagnant?

**Response:** It generally corresponds with the period about 1 hour before and 1 hour after the low or high tide. The Permittee must use available information on tidal cycle for their site.

**Comment #3 – Section S4.B.5 & S4.C.5:** To be consistent with other parts of the permit, please reword these conditions to specify that discharge is allowed to "rivers, streams and lakes," rather than specifying only "rivers."

**Response:** The language in these sections are modified to restrict the discharge to "surface waters" instead of "rivers."

## City of Tacoma

*Ecology received the following comments from City of Tacoma by email dated December 1, 2016. Below, comments are arranged by number and the page number the comment appears on the comment letter. Each comment is followed by Ecology's response.*

**Comment #1 – Section S1.B:** It is unclear if this permit only covers direct discharges to waters of the state or if the Phase I NPDES Permit would apply for discharges that enter the City's MS4 first. AKART for the BWGP may not align with AKART for the NPDES Phase I Permit which could violate permit conditions.

**Response:** This permit covers activities noted in S1.B for all bridges and the ferry terminal structures noted, regardless of material. Where the discharge is to a storm sewer, the Permittees must comply with the requirements in Section S4.A – F of this permit, applicable to the type of activity.

**Comment #2 – Section S2:** The BWGP should allow for local jurisdictions to obtain one blanket permit that covers all bridge and ferry terminal washing practices in their jurisdictions for the length of the permit cycle to avoid excessive time and cost associated with applying for multiple permits.

**Response:** Ecology considered numerous coverage options and chose this approach because these activities are not generally conducted on an on-going, continuous basis for a single structure. They occur infrequently and, in most instances, with multiple years in between. WSDOT is an exception to this because of the frequency of washing and advanced notice of all possible locations.

**Comment #3 – Section S3.B:** It is unclear if this Permit is requiring the use of BMPs to treat wash water before it is discharged to waters of the state or if the Permit is considering a mixing zone to be the means of meeting AKART. The Fact Sheet appears to state that the use of filter fabric meets AKART then also allows for the use of a mixing zone as a means of "treatment". Appendix B then states that the Permit "does not require the use of a permeable tarp to filter maintenance wash water." Please clarify.

**Response:** WSDOT bridge and ferry terminal washing operations are currently covered by the individual NPDES permit no. WA0039039 effective since 2010. Based on a report prepared by Herrera Consultants in 2003[(1) (2)], Ecology determined AKART for the preparatory washing and the maintenance washing in that individual NPDES permit before its issuance. In development of this general NPDES permit, Ecology relied on its AKART determination made in the development of WSDOT's individual NPDES permit incorporating the BMPs from the individual NPDES permit in the General NPDES permit.

Ecology made the determination that AKART for preparatory washing incudes the use of filter tarp to capture chipped paint particles in the wash water that are scraped off the metal/steel bridge structures using pressure washers operating at about 3000 psi.

Maintenance washing uses relatively low pressure water typically between 90 – 120 psi. In addition, the permit requires the use of dry methods and equipment (scraping, sweeping, vacuuming) to remove loose paint particles and other particulates before flushing the structure. The requirement to clean the structure in dry prevents the majority of the debris and substances from entering waters of the state.

Under its individual NPDES permit, WSDOT conducted effluent sampling and analysis to characterize the discharge from the preparatory washing after treatment through filter tarp and from the maintenance washing without filter tarp. The analysis included measuring the concentration of the metals of concern (copper, lead, and zinc) in the effluents. Both total and dissolved metal concentrations were measured in effluents from preparatory and maintenance washing discharges. The data collected show significant variability in the metals concentration in both the preparatory and maintenance washing discharges (Table 1 of Fact Sheet). However, based on the data collected, the concentration of metals in unfiltered maintenance wash water effluent are significantly lower than those in the preparatory wash water effluent after filter tarp.

