Port of Seattle

The Port of Seattle respectfully submits comments on the formal draft of the Stormwater Management Manual for Western Washington. Our suggested revisions are intended to clarify language so that regulated parties can effectively manage stormwater and protect our local and regional water bodies

In addition to the comments submitted on the Excel template, we recommend revisions to two best management practices documents, and have uploaded these in Word format:
• S439 BMPs for In-water and Overwater Fueling
• S434 BMPs for Dock Washing

We appreciate the opportunity to provide comments on this important stormwater document. If you have questions on the Port's comments please contact Jane Dewell, (206) 787-4669 or dewell.j@portseattle.org. Thank you.

Jane Dewell
Maritime Stormwater Program Manager | Port of Seattle

Comments on the Draft 2019 SWMMWW		
Draft 2019 SWMMWW Section (select from drop down)	**Comment**	**Comment Made By**
(General Comment)	**Draft SWMWW Text** General Comment on SWMMWW organization. **Comment** Including a table of contents at the beginning of each volume would make it easier to navigate as each volume is often used independently of the other volumes. **Suggested Revision** Add table of contents at the beginning of each volume.	Port of Seattle
I-3.4.2 MR2: Construction Stormwater Pollution Prevention Plan (SWPPP)	**Draft SWMMWW Text** Element 9 Additional Guidance First Bullet: "Wheel wash or tire bath wastewater shall not include wastewater from concrete washout areas." **Comment** Having to segregate wastewaters (wheel wash, tire bath, concrete washout) should not be required if wastewaters will be properly disposed of at an offsite location or treatment facility. **Suggested Revision** Element 9 Additional Guidance First Bullet: If infiltration or upland land application will be used for wastewater disposal, wheel wash or tire bath wash wastewater shall not include wastewater from concrete washout areas.	Port of Seattle
I-3.4.5 MR5: On-Site Stormwater Management	**Draft SWMMWW Text** Table I-3.1 Minimum Requirement #5 Compliance Options, Flow Control Exempt Projects "Projects qualifying as Flow Control exempt in accordance with the Threshold Discharge Area (TDA) Exemption in I-3.4.7 MR7: Flow Control shall either: Use the LID BMPs from List #3 for all surfaces within each type of surface in List #3; or Use any Flow Control BMP(s) desired to achieve the LID Performance Standard, and apply BMP T5.13: Post-Construction Soil Quality and Depth." **Comment** The SWMMWW Chart of Changes Section I.3.4.7 MR7 Flow Control identifies that adding Marine waterbodies to the Flow Control Exempt Receiving Water list "will ensure the same protection of waterways between the TDA discharge point and the marine waterbody as is provided with other types of exempt waterbodies." An exception should be added to the new requirement so that waterfront properties/project sites discharging directly into a marine waterbody or flow control exempt receiving water are not required to evaluate/implement these flow control/LID BMPs as there are no waterways to protect between the discharge point and flow control exempt receiving water. **Suggested Revision** Table I-3.1 Minimum Requirement #5 Compliance Options, Flow Control Exempt Projects With the exception of project sites that discharge directly to a "Flow Control Exempt Receiving Water" identified in Appendix I-A, projects qualifying as Flow Control exempt in accordance with TDA Exemption in I-3.4.7 Minimum Requirement #7: Flow Control shall either: Use the LID BMPs from List #3 for all surfaces within each type of surface in List #3; or Use any Flow Control BMP(s) desired to achieve the LID Performance Standard, and apply BMP T5.13: Post-Construction Soil Quality and Depth."	Port of Seattle
BMP C151: Concrete Handling	**Draft SWMMWW Text** • Conditions of Use, Disposal Options #3: "De minimum washout to formed areas" • Design and Installation Specifications Bullet 3: "Do not wash off any concrete handling equipment, large or small, within the footprint of a proposed infiltration BMP." **Comment** Some language could be improved for clarity. • Correct typo of "De minimum" to "*De minimis*." • For clarity, add "awaiting concrete" after the term "*formed areas*" • For clarity, use alternative description for "*proposed infiltration BMP*." Describe as "area where infiltration feature will be installed or built." **Suggested Revision** • Conditions of Use, Disposal Options #3: De ~~minimum~~ minimis washout to formed areas awaiting concrete • Design and Installation Specifications Bullet 3: "Do not wash off any concrete handling equipment, large or small, within the footprint of ~~a proposed infiltration BMP~~ an area where an infiltration feature will be installed or built."	Port of Seattle
BMP C154: Concrete Washout Area	**Draft SWMMWW Text** Conditions of Use last sentence: "At no time shall concrete handling equipment be washed off into the footprint of a proposed infiltration BMP." **Comment** Some language could be improved for clarity. • For clarity, use alternative description for "*proposed infiltration BMP*." Describe as "area where infiltration feature will be installed or built." **Suggested Revision** Conditions of Use last sentence: "At no time shall concrete handling equipment be washed off into the footprint of ~~a proposed infiltration BMP~~ an area where an infiltration feature will be installed or built."	Port of Seattle
BMP C241: Sediment Pond (Temporary)	**Draft SWMMWW Text** General comment on BMP C241. **Comment** The BMP does not address what conditions are appropriate for infiltration or detention, soil permeability, and selection of pond location. Clarification should be provided. **Suggested Revision** Add language to introduction clarifying if a temporary pond can be designed to infiltrate. If no, then update figures to show geotextile fabric pond liner. If yes, then add bullet to Design and Installation Specifications section to identify appropriate location for pond in context of soil permeability and future site use.	Port of Seattle