In general, the total metal concentrations are also significantly lower in the unfiltered maintenance wash water effluent as compared with those in the preparatory washing effluent after filter tarp. Treatment with filter tarp does have an inherent limitation since its effectiveness in removing particulate material is constrained by the filter tarp sieve size. Particulate material smaller than the filter tarp sieve size (#100) can pass through the filter tarp rendering the treatment for removing small size particles rather ineffective. This limitation may make filter tarp particularly ineffective for treating maintenance wash water where the majority of the particles have already been removed through cleaning in dry, including scraping, sweeping, and vacuuming before flushing with wash water at a relatively low pressure. Considering the significant effort and costs associated with installation and hanging a filter tarp under the bridge, the safety concerns associated with it, and the tarp's ineffectiveness in removing smaller particulate metals in the maintenance discharge, Ecology concluded that requiring filter tarp for maintenance washing is not reasonable and does not constitute AKART. The permit relies on the flow in the receiving water to provide mixing and dilution of the discharge within the allowed mixing zone for compliance with the water quality standards.

**Comment #4 – Section S3.B:** The fact sheet states that filter tarp slung below the bridge to catch debris meets AKART. Add the requirement to use filter tarps to Section S4 so that it is clear that filter tarps are an acceptable BMP for meeting AKART.

**Response:** Filter fabric treatment is required for preparatory washing. For maintenance washing, the BMP requirements include cleaning using dry methods before washing with water. Filter tarp is not a requirement for maintenance washing.

**Comment #5 – Section S3.C:** It is stated, "A mixing zone is not authorized for receiving waters exceeding the water quality criteria for pollutants in the discharge." What are the water quality criteria for the pollutants in the discharge – reference a permit section or include the values here. Does this criterion require testing of all receiving waters and discharges before discharges will be allowed?

**Response:** Based on existing monitoring data, the water quality criteria of concern are copper, lead, and zinc. The permit prohibits discharges to waters of state listed for these metals.

**Comment #6 – Section S4.A:** Add that BMPs must be utilized to treat wash water before discharge. It does not specifically state anywhere that BMPs must be used; the AKART section does so by default but it is not obvious to the reader that wash water must be treated before it is discharged.

**Response:** The requirements in Sections S4.A – F together constitute BMPs. In addition to those BMPs, preparatory washing requires the use of filter fabric for removal of particulate pollutants in the wash water effluent before discharge.

**Comment #7 – Section S4.A:** Section S4.A.3: The Permit allows for discharges of wash water that utilize AKART. It is unclear if wash water that has been filtered through a catch basin insert or similar device which would act to filter the wash water in a similar fashion to a tarp would be considered AKART and thus be allowed to discharge to waters of the state. This section appears to state that any wash water that enters a drain cannot enter waters of the state without being discharged through vegetated areas. What if no vegetation exists on the landward end of the structure – is it expected that just because a drain exists that all wash water must then be captured and properly disposed in another location?

**Response:** Plugging the drains prevents direct discharge of wash water to surface water. The wash water can be routed to land next to the structure which provides some treatment and slower release of the discharge to surface water.

**Comment #8 – Section S4.A:** Section S4.A.4: The definition of debris and substances is very broad including both solid waste and dissolved liquid waste. It is unlikely that a tarp can collect and contain substances that have been dissolved in the wash water. It is recommended to change the definition of debris and substances to include those materials that can be captured on a 100# sieve filter fabric.

**Response:** Filter fabric #100 sieve is only required for preparatory washing. Other than the BMPs required in Sections S4.C and S4.E for maintenance, there are no other treatment BMP required for removal of pollutants in the maintenance wash water effluent discharge.

**Comment #9 – Section S4.A:** Section S4.A.4: It is unclear how substances could be placed in an upland area and over time not "erode into waters of the state." It would be more appropriate to contain and appropriately dispose of debris and substances in a landfill or hazardous waste facility depending upon the type of contaminant.

**Response:** Section S4.A.3 requires the Permittee to obtained the appropriate regulatory approval for placing "Debris and Substances" in an upland area.

**Comment #10 – Section S4.A:** Section S4.A.5: Page 6 of the Fact Sheet states that degreasers are used to clean transfer span surfaces. Revise the language to allow the use of degreasers if this is common practice.

**Response:** Section S4 allows the use of degreasers on absorbent material as an in-dry cleaning method.

**Comment #11 – Section S4.B:** Section S4.B.1. Consider revising to state, "The Permittee may discharge *treated wash water* to the ground…"

**Response:** Treatment of wash water effluent with filter fabric #100 sieve is required only for preparatory washing.

**Comment #12 – Section S4.B:** Section S4.B.4. Add that the conditions of S4.A must be complied with as well.

**Response:** Currently, that requirement is stated at the beginning of S4 section as the first set of requirements in the S4.A heading. Section S4.A title is revised to *"Requirements*

*Applicable to All Permitted Activities"* to clarify S4.A requirements apply to all activities covered under this permit.

**Comment #13 – Section S4.B:** Section S4.B.5. Consider revising to state, "The Permittee may discharge *treated* ~~wastewater~~ *wash water* to rivers with flows less than…" This section requires washing to occur during the most likely time for stormwater events, which could increase the polluted runoff potential and is in conflict with BMPs in Volume IV of Ecology's SWMM.

**Response:** Discharge is allowed after relevant BMPs are applied including the use of dry methods and equipment (scraping, sweeping, vacuuming) that will prevent debris and substances from entering waters of the state. Section S4.B.5 requires the Permittee to conduct washing activities when the river flows are high providing relatively greater mixing and dilution of the pollutants.

**Comment #14 – Section S4.B:** Section S4.B.6. The WDFW Permit requires many of the same components that would be required of this permit; it is unclear why this Permit is needed where an HPA permit will be needed.

**Response:** Federal and State regulations require dischargers to obtain a National Pollutant Discharge Elimination System (NPDES) permit and/or a State Waste Discharge Permit before discharging to the waters of state. Although WDFW may require a hydraulic Project Permit, the requirements of these permits are not all the same.

**Comment #15 – Section S4.B:** Section S4.B.7. Consider revising to state, "The Permittee may discharge *treated* wash water directly to…"

**Response:** Discharge is allowed after relevant BMPs are applied.

**Comment #16 – Section S4.B:** Section S4.B.9. This paragraph appears to provide a limited list of BMPs to minimize scour at discharge locations. Is the intent to only allow these methods? If the intent is to allow only these methods and if these methods are used but are ineffective in achieving the outcome of not allowing scour to occur, is the permittee liable or by use of a method would the permittee be considered in compliance regardless of the outcome? Please clarify.

**Response:** The section requires Permittee to minimize the scour impact of wash water discharges. The methods mentioned are among the measures the Permittee can take to minimize erosion. Where necessary, additional methods must be used to minimize scour.

**Comment #17 – Section S4.B:** Section S4.B.10. This paragraph seems to imply that certain work below OHWM is authorized by this permit; however, installation of structures may require other local, state or federal permits. This should be clarified in the permit. Section G8 does indicate that all other laws and statues should be followed perhaps that should be noted in this section.

**Response:** The statement is modified by adding "and after obtaining the appropriate regulatory approval" to the end of the paragraph as shown in the following: The Permittee must not work or use equipment below the Ordinary High Water Mark (OHWM) except to install BMPs to direct the discharge of wash water to flowing water or to adjacent upland/ground as allowed above "*and after obtaining the appropriate regulatory approval.*"

**Comment #18 – Section S4.B:** Section S4.B.11. This statement does not require the use of BMPs to treat wash water before discharge. See comment #3 above.

**Response:** For maintenance washing, the BMP requirements include cleaning using dry methods before washing with water.

**Comment #19 – Section S4.C:** Section S4.C.1. Consider revising to state, "The Permittee may discharge *treated wash water* to the ground…"

**Response:** Discharge is allowed after relevant BMPs are applied.

**Comment #20 – Section S4.C:** Section S4.C.4. Add that the conditions of S4.A must be complied with as well.

**Response:** Section S4.A (Effluent Limitations for All Permitted Activities) comes before S4.C and other sub-sections under S4 and the requirements apply to all activities permitted under this permit. Section S4.A title is revised to "*Requirements Applicable to All Permitted Activities*."