Volume IV	**Draft SWMMWW Text** General comment on Volume IV organization and numbering of BMPs. **Comment** Reorganizing the BMPs in Volume IV by category is useful; however, keeping the old BMP numbers make Volume IV more difficult to navigate and use. A new BMP numbering system should be developed to match the reorganization as described below. The proposed numbering system should be sufficient for long-term use. A crosswalk/cross reference table from the 2014 to 2019 Volume IV BMPs should be provided to facilitate the transition. Once the transition is completed, the proposed Volume IV BMP numbering system should be sufficient for many iterations of the SWMMWW. In the long term, this will improve the usability of Volume IV. **Suggested Revision** Reassign Volume IV BMP numbers to match Volume, Chapter, and then BMP # and provide a crosswalk/cross reference table from the 2014 to 2019 Volume IV BMPs. The first digit in the BMP number would represent the Volume (i.e., 4). The second digit in the BMP number would represent the chapter within Volume IV (e.g., 1 for Chapter 1, 2 for Chapter 2). The third and fourth digits in the BMP number would represent the BMP number within each chapter (e.g., 01 for the first BMP in the chapter, 02 for the second BMP in the chapter. This would allow up to 99 BMPs in each chapter to follow this numbering convention. For example, the following BMPs could be used: • S4101 for Illicit Connections • S4102 for Formation of PPT • S4103 for Preventive Maintenance/Good Housekeeping • S4201 for Washing and Steam Cleaning Vehicles • S4202 for Dock Washing • S4203 for Potable Water Line Flushing, etc.	Port of Seattle
S410 BMPs for Correcting Illicit Connections to Storm Drains	**Draft SWMMWW Text** • Applicable Operational BMPs Bullet 1: "For all real properties, responsible parties must examine their plumbing systems to identify any potential illicit connections. A good place to start is with an examination of the site plans." • Applicable Operational BMPs Bullet 2: "If an illicit discharge is suspected, perform a closed circuit television inspection (CCTV) or dye test with a nontoxic dye. These tests are to be performed by qualified personnel…" **Comment** • The language/phrasing for bullet 1 is not consistent with how other BMPs are written; proposed changed indicated below. • There are many effective detection methods for illicit discharges and illicit connections as noted in the King County Illicit Connection/Illicit Discharge Field Screening Manual (2013), including visual reconnaissance, smoke testing, and chemical-specific tests. Allowing permittees to choose the best method rather than constraining the choice to just CCTV or dye testing will give more flexibility and save costs where simpler methods are called for, while providing the same benefit of identifying and eliminating illicit discharges and illicit connections. **Suggested Revision** • Applicable Operational BMPs Bullet 1: For all real properties, responsible parties must examine their plumbing systems to identify any potential illicit connections. ~~A good place to start is with an examination of the site plans.~~ Review site plans, engineering drawings or other sources of information for the plumbing systems on the property. • Applicable Operational BMPs Bullet 2: If an illicit discharge or illicit connection is suspected, ~~perform a closed circuit television inspection (CCTV) or dye test with a nontoxic dye~~ trace the source using an appropriate method such as visual reconnaissance, smoke test, flow test, dye test with a nontoxic dye, or closed circuit television (CCTV) inspection. Refer to the King County Illicit Connection/Illicit Discharge Field Screening Manual or equivalent guidance document for additional methods and information. These tests are to be performed by qualified personnel…	Port of Seattle
S453 BMPs for Formation of a Pollution Prevention Team	**Draft SWMMWW Text** Bullet 3: "Be located on-site on a daily basis." **Comment** For permittees with more than one facility/location, the requirement to be onsite daily suggests that pollution prevention staff need to be at all applicable sites on all days of business operations. **Suggested Revision** Bullet 3: ~~Be located on-site on a daily basis.~~ Assign pollution prevention team staff to be on duty on a daily basis to cover applicable permittee facilities when those facilities are in operation.	Port of Seattle
S455 BMPs for Spill Prevention and Cleanup	**Draft SWMMWW Text** Spill Cleanup and Proper Disposal of Material Bullet 7: "Immediately report all spills, discharges, or releases that could impact a drainage system, a combined sewer, a sanitary sewer, or a receiving water." **Comment** The requirement to report all spills that could impact a drainage system will create a significant additional amount of reporting. A clear definition for "could impact" is not provided, and for spills that don't cause any impacts, the value of reporting every spill is not balanced by the reporting effort. **Suggested Revision** Spill Cleanup and Proper Disposal of Material Bullet 7: Immediately report all spills, discharges, or releases that ~~could impact~~ have impacted a drainage system, a combined sewer, a sanitary sewer, or a receiving water. Notifications must be made according to federal, state, and local laws, and may include notification to the local jurisdiction, local fire department, Department of Ecology, and/or the National Response Center.	Port of Seattle
S431 BMPs for Washing and Steam Cleaning Vehicles / Equipment / Building Structures	**Draft SWMMWW Text** • Applicable Structural Source Control BMPs Bullets 2 and 3 under "Conduct outside washing operations in a designated wash area with the following features:" • Applicable Structural Source Control BMPs Bullet 8 (last bullet) under "Conduct outside washing operations in a designated wash area with the following features:" "Label all mobile cleaning equipment as follows: "Porperly dispose of all wastewater…" **Comment** For Applicable Structural Source Control BMPs, text is repeated in Bullets 2 and 3 under "Conduct outside washing operations in a designated wash area with the following features." The repeated text should be deleted. The typo under Bullet 8 should be fixed. **Suggested Revision** • Applicable Structural Source Control BMPs: Delete Bullet 3 under "Conduct outside washing operations in a designated wash area with the following features." • Applicable Structural Source Control BMPs Bullet 8 (last bullet): Change "Porperly" to "Properly"	Port of Seattle

S434 BMPs for Dock Washing	**Draft SWMMWW Text** General comment on S434 BMPs for Dock Washing. **Comment** This BMP is a good addition for an activity that was not previously addressed. However, the dock cleaning BMP is not consistent with requirements for discharges of dock washwater when hosing down compared to pressure washing, and for use of different cleaning techniques and associated discharges. This new BMP needs to be consistent in what is required. The Port of Seattle is providing a redlined version of the entire BMP for consideration by Ecology. **Suggested Revision** The Port of Seattle is providing a redlined version of S434 BMPs for Dock Washing. Suggested revisions are contained within that document.	Port of Seattle
S406 BMPs for Deicing and Anti-Icing Operations for Streets / Highways	**Draft SWMMWW Text** Applicable BMPs – Maintenance Operations **Comment** Separating the deicing BMPs based on where deicing occurs makes it clear which practices apply to streets, roads, and highways (compared to at airports, which were all grouped together in 2014 SWMMWW version of this BMP). The Maintenance Operations subsection does not apply to deicing but appears to apply to asphalt. **Suggested Revision** Applicable BMPs - Maintenance Operations: Remove the Maintenance Operations subsection or update the subsection so that it applies to deicing.	Port of Seattle
S421 BMPs for Parking and Storage of Vehicles and Equipment	**Draft SWMMWW Text** Applicable Operational BMPs Bullet 4: "Place drip pans below inoperative or leaking vehicles and equipment in a manner that catches leaks or spills, including employee vehicles." **Comment** If an inoperative vehicle is not leaking or has already been drained of fluids, placing drip pans underneath the inoperative vehicle would not be necessary. This part of the BMP should be rephrased to clarify this. Employee vehicles are typically parked in non-industrial areas of a facility or administrative parking areas, and are independent and outside of operations at a given facility. In addition, employers do not have control over the condition of employee vehicles and requiring oversight of employee vehicles would expand the scope of the stormwater BMPs to personal vehicles. The scope of the stormwater BMPs is limited to regulated entities, and should not encroach upon personal vehicles/private citizen transportation to work. The reference to "employee vehicles" should be removed. **Suggested Revision** Applicable Operational BMPs Bullet 4: "Place drip pans below ~~inoperative or~~ leaking vehicles and equipment <u>(including inoperative vehicles and equipment)</u> in a manner that catches leaks or spill<u>s</u>~~, including employee vehicles~~."	Port of Seattle
S421 BMPs for Parking and Storage of Vehicles and Equipment	**Draft SWMMWW Text** Pollutant Control Approach: If the parking lot generates high concentrations of oil due to high traffic turnover or the frequent transfer of oil, provide appropriate oil removal equipment for the contaminated stormwater runoff. The site use thresholds to determine if the site is expected to generate high concentrations of oil are defined in Step 2: Determine if an Oil Control BMP is Required in III-1.2 Choosing Your Runoff Treatment BMPs. Applicable Treatment BMPs: Establishments subject to high-use intensity are significant sources of oil contamination of stormwater. Examples of potential high use areas include customer parking lots… **Comment** Previous use of "high-use site" as the determining factor for installation of an oil control BMP was based on the type of site and the potential to generate high concentrations of oil in stormwater runoff based on the type of activity occurring at the site. Suggest referring to the potential to generate high concentrations of oil, rather than the actual generation of oil. **Suggested Revision** Pollutant Control Approach: If the parking lot ~~generates~~ <u>has the potential to generate</u> high concentrations of oil due to high traffic turnover or the frequent transfer of oil, provide appropriate oil removal equipment for the contaminated stormwater runoff… Applicable Treatment BMPs: Establishments subject to high-use intensity are <u>potentially</u> significant sources of oil contamination of stormwater. Examples of potential high use areas include customer parking lots…	Port of Seattle
S439 BMPs for In-Water and Over-Water Fueling	**Draft SWMMWW Text** • General comments on the BMP. • Additional Applicable Operational BMP. • Applicable Operational BMPs Bullet 15: "Install a tank and leak detection monitoring system that shuts off the pump and fuel line when a leak is sensed." • Applicable Operational BMPs Bullet 16: "Install personal watercraft floats at fuel docks to help boaters stabilize their vessel and refuel without spilling." **Comment** • Separating the Applicable Operational BMPs into categories/topics would facilitate understanding and implementation of these new BMPs. This BMP could have significant economic impacts on floating fueling facilities located on piers or docks. Ecology should consider separating requirements for land-based facilities and floating facilities for clarity. • A BMP should be added for managing spill response materials after they have been used. See suggested language in the attached redlined version of S439 BMPs for In-Water and Over-Water Fueling. • Installing a leak detection monitoring system is a structural BMP, and should be identified as such. • The BMP on installing personal watercraft floats should be rephrased for clarification. **Suggested Revision** The Port of Seattle is providing a redlined version of S439 BMPs for In-Water and Over-Water Fueling. Suggested revisions are contained within that document.	Port of Seattle