**Comment #21 – Section S4.C:** Section S4.C.5. Consider revising to state, "The Permittee may discharge treated ~~wastewater~~ wash water to rivers with flows less than…" This section requires washing to occur during the most likely time for stormwater events, which could increase the polluted runoff potential and is in conflict with BMPs in Volume IV of Ecology's SWMM.

**Response:** Discharge is allowed after relevant BMPs are applied. Section S4.C.5 requires the Permittee to conduct washing activities when the river flows are high providing relatively greater mixing and dilution of the pollutants.

**Comment #22 – Section S4.C:** Section S4.C.6. The WDFW Permit requires many of the same components that would be required of this permit; it is unclear why this Permit is needed where an HPA permit will be needed.

**Response:** Federal and State regulations require dischargers to obtain a National Pollutant Discharge Elimination System (NPDES) permit and/or a State Waste Discharge Permit before discharging to the waters of state. Although WDFW may require a hydraulic Project Permit, the requirements of these permits are not all the same.

**Comment #23 – Section S4.C:** Section S4.C.7. Consider revising to state, "The Permittee may discharge *treated* wash water directly to…"

**Response:** Discharge is allowed after relevant BMPs are applied.

**Comment #24 – Section S4.C:** Section S4.C.9. This paragraph appears to provide a limited list of BMPs to minimize scour at discharge locations. Is the intent to only allow these methods? If the intent is to allow only these methods and if these methods are used but are ineffective in achieving the outcome of not allowing scour to occur, is the permittee liable or by use of a method would the permittee be considered in compliance regardless of the outcome? Please clarify.

**Response:** The section requires Permittee to minimize the scour impact of wash water discharges. The methods mentioned are among the measures the Permittee can take to minimize erosion. Where necessary, additional methods must be used to minimize scour.

**Comment #25 – Section S4.C:** Section S4.C.10. This paragraph seems to imply that certain work below OHWM is authorized by this permit; however, installation of structures may require other local, state or federal permits. This should be clarified in the permit. Section G8 does indicate that all other laws and statues should be followed perhaps that should be noted in this section.

**Response:** The statement is modified by adding "and after obtaining the appropriate regulatory approval" to the end of the paragraph.

**Comment #26 – Section S4.C:** Section S4.C.12 What is the definition of "nesting colonies of birds?"

**Response:** There is no special definition other than identifying and preventing bird nests and fecal material from entering waters of state.

**Comment #27 – Section S4.D:** "Section S4.D.1. Consider revising to state, "~~*Wastewater*~~ *Treated wash water* may be directed to ground discharge…"."

**Response:** Agreed. The permit is modified accordingly. Discharge is allowed after relevant BMPs are applied. Treatment of wash water effluent with filter fabric #100 sieve is required for preparatory washing.

**Comment #28 – Section S4.D:** Section S4.D.2. The WDFW Permit requires many of the same components that would be required of this permit; it is unclear why this Permit is needed where an HPA permit will be needed.

**Response:** Federal and State regulations require dischargers to obtain a National Pollutant Discharge Elimination System (NPDES) permit and/or a State Waste Discharge Permit before discharging to the waters of state. Although WDFW may require a hydraulic Project Permit, the requirements of these permits are not all the same.

**Comment #29 – Section S4.D:** Section S4.D.5. This statement does not require the use of BMPs to treat wash water before discharge. See comment #5 above.

**Response:** Discharge is allowed after relevant BMPs are applied. Treatment of wash water effluent with filter fabric #100 sieve is required for preparatory washing.

**Comment #30 – Section S4.D:** Section S4.D.6. This paragraph appears to provide a limited list of BMPs to minimize scour at discharge locations. Is the intent to only allow these methods? If the intent is to allow only these methods and if these methods are used but are ineffective in achieving the outcome of not allowing scour to occur, is the permittee liable or by use of a method would the permittee be considered in compliance regardless of the outcome? Please clarify.