S401 BMPs for the Building, Repair, and Maintenance of Boats and Ships	**Draft SWMMWW Text** Applicable Operational BMPs Bullet 17 (last bullet): "Locate spill kits on all pipers and docks." **Comment** The intent of bullet 17 is that spill kits be readily accessible from all piers and docks. This does not necessarily mean that each individual pier or dock at a facility requires a spill kit to support prompt spill response. This could lead to redundancy in spill kit locations. Recommended language is provided below to clarify this requirement. Also, there is a typo on last bullet under Applicable Operational BMPs – change "pipers" to "piers." **Suggested Revision** Applicable Operational BMPs Bullet 17 (last bullet): "Locate spill kits so they are readily accessible on all ~~pipers~~ piers and docks."	Port of Seattle
S438 BMPs for Construction Demolition	**Draft SWMMWW Text** Suggested Operational BMPs: • Construct a wall to prevent stray building materials and dust from escaping the area during demolition. • Schedule demolition to take place at a dry time of the year to prevent stormwater runoff from the demolition site. **Comment** • This BMP may be more appropriate in SWMMWW Volume 2 for Construction Stormwater. • Some demolition activities will need to occur during wet weather, and the BMP would do well to anticipate and address these times. Potential to add three bullets to Suggested Operational BMPs as indicated below. **Suggested Revision** Consider moving this BMP to Volume 2. Suggested Operational BMPs: • Construct a screen ~~wall~~ to prevent stray building materials and dust from escaping the area during demolition. Size and orient the screen to capture wind-blown materials and contain them onsite. • If possible, schedule demolition to take place at a dry time of the year to prevent stormwater runoff from the demolition site. • For wet weather demolition: o If possible, build a temporary structure to cover the area being demolished in order to minimize contact with rain. o Establish a contained work area with temporary fencing and berms to direct runoff either to the sanitary sewer or to a temporary holding pond where it can be pumped to the sewer. o If a temporary holding pond is used, remove accumulated debris in the pond when the pond becomes more than 50 percent full of debris and at the end of the work before dismantling the pond.	Port of Seattle
S440 BMPs for Pet Waste	**Draft SWMMWW Text** • General comments on S440 BMPs for Pet Waste. • Applicable Operational BMPs Bullet 2: Inspect and clean up outdoor areas where there may be pet waste prior to rain events. **Comment** • Management of pet waste is noted in other Volumes and BMPs. Including references to these locations would increase usability of the SWMMWW. • In Western Washington, there are frequent/continuous rain events and inspecting/cleaning up pet waste prior to each rain event is not feasible. This BMP should be revised to consider this, and add qualifying language to develop a program to inspect and cleanup outdoor areas. **Suggested Revision** • Add references to other BMPs where pet waste is noted, such as runoff treatment BMPs (Volume V). • Applicable Operational BMPs Bullet 2: Develop and implement a program or procedure to inspect and clean up outdoor areas where there may be pet waste prior to rain events.	Port of Seattle
S443 BMPs for Fertilizer Application	**Draft SWMMWW Text** Comment includes an additional Applicable Operational BMP. **Comment** Suggest adding a requirement to prepare an Integrated Pest Management Plan (BMP S435) to be consistent with the reference to this BMP in S411 BMPs for Landscaping and Lawn/Vegetation Management. Many of the same operational steps are relevant to applying fertilizers and pesticides. **Suggested Revision** Add bullet to the list of Applicable Operational BMPs: • Prepare an Integrated Pest Management Plan per S435 BMPs for Pesticides and an Integrated Pest Management Program.	Port of Seattle
S446 BMPs for Well, Utility, Directional and Geotechnical Drilling	**Draft SWMMWW Text** Comment includes an additional Applicable Operational BMP and general comments on the BMP. **Comment** • The BMP does not address drilling wells in areas of known or suspected soil contamination. Suggested bullet to accomplish this included below. • The first set of bullets seem overly general to protect or mitigate impact without real guidance. Later bullets are more detailed as how to accomplish each task. For the first set of bullets, consider adding references to other BMPs that would facilitate the protection of stormwater. • Applicable Operational BMP Bullet 1: Obtaining permits does not seem to be a BMP, but rather a jurisdictional requirement. Therefore, it seems unnecessary to include here. • Applicable Operational BMP Bullets 4 and 12 (second to last): Bullet 4 references drilling fluid and bullet 12 references drilling slurry. We assume that this is referring to the same material; if so, one term should be used for consistency. • Applicable Operational BMP Bullet 4: More detail or information on how to "take measures to capture and contain drilling fluids" would be helpful. **Suggested Revision** Add bullet to the list of Applicable Operational BMPs: • When drilling in areas of known or suspected soil contamination, test and characterize soil cuttings and accumulated sediment to determine proper management and disposal methods. If applicable, generator knowledge may be used to characterize the soil cuttings and accumulated sediment.	Port of Seattle

S447 BMPs for Roof Vents	**Draft SWMMWW Text** • Applicable Operational BMPs Bullet 1: Identify processes that are vented and may contribute pollutants to the roof. Pollutants of concern include and are not limited to: o Metal dust o Grease from food preparation o Solvents o Hydrocarbons o Fines o Stone dust • Applicable Operational BMPs Bullet 2: Look for chemical deposition around vents, pipes and other surfaces. **Comment** A more specific list of activities and operational BMPs would help clarify requirements of this BMP. **Suggested Revision** • Applicable Operational BMPs Bullet 1: Identify processes that are vented and may contribute pollutants to the roof. Pollutants of concern include and are not limited to: o Metal dust o Grease from food preparation o Solvents o Hydrocarbons o Fines o Stone dust o Paint o Fiberglass o Sandblast • Applicable Operational BMPs Bullet 2: Look for ~~chemical~~ particulate deposition around vents, pipes and other ~~surfaces~~ accessible rooftop structures.	Port of Seattle
S451 BMPs for Building, Repair, Remodeling, Painting, and Construction	**Draft SWMMWW Text** Comment includes additional Suggested Operational BMPs. **Comment** • Some or all of this BMP may be appropriate in SWMMWW Volume 2 for Construction Stormwater. • Potential to add Suggested Operational BMPs to address the range of activities associated with building repair, remodeling, and construction. **Suggested Revision** • Consider moving some or all of the BMPs to Volume 2. Suggested Operational BMPs: • Consider using filtered vacuuming to collect waste that may be hard to sweep, such as dust on a drop cloth. • If conducting work in wet weather conditions, consider setting up temporary cover when scraping or pressure-washing lead-based paint.	Port of Seattle
S452 BMPs for Goose Waste	**Draft SWMMWW Text** • Applicable Operational BMPs Bullet 1: If possible, pick up goose poop using brooms, rakes, power sweepers, and trash cans. Properly dispose of goose poop in the garbage. • Applicable Operational BMPs Bullet 6: Geese's favorite food is new shoots of grass. Low lying grass also allows easy access to the water for protection from predators. Let grass grow to six inches or taller. Stop fertilizing and watering the lawn to reduce the palatability of the lawn. • Applicable Operational BMPs Bullet 7: Minimize open sight lines for geese to less than 30 feet. **Comment** Ecology should consider removing this BMP since we do not want to be involved with animal control/management as part of meeting stormwater requirements. This BMP appears to be tailored towards more rural areas, and does not consider the challenges of implementing the identified BMPs in urban or industrial environments. Some land uses such as waterfront facilities, industrial facilities, container terminals and piers/docks at marine facilities are not conducive to the preventive measures described. Primary objective of the BMP should be to address areas of chronic accumulation of goose waste. Language should be added to incorporate practical options for these types of land uses where geese and associated goose waste are a chronic condition. The BMPs should identify the use of barbed wire or similar metal wire deterrence on fixed structures. Specific BMPs such as letting grass grow to six inches or taller and minimizing open sight lines are not feasible at most urban and industrial facilities. Ecology should consider adding more information on the applicability of this BMP as during a listening session, it was noted there was one specific area in the state that prompted the development of this BMP and this is evident in many of the Applicable and Suggested Operational BMPs. **Suggested Revision** • Consider removing this BMP from the SWMMWW. Local jurisdictions can implement requirements that are more stringent than the SWMMWW. Applicable Operational BMPs: • Applicable Operational BMPs Bullet 1: If possible, pick up goose poop using shovels, brooms, rakes, power sweepers, and trash cans. Properly dispose of goose poop in the garbage. • Add another Applicable Operational BMP: Regularly clean goose waste from areas of chronic deposition where deterrence measures are impractical. • Applicable Operational BMPs Bullet 5, add sub-bullet under examples of harassment and scare tactics: o Consider installing fixed deterrence, such as barbed wire or spikes, for fixed structures including rooftops, statues/art, railings, aboveground tanks, equipment, and lamp posts. • Applicable Operational BMPs Bullet 6: Geese's favorite food is new shoots of grass. Low lying grass also allows easy access to the water for protection from predators. When practical, let grass grow to six inches or taller. When practical, stop fertilizing and watering the lawn to reduce the palatability of the lawn. • Applicable Operational BMPs Bullet 7: When practical, minimize open sight lines for geese to less than 30 feet. • Change subsection heading for "Optional Operational BMPs" to "Suggested Operational BMPs" for consistency.	Port of Seattle

DRAFT Comments on the Draft 2019 Stormwater Management Manual for Western Washington (SWMMWW)
S434 BMPs for Dock Washing
This document contains the redlined version of S434 BMPs for Dock Washing with suggested revisions as identified in Port of Seattle comments on the SWMMWW.

S434 BMPs for Dock Washing

Description of Pollutant Sources: Washing docks (or wharves, piers, floats, and boat ramps) can result in the discharge of dirt, bird feces, soaps and detergents that can be harmful to aquatic life, especially after they take on contaminants while cleaning. The BMPs in this section do not address dry docks, graving docks, or marine railway cleaning operations.

Pollutant Control Approach: Use dry methods and equipment (scraping, sweeping, vacuuming) to remove debris and contaminants prior to cleaning with water to prevent these substances from entering surface water.

Applicable Operational BMPs:

Surface Preparation and Spot Cleaning

- Scoop and collect debris and bird feces.
- Sweep, capture, and dispose of debris from the dock as solid waste. Sweep or vacuum docks to minimize the need for chemical cleaners.
- During cleaning activities, if debris, substances, or wash water could enter surface waters through drains, temporarily block the drains to route water to the landward end(s) of the structure and onto vegetative areas.
- Hose down area if necessary and collect water as feasible.
- Try spot cleaning with water and a coarse cloth before using soaps or detergents.
- If a cleaner is needed for spot cleaning:
    - Mix it in a bucket and use it to scrub down only the areas that need extra attention.
    - Start with vinegar and baking soda and move to other options as needed. Spot clean using a rag if harsher cleaning products are needed.
    - Avoid or minimize the use of petroleum distillates, chlorinated solvents, and ammoniated cleaning agents.
    - Use degreasers or absorbent material to remove residual grease by hand and do not allow this material to enter surface water.
    - Keep cleaners in sealed containers. Keep cleaner containers closed securely when transporting between the shore and docks.
    - Properly dispose of the dirty bucket water on shore.
- Minimize the scour impact of wash water to any exposed soil at the landward end(s) of the dock or below the dock. Place a tarp over exposed soil, plant vegetation, or put berms to contain eroded soil.

Deleted: toxic

Moved (insertion) [7]

Deleted: .

Deleted: Sweep, capture, and dispose of debris from the dock at least once per week or as needed.

Moved (insertion) [1]

Moved (insertion) [4]

Deleted: , s

Deleted: .
<#>Avoid or minimize the use of petroleum distillates, chlorinated solvents, and ammoniated cleaning agents. ... [1]

Moved (insertion) [3]

Moved (insertion) [2]

Deleted: <#>Avoid or minimize the use of petroleum distillates, chlorinated solvents, and ammoniated cleaning agents. ... [2]

Moved (insertion) [5]

Moved (insertion) [6]

Moved (insertion) [8]

DRAFT Comments on the Draft 2019 Stormwater Management Manual for Western Washington (SWMMWW)
S434 BMPs for Dock Washing
This document contains the redlined version of S434 BMPs for Dock Washing with suggested revisions as identified in Port of Seattle comments on the SWMMWW.

Dock Washing and Disposal

- To the extent practicable, collect any wash water generated from hosing down, pressure washing or cleaning dock areas, and convey to sanitary sewer or appropriate treatment and disposal.

  The following video, provided courtesy of the Port of Seattle, highlights the methods they have developed to collect wash water generated during dock washing.

  Video: Dock Scrubbing at Port of Seattle (YouTube Link): https://www.youtube.com/watch?v=7RBFdjC3K1Q

-
-

- Try pressure washing using light pressure. This uses less water and decreases the need for soap and scrubbing when washing the dock. Avoid using excessive pressure, which may damage the dock or send flakes of paint and other material into the water.

-
-
-
- Do not place any debris and substances resulting from cleaning activities in shoreline areas, riparian areas, or on adjacent land where these substances may erode into waters of the state.
- Where treated wood associated with the structure being washed are present, 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.
- Do not discharge removed marine growth to waters of the state where such marine growth would accumulate on the sea bed.
- Do not discharge emulsifiers, dispersants, solvents, or other toxic deleterious materials to waters of the state.