**Response:** The section requires Permittee to minimize the scour impact of wash water discharges. The methods mentioned are among the measures the Permittee can take to minimize erosion. Where necessary, additional methods must be used to minimize scour.

**Comment #31 – Section S4.D:** Section S4.D.14 of the permit states "may flush any remaining debris with clean water." Does this allow permittees to flush the drains to their discharge point into an MS4 or receiving water? For drains that go to an MS4 prior to a receiving water, this would be a violation of the MS4 permit and be a potential maintenance issue for the MS4.

**Response:** Clarifications are added to Sections S4.C.15 and S4.D.14 as follows: The Permittee must plug drains to prevent debris and substances from entering waters of state. The Permittee must prevent debris from accumulating in drains by removing them regularly. After removing the debris and substances from the plugged drains to the maximum extent practicable, the Permittee may flush any remaining debris in the drains with clean water to make the drains functional again.

**Comment #32 – Section S4.E:** Section S4.E.7. Consider adding additional language that invasive marine growth must be properly collected and disposed.

**Response:** This section has been modified as follows: The Permittee must not discharge removed marine growth to waters of the state where such marine growth would accumulate on the sea bed.

**Comment #33 – Section S4.E:** Section S4.E.11. The WDFW Permit requires many of the same components that would be required of this permit; it is unclear why this Permit is needed where an HPA permit will be needed.

**Response:** Federal and State regulations require dischargers to obtain a National Pollutant Discharge Elimination System (NPDES) permit and/or a State Waste Discharge Permit before discharging to the waters of state. Although WDFW may require a hydraulic Project Permit, the requirements of these permits are not all the same.

**Comment #34 – Section S4.F:** Section S4.F.1. Consider revising statement as follows: "Where the Permittee plans to discharge *treated wash water* to ground…"

**Response:** Agreed. The permit is modified to indicate that, for preparatory washing, treatment of wash water effluent with filter fabric #100 sieve is required.

**Comment #35 – Section S4.F:** Section S4.F.4. The WDFW Permit requires many of the same components that would be required of this permit; it is unclear why this Permit is needed where an HPA permit will be needed.

**Response:** Federal and State regulations require dischargers to obtain a National Pollutant Discharge Elimination System (NPDES) permit and/or a State Waste Discharge Permit before discharging to the waters of state. Although WDFW may require a hydraulic Project Permit, the requirements of these permits are not all the same.

**Comment #36 – Section S4.F:** Section S4.F.6. This statement does not require the use of BMPs to treat wash water before discharge. See comment #5 above.

**Response:** Discharge is allowed after relevant BMPs are applied. Treatment of wash water effluent with filter fabric #100 sieve is required for preparatory washing.

**Comment #37 – Section S4.F:** Section S4.F.8. Consider adding additional language that invasive marine growth must be properly collected and disposed.

**Response:** See response to comment #32.

**Comment #38 – Section S4.H:** Section H.1.v replace "devise" with "device."

**Response:** Thank you for your comment. Edit has been made in the permit.

**Comment #39 – Appendix B:** Page 41 last paragraph – describes a method to determine if groundwater is deeper than 1.5 feet, it states "this is done through field verification by digging a series of holes where wash water would be deposited of in the upland areas." It does not say how deep the holes should be dug. Add that the holes should be deeper than 1.5 feet.

**Response:** Agreed. The permit is modified accordingly.

**Comment #40 – General Comments:** The permit allows discharge to uplands but does not clarify that the permittee must own the area or obtain proper permissions from the owner to discharge. Provide additional language to clarify.

**Response:** Section S4.A.4 requires obtaining appropriate regulatory approval before debris and substances can be placed upland. Sub-sections under Section S4 allow discharges to ground BUT do not address whether the ground area must be owned by Permittee or owner permission is needed. A clarification is added in the S4 sub-sections.