Deleted: On marine dock areas, sweep or vacuum rather than hose down debris. C

Deleted: hose

Deleted: hose

Moved up [1]: Try cleaning with water and a coarse cloth before using soaps or detergents.

Moved up [5]: Use degreasers or absorbent material to remove residual grease by hand and do not allow this material to enter surface water.

Deleted:

Moved up [2]: Avoid or minimize the use of petroleum distillates, chlorinated solvents, and ammoniated cleaning agents.

Moved up [3]: If you need a cleaner, mix it in a bucket and use it to scrub down only the areas that need extra attention. Properly dispose of the dirty bucket water on shore.

Moved up [4]: If a cleaner is needed, start with vinegar and baking soda and move to other options as needed. Spot clean using a rag if harsher cleaning products are needed.

Moved up [6]: Keep cleaners in sealed containers. Keep cleaner containers closed securely when transporting between the shore and docks.

Moved up [7]: During cleaning activities, if debris, substances, or wash water could enter surface waters through drains, temporarily block the drains to route water to the landward end(s) of the structure and onto vegetative areas.

Moved up [8]: Minimize the scour impact of wash water to any exposed soil at the landward end(s) of the dock or below the dock. Place a tarp over exposed soil, plant vegetation, or put berms to contain eroded soil.

Deleted: <#>For work located over marine water, try to avoid washing structures during high or low slack tide, except when washing during slack tide is necessary for the health of safety of workers or the general public, or to avoid conflict with other legal requirements.

Page 1: [1] Deleted	Prasek, Matt	9/17/18 7:14:00 AM

If you need a cleaner, mix it in a bucket and use it to scrub down only the areas that need extra attention. Properly dispose of the dirty bucket water on shore.

Page 1: [2] Deleted	Prasek, Matt	9/17/18 7:12:00 AM

Avoid or minimize the use of petroleum distillates, chlorinated solvents, and ammoniated cleaning agents.

Use degreasers or absorbent material to remove residual grease by hand and do not allow this material to enter surface water.

Keep cleaners in sealed containers. Keep cleaner containers closed securely when transporting between the shore and docks.

DRAFT Comments on the Draft 2019 Stormwater Management Manual for Western Washington (SWMMWW)
S439 BMPs for In-Water and Overwater Fueling
This document contains the redlined version of S439 BMPs for In-water and Overwater Fueling with suggested revisions as identified in Port of Seattle comments on the SWMMWW.

S439 BMPs for In-Water and Overwater Fueling

Deleted: -W

Description of Pollutant Sources: BMPs in this section apply to businesses and public agencies that operate a facility used for the transfer of fuels from a stationary pumping station to vehicles or equipment in water. This type of fueling station includes aboveground or underground fuel storage facilities, which may be permanent or temporary. Fueling stations include facilities such as, but not limited to, commercial gasoline stations, port facilities, marinas, private fleet fueling stations, and boatyards.

Typically, stormwater contamination at fueling stations is caused by leaks or spills of fuels, lubrication oils, and fuel additives. These materials contain organic compounds, oil and greases, and metals that can be harmful to humans and aquatic life.

Most fuel dock spills are small and result from overfilling boat fuel tanks, burps from air vent lines, and drips from the pump nozzle as it is being returned to the pump.

Pollutant Control Approach: Provide employees with proper training and use spill control devices to prevent the discharge of pollutants in the receiving water or the drainage system.

Applicable Operational BMPs

Applicable Operational BMPs for Fuel Docks

General

- Facilities and procedures for the loading or unloading of petroleum products must comply with U.S. Coast Guard requirements. Refer to specifications in Coast Guard Requirements for Marine Transfer of Petroleum Products.

Moved (insertion) [5]

Training and Fueling Dock Supervision

Deleted: .

- Train staff on proper fueling procedures.

Moved (insertion) [1]

- Have an employee supervise the fuel dock during fueling activities.
- Do not allow self-service on a marina dock without some means of controlling the dock activity. According to *NFPA 30A: Code for Motor Fuel Dispensing Facilities and Repair Garages*, each facility must have an attendant on duty to supervise, observe, and "control" the operation when open for business. This can be done via camera, intercom, and shutoff abilities in the office. However, this can lead to complacency and nothing can replace having an attendant on the dock to attend to emergencies when they occur. (NFPA, 2012)

Moved (insertion) [2]

Fueling Dock Setup, Maintenance and Inspection

DRAFT Comments on the Draft 2019 Stormwater Management Manual for Western Washington (SWMMWW)
S439 BMPs for In-Water and Overwater Fueling
This document contains the redlined version of S439 BMPs for In-water and Overwater Fueling with suggested revisions as identified in Port of Seattle comments on the SWMMWW.

- Install a tank and leak detection monitoring system that shuts off the pump and fuel line when a leak is sensed.
- Install personal watercraft floats at fuel docks to stabilize personal watercraft/jet skis while refueling.
- Provide a spill containment equipment storage area where materials are easily accessible and clearly marked.
- Use automatic shut-off nozzles and promote the use of "whistles" and fuel/air separators on air vents or tank stems of inboard fuel tanks to reduce the amount of fuel spilled into receiving waters during fueling of boats.
- Post readable refueling directions, BMPs, and emergency protocols.
- Always have a "Spills Aren't Slick" sign with emergency spill reporting numbers clearly visible. Marinas on land leased from the Washington Department of Natural Resources (DNR) are required to post these signs.
- Display "No Smoking" signs on fuel docks.
- Create a regular inspection, maintenance, and replacement schedule for fuel hoses, pipes, and tanks. Have staff walk the dock fuel lines from dispenser to tank to look for signs of leakage at joints and determine hose condition from end to end.

Fueling Practices

- Discourage operators from "topping off" (no more than 90% capacity). Fuel expands and can slosh out of the vent when temperatures rise or waters become choppy.
- When handing over the nozzle, wrap an absorbent pad around the nozzle end or plug inside the nozzle end to prevent fuel in the nozzle from spilling.
- Have the boat operator place an absorbent pad or suction cup bottle under the vent(s) to capture fuel spurts from the vent.
- Never block open the fuel nozzle trigger and always disable hands-free clips to ensure the boater remains with the nozzle to prevent overfilling. Hands-free clips are not allowed in Washington, per WAC 296-24-33015.
- Always keep the nozzle tip pointing up and hang the nozzle vertically when not in use.
- During fueling operations, visually monitor the liquid level indicator to prevent the tank from being overfilled.

  The maximum amount of product received must not exceed 95 percent capacity of the receiving tank.

Moved (insertion) [7]

Deleted: help boaters

Deleted: their vessel and refuel without spilling.

Moved (insertion) [3]

Moved (insertion) [4]

Moved (insertion) [8]

Deleted:

Moved (insertion) [10]

Moved (insertion) [9]

Formatted: Character scale: 100%

Moved (insertion) [6]

Formatted: List Paragraph, Space After: 0 pt, Line spacing: single, No bullets or numbering, Allow hanging punctuation

Deleted:

Moved up [10]: Discourage operators from "topping off" (no more than 90% capacity). Fuel expands and can slosh out of the vent when temperatures rise or waters become choppy.

Formatted: Font:(Default) Arial, Not Expanded by / Condensed by

Formatted: Font:(Default) Arial

Formatted: Font:(Default) Arial, Not Expanded by / Condensed by

Formatted: Font:(Default) Arial

Formatted: Font:(Default) Arial, Not Expanded by / Condensed by

Formatted: Font:(Default) Arial

Formatted: Font:(Default) Arial

Formatted: Font:(Default) Arial, Not Expanded by / Condensed by

Formatted: Font:(Default) Arial

Formatted: Font:(Default) Arial, Not Expanded by / Condensed by

Formatted: Font:(Default) Arial

Formatted: Font:(Default) Arial, Not Expanded by / Condensed by

Formatted: Font:(Default) Arial

Formatted: Font:(Default) Arial, Not Expanded by / Condensed by

Formatted: Font:(Default) Arial

Formatted: Font:(Default) Arial, Not Expanded by / Condensed by

Formatted: Font:(Default) Arial

DRAFT Comments on the Draft 2019 Stormwater Management Manual for Western Washington (SWMMWW)
S439 BMPs for In-Water and Overwater Fueling
This document contains the redlined version of S439 BMPs for In-water and Overwater Fueling with suggested revisions as identified in Port of Seattle comments on the SWMMWW.

-

Spill Cleanup

- See S426 BMPs for Spills of Oil and Hazardous Substances.
- Manage petroleum-contaminated booms, pads, and absorbents in a designated collection container and properly dispose of these materials (see S427 BMPs for Storage of Liquid, Food Waste, or Dangerous Waste Containers).
- Using detergents to disperse a fuel spill is illegal and the fines are expensive.
- Ensure customers do not use soaps in the event of a spill. Use oil absorbent booms or pads instead.
-

Applicable Operational BMPs for Fueling by Portable Container

- Have boats fuel on shore or at a fuel dock rather than transport fuel from an upland facility to the boats. Only use hand-held fueling containers or "jerry cans" when necessary or when on shore or at dock fueling is not practical.
- Always refill portable fuel containers on the pavement or dock to ensure a good electrical ground. While the deck of the boat may seem stable, static electricity can build up and cause a spark.
- On the dock, put an absorbent pad under the container and wrap an absorbent pad around the fuel fill — this can easily be done by putting a hole in the pad.
- Ensure the nozzle stays in contact with the tank opening.
- When transferring fuel from a portable can, use a fuel siphon with a shut-off feature.
- If a siphon is not available, a nozzle/spout with a shut off is a good alternative.

Moved up [8]: Create a regular inspection, maintenance, and replacement schedule for fuel hoses, pipes, and tanks. Have staff walk the dock fuel lines from dispenser to tank to look for signs of leakage at joints and determine hose condition from end to end.

Formatted ... [1]

Moved up [1]: Train staff on proper fueling procedures.

Formatted: Font:(Default) Arial, Not Expanded by / Condensed by

Formatted: List Paragraph, Space After: 0 pt, Line spacing: single, Allow hanging punctuation

Formatted ... [2]

Moved up [3]: Post readable refueling directions, BMPs, and emergency protocols.
Always have a "Spills Aren't Slick" sign with emergency spill reporting numbers clearly visible. Marinas on land leased from the Washington Department of Natural Resources (DNR) are required to post these signs.
Spill Cleanup

Formatted ... [3]

Formatted: Font:(Default) Arial

Formatted: List Paragraph, Line spacing: single, Allow hanging punctuation, Don't adjust space between Latin and Asian text, Don't adjust space between Asian text and numbers

Formatted ... [4]

Deleted:

Moved up [4]: Display "No Smoking" signs on fuel docks.

Moved up [2]: Do not allow self-service on a marina dock without some means of controlling the dock activity. According to *NFPA 30A: Code for Motor Fuel Dispensing Facilities and Repair Garages*, each facility must have an attendant on duty to supervise, observe, and "control" the operation when open for business. This can be done via camera, intercom, and shutoff abilities in the office. However, this can lead to complacency and nothing can replace having an attendant on the dock to attend to emergencies when they occur. (NFPA, 2012)

Moved up [7]: Install a tank and leak detection monitoring system that shuts off the pump and fuel line when a leak is sensed.
Install personal watercraft floats at fuel docks to help boaters stabilize their vessel and refuel without spil ... [5]

Moved up [6]: During fueling operations, visually monitor the liquid level indicator to prevent the tank from b ... [6]

Moved up [5]: Facilities and procedures for the loading or unloading of petroleum products must comply with ... [7]

Deleted: ... [8]

- Since fueling boats with a portable container can take time, make sure the container is comfortable to carry, hold, and balance.
- Use a high flow funnel. Funnels can help prevent spills by making a larger opening for fueling.
- Place a plug of absorbent pad or paper towel in the nozzle when not in use to capture any extra drops that accumulate.
- Fuel slowly and pour deliberately, and watch the container (especially the nozzle mechanism) for signs of wear.
- Store portable fuel tanks out of direct sunlight and keep in a cool, dry place to minimize condensation.