**Comment #41 – General Comments:** The Institutional Controls Plan for the Thea Foss and Wheeler-Osgood Waterways Remediation Project includes a requirement stating that Tacoma will coordinate with the Washington State Department of Transportation to assure that maintenance of the Eleventh Street Bridge and the SR509 Bridge are undertaken in a manner that protects the remedial actions which have taken place within the waterway. However, according to the Fact Sheet, the Permit does not authorize the discharge of effluent to surface waters listed as Category 4 or 5 on the 2015 WQ Assessment for copper, lead or zinc. The Water Quality Atlas shows the Thea Foss as a Category 5 – 303(d) for Water and 4B for Sediments. The Permit should be clarified as to applicability to marine waters falling into these categories.

**Response:** The permit prohibits discharge to Categories 4 and 5. For activities over Categories 4 and 5 water bodies, the Permittee must either use full containment with no discharge or discharge to ground where allowed.

**Comment #42 – Comment on the Fact Sheet:** The last paragraph in the Purpose section of the document (page 3/32) references the 2015 WQ Assessment while Section III.G references the 2012 WQ Assessment. Should the second reference be changed to 2015?

**Response:** The date in the fact sheet should be changed to the latest listing date which is currently the 2015 WQ Assessment.

## North Sound Baykeeper and Spokane Riverkeeper

*Ecology received the following comments from North Sound Baykeeper and Spokane Riverkeeper by email dated December 2, 2016. Below, comments are arranged by number and the page number the comment appears on the comment letter. Each comment is followed by Ecology's response*

**Comment #1 – Page 1:** It is unclear to us who exactly must gain coverage under this permit. Will cities and counties will be required to gain coverage? Please insert clarifying language in S1 about **exactly** who will be required to gain coverage, in a manner similar to the State's other NPDES permits – which are specific about what types of businesses require coverage.

> **Response:** This general permit is available to municipalities and other local government agencies with responsibility to maintain bridge structures. Special Condition S1.B uses the term "Operators", as defined in "Appendix A – Glossary" of this general permit, to identify who must apply for coverage under this permit to conduct activities allowed under this permit. Clarification added in S1.B.

**Comment #2 – Page 1:** We suggest that a provision be added that clarifies whether the permittee must acquire a Hydraulic Project Approval (HPA) from the WA Department of Fish and Wildlife (WDFW). We see a possible conflict between what the draft permit requires for stream flow and mixing zones (before work can commence) and the timing of salmon migrations. If a permittee is planning to discharge process water that contains copper, lead, and zinc – it should be made very clear to applicants that this work must also be permitted under an HPA.

> **Response:** Special Condition S4 of the draft general permit requires the Permittee to contact Washington State Department of Fish & Wildlife for other requirements related to fish habitat protection prior to conducting the activity.

**Comment #3 – Page 1:** S4.A.2, page 7 states that the Permittee must use techniques to prevent damage to the vegetation in the riparian area located within 200 feet of the water. Please revise this section to make it clear that the permittee is ***required*** to employ these measures, and include a list of required BMPs. The ecological function of riparian areas is well documented, and there are BMPs that are effective in protecting these areas.

> **Response:** The washing operation uses clean water to spray the bridge structure. In the process of cleaning the structure, small amount of pollutants would be washed off the structure that could splash onto the land and vegetation surrounding the structure. The volume of the splashed water, the concentration of pollutants, the duration of the activity (typically a few hours), and the intermittent nature of the activity (typically once every few years) would make it unlikely to cause substantial and permanent damage to the ground or the vegetation it supports. However, for clarity, the permit language is modified to require the Permittee not damage vegetation in the riparian area.

**Comment #4 – Page 1:** We suggest that a series of photographs be required to be taken that show and identify the vegetative community in and around the bridge before any work commences. The permit should include a provision that requires restoration of damaged vegetation. The photographs will be useful if/when restoration is required.

> **Response:** The washing operation uses clean water to spray the bridge structure. In the process of cleaning the structure, small amount of pollutants would be washed off the structure that could splash onto the land and vegetation surrounding the structure. The

volume of the splashed water, the concentration of pollutants, the duration of the activity (typically a few hours), and the intermittent nature of the activity (typically once every few years) would make it unlikely to cause substantial and permanent damage to the ground or the vegetation it supports.

**Comment #5 – Page 1:** S4.A.2, page 7 states that existing parking lots and "open managed fields within the riparian area" may be used for staging work. As in #3, above, please require specific BMPs to protect vegetation and prevent pollution when parking lots and open fields are used for staging work. We suggest that the same BMPs that are required for the State's NPDES general permit for construction sites be required in this permit. We consider these BMPs to be *all known, available, and reasonable methods of treatment*, or AKART, which is required to be used by Ecology when drafting NPDES permits. Furthermore, if parking lots and open fields are used for staging, sampling for turbidity should be required if there is any discharge associated with the work.

**Response:** Land disturbance activity associated with hosing down a bridge with clean water is not expected to be nearly the same as land disturbance associated with carrying out construction activities. There are no earth moving construction equipment involved that disturb land and cause sediment discharges.

**Comment #6 – Page 2:** S4.E, page 13 concerns over-water metal structures. We are especially concerned with pollution generated from washing and cleaning procedures where there are rusty metal guard rails over small bridges in our counties. Please include required steps that require the collection and proper disposal of rusty metal flakes from these structures. Similarly, on page 14, we request that protective steps be taken when creosote or treated wood fibers are present on or underneath the bridge structure, to prevent discharges to waters of the state.

**Response:** Special Condition S4 includes requirements for hand cleaning the bridge structure using dry methods before flushing with water such as scraping, sweeping, and vacuuming. These methods remove particulates, rusty metal flakes, and loose paint chips. In addition, S4 requires removing residual grease by hand using degreaser on absorbent material. A requirement is added to S4.A for where treated wood associated with the structure being washed are present, the Permittee must use non-abrasive methods and tools that, to the maximum extent practicable, minimize removal of the creosote or treated wood fibers when it removes marine growth from creosote or any other treated wood.

**Comment #7 – Page 2:** S4.H.I.iii, page 17 concerns requirements for a spill prevention and response plan. Please include language that **requires** the permittee to store and mix all liquid products in a secure, contained, and locked location to eliminate the potential for spills into waters of the state.

**Response:** S4.H.iv includes a requirement for Permittee to store and mix liquid products in secure and contained location. This paragraph is modified to add that the storage container must be locked up as follows: "…store and mix all liquid products in a secure, contained, and locked location to…"

**Comment #8 – Page 2:** S7.3, page 21 includes requirements for storage of oil, fuel, and chemicals. Please **require** that these and similar materials be stored, contained, and locked up to eliminate the potential for spills into waters of the state.

**Response:** Language added to S7.3 to have the storage container locked up.

## Snoqualmie Indian Tribe

*Ecology received the following comments/questions from Snoqualmie Indian Tribe by email dated November 21, 2016. Ecology's response to the comment/question follow.*

**Question/Comment:** Does the Department of Ecology have a list of cleaning solutions that are the least hazardous for use on over water structures? Will these solutions be required? How is the use of phosphate-free or other environmentally safe cleaning solutions enforced?

**Response:** The draft permit does not authorize use of detergents or other cleaning agents. Here is the permit language on Page 7:

- "The Permittee must wash with clean water and must not use any detergents or other cleaning agents."

## Washington State Department of Archaeology and Historic Preservation (DAHS)

*Ecology received the following comments from Washington State Department of Natural Resources by email dated October 27, 2016. Ecology's response to comments follows.*

**Comments:** Please be sure to include language that involves the treatment of historic bridges and structures. If bridges or structures are historic (more than 50 years old), consideration regarding the potential impacts to the structure from activities proposed in the permit must be accounted for.

Painting of any historic structure that is eligible or potentially eligible for listing in the National Register of Historic Places should be reviewed by our office prior to the commencement of work.

> **Response:** Thank you for your comments. This general permit addresses water quality impacts including those associated with paint stripping activities on metal bridges. The permit includes requirements for the Permittee to follow in order to mitigate and minimize such impacts to the receiving waters of state. Requiring bridge painting project reviews in this general permit is outside its scope. Ecology expects the Permittee to have gone through all the necessary regulatory reviews and have obtained approvals before proceeding with paint stripping and removal activities on a bridge structure including the review by Department of Archaeology and Historic Preservation.