Page 3: [1] Formatted **Prasek, Matt** **10/29/18 9:09:00 AM**

Font:(Default) Arial

Page 3: [1] Formatted **Prasek, Matt** **10/29/18 9:09:00 AM**

Font:(Default) Arial

Page 3: [1] Formatted **Prasek, Matt** **10/29/18 9:09:00 AM**

Font:(Default) Arial

Page 3: [1] Formatted **Prasek, Matt** **10/29/18 9:09:00 AM**

Font:(Default) Arial

Page 3: [1] Formatted **Prasek, Matt** **10/29/18 9:09:00 AM**

Font:(Default) Arial

Page 3: [1] Formatted **Prasek, Matt** **10/29/18 9:09:00 AM**

Font:(Default) Arial

Page 3: [1] Formatted **Prasek, Matt** **10/29/18 9:09:00 AM**

Font:(Default) Arial

Page 3: [1] Formatted **Prasek, Matt** **10/29/18 9:09:00 AM**

Font:(Default) Arial

Page 3: [1] Formatted **Prasek, Matt** **10/29/18 9:09:00 AM**

Font:(Default) Arial

Page 3: [1] Formatted **Prasek, Matt** **10/29/18 9:09:00 AM**

Font:(Default) Arial

Page 3: [1] Formatted **Prasek, Matt** **10/29/18 9:09:00 AM**

Font:(Default) Arial

Page 3: [1] Formatted **Prasek, Matt** **10/29/18 9:09:00 AM**

Font:(Default) Arial

Page 3: [1] Formatted **Prasek, Matt** **10/29/18 9:09:00 AM**

Font:(Default) Arial

Page 3: [1] Formatted **Prasek, Matt** **10/29/18 9:09:00 AM**

Font:(Default) Arial

Page 3: [1] Formatted **Prasek, Matt** **10/29/18 9:09:00 AM**

Font:(Default) Arial

Page 3: [1] Formatted **Prasek, Matt** **10/29/18 9:09:00 AM**

Font:(Default) Arial

Page 3: [1] Formatted **Prasek, Matt** **10/29/18 9:09:00 AM**

Font:(Default) Arial

Page 3: [2] Formatted **Prasek, Matt** **10/29/18 9:08:00 AM**

Font:(Default) Arial

Page 3: [2] Formatted **Prasek, Matt** **10/29/18 9:08:00 AM**

Font:(Default) Arial

Page 3: [2] Formatted **Prasek, Matt** **10/29/18 9:08:00 AM**

Font:(Default) Arial

Page 3: [3] Formatted **Prasek, Matt** **10/29/18 9:08:00 AM**

Font:(Default) Arial, Not Expanded by / Condensed by

Page 3: [3] Formatted **Prasek, Matt** **10/29/18 9:08:00 AM**

Font:(Default) Arial, Not Expanded by / Condensed by

Page 3: [3] Formatted **Prasek, Matt** **10/29/18 9:08:00 AM**

Font:(Default) Arial, Not Expanded by / Condensed by

Page 3: [3] Formatted **Prasek, Matt** **10/29/18 9:08:00 AM**

Font:(Default) Arial, Not Expanded by / Condensed by

Page 3: [4] Formatted **Prasek, Matt** **10/29/18 9:08:00 AM**

Font:(Default) Arial, Not Expanded by / Condensed by

Page 3: [4] Formatted **Prasek, Matt** **10/29/18 9:08:00 AM**

Font:(Default) Arial, Not Expanded by / Condensed by

Page 3: [4] Formatted **Prasek, Matt** **10/29/18 9:08:00 AM**

Font:(Default) Arial, Not Expanded by / Condensed by

Page 3: [4] Formatted **Prasek, Matt** **10/29/18 9:08:00 AM**

Font:(Default) Arial, Not Expanded by / Condensed by

Page 3: [4] Formatted **Prasek, Matt** **10/29/18 9:08:00 AM**

Font:(Default) Arial, Not Expanded by / Condensed by

Page 3: [4] Formatted	Prasek, Matt	10/29/18 9:08:00 AM

Font:(Default) Arial, Not Expanded by / Condensed by

Page 3: [4] Formatted	Prasek, Matt	10/29/18 9:08:00 AM

Font:(Default) Arial, Not Expanded by / Condensed by

Page 3: [4] Formatted	Prasek, Matt	10/29/18 9:08:00 AM

Font:(Default) Arial, Not Expanded by / Condensed by

Page 3: [4] Formatted	Prasek, Matt	10/29/18 9:08:00 AM

Font:(Default) Arial, Not Expanded by / Condensed by

Page 3: [4] Formatted	Prasek, Matt	10/29/18 9:08:00 AM

Font:(Default) Arial, Not Expanded by / Condensed by

Page 3: [5] Moved to page 2 (Move #7)	Prasek, Matt	10/29/18 9:06:00 AM

Install a tank and leak detection monitoring system that shuts off the pump and fuel line when a leak is sensed.

Install personal watercraft floats at fuel docks to help boaters stabilize their vessel and refuel without spilling.

Provide a spill containment equipment storage area where materials are easily accessible and clearly marked.

Page 3: [6] Moved to page 2 (Move #6)	Prasek, Matt	10/29/18 9:28:00 AM

During fueling operations, visually monitor the liquid level indicator to prevent the tank from being overfilled.

The maximum amount of product received must not exceed 95 percent capacity of the receiving tank.

Page 3: [7] Moved to page 1 (Move #5)	Prasek, Matt	10/29/18 9:05:00 AM

Facilities and procedures for the loading or unloading of petroleum products must comply with U.S. Coast Guard requirements. Refer to specifications in Coast Guard Requirements for Marine Transfer of Petroleum Products.

Page 3: [8] Deleted	Prasek, Matt	10/29/18 9:09:00 AM