## Washington State Department of Natural Resources (DNR)

*Ecology received the following comments from Washington State Department of Natural Resources by email dated December 1, 2016. Ecology's response to comments follows.*

**Comments:** Although the Permit identifies a series of best management practices (BMPs) suitable for this work, it still allows for untreated washwater to be discharged into receiving waters. It has been shown through numerous studies that small amounts of copper and zinc can have significant effects on salmon and many other fish species in our environment. The immediate exposure to chemicals may be limited, but possible accumulation of the material downstream on a riverbank or collected in a debris pile could lead to acute exposure to fish.

Previous stormwater NPDES general permits have strict requirements to keep dirt, debris, paint remnants, and washwater out of stormwater discharge to ensure it does not have contact with the receiving water. It seems counterproductive to then develop a NPDES permit that allows the direct discharge of those materials into Washington's sensitive ecosystem. DNR would like to the see requirement that all washwater be collected and treated prior to discharge to a receiving water, no matter the current flow available for dilution.

> **Response:** Thank you for your comments. This permit includes BMPs that are intended to minimize impacts and be protective of the waters of state. It requires the Permittee to use dry methods and equipment (scraping, sweeping, vacuuming) to remove loose paint particles and other particulates including bird nests, fecal matter, dirt, and moss before flushing the structure with clean water. The requirement to clean the structure in dry prevents the majority of those debris and substances from entering waters. All debris and particulate substances resulting from cleaning activities must be collected and properly disposed of after obtaining the appropriate regulatory approval.

## Referenced Documents Noted in Response to Comments

1. AKART Feasibility Study – Treatment Alternative Evaluation for WSDOT Bridge Washing Effluent, March 28, 2003 (Draft).
   http://www.wsdot.wa.gov/NR/rdonlyres/AE774DEC-D40F-4456-BBCE-18CC18C124CE/0/DraftAKART.pdf

2. Water and Sediment Quality Impact Engineering Analysis - Treatment Evaluation for WSDOT Bridge Washing Effluent, October 2003.
   http://www.wsdot.wa.gov/NR/rdonlyres/B5E51F3D-F6D9-4AEA-8326-A020ACDFCA5D/0/AKARTstudy.pdf

3. Bridge and Ferry Terminal Maintenance Washing and Cleaning Monitoring Protocols, March 2010.
   http://www.wsdot.wa.gov/NR/rdonlyres/04256873-DCE8-4CF2-A7A3-9D967D1DA286/0/2010BridgeWashProtocol.pdf

4. Steel Bridge Structure Paint-Prep Washing Protocols For NPDES Permit WA-0039039, October 2010.
   http://www.wsdot.wa.gov/NR/rdonlyres/15902455-B54E-4224-A7C3-3AFCD356028F/0/BridgePaintPrepProto.pdf

5. Ferry Terminal Paint-Prep Washing and Painting below the OHWM Protocols for NPDES Permit WA-0039039, March 2010.
   http://www.wsdot.wa.gov/NR/rdonlyres/E31BF55B-D41B-4089-BD67-521385993869/0/FerryTerminalPaintPrepWash.pdf

6. WSDOT Protocol for Washwater Effluent Disposal To Upland Areas From Bridge Paint Preparatory Washing And Bridge Maintenance Washing Activities, Revised February 8, 2013.
   http://www.wsdot.wa.gov/NR/rdonlyres/0F866673-7C84-4190-819C-8450598A87A5/0/NPDESGroundwaterProtocol.pdf

7. Ground Disposal of Effluent from WSDOT Preparatory Bridge Washing, Herrera Environmental Consultants, Inc., January 2008.
   http://www.wsdot.wa.gov/NR/rdonlyres/588F9251-EA53-4985-90A7-597ED170B5B0/0/BridgeWashingImpactsGroundwater.pdf