

STORMWATER POLLUTION PREVENTION PLAN
PORT OF PORT TOWNSEND BOATYARD
COVERED UNDER THE BOATYARD GENERAL PERMIT

PORT OF PORT TOWNSEND

APRIL 2019

PREPARED IN ACCORDANCE WITH THE BOAT YARD GENERAL PERMIT OF
WASHINGTON STATE
EFFECTIVE AUGUST 8, 2016

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FIGURES

1 - Vicinity Map

2 - Site Map

- **All points of discharge (surface water, groundwater, sanitary sewer and storm drain system).**
- **Stormwater drainage and discharge structures.**
- **Outlines of the stormwater drainage areas for each stormwater discharge point (including discharges to groundwater).**
- **Paved areas and buildings.**
- **Areas of pollutant contact (actual or potential).**
- **Surface water locations (including wetlands and drainage ditches).**
- **Lands and waters adjacent to the site.**

3 – Drainage System Detail

- **Catch Basins**
- **Treatment units**
- **Monitoring Locations**

4 – Roof Drainage System

- **Collection System**
- **Treatment Units**
- **Monitoring Locations**

APPENDICES

- A. Boatyard General Permit NPDES**
- B. Detailed Port Best Management Practices (BMPs)**
- C. Worksheet Templates**
- D. Completed Worksheets & Reports**
 - **Worksheet #1 Pollution Prevention Team**
 - **Worksheet #2 Identify Areas Associated With Industrial Activity**
 - **Worksheet #3 Material Inventory**
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 - **Worksheet #6 Non-stormwater Miscellaneous Discharges (consolidate?)**
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 - **Worksheet #8 Weekly Boatyard Site Inspection Checklist (Blank Form)**
 - **Worksheet #9 Mandatory Boatyard BMP Identification (Replace with DMRs)**
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- E. Completed DMRs – To be Developed**
 - **Stormwater**
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- F. Stormwater Treatment Performance Assessment and Maintenance Protocols – To be developed**
- G. Pressure Wash System Maintenance Protocols – To be developed –**
- H. Roof Drain Treatment – Maintenance Protocols – To be developed**
- I. Equipment Information – To be developed**
 - **Tide Gates**
 - **Overflow Pump Station (Near Vault 3)**
 - **Stormwater Rx Units & Pumps**
 - **Vault 4 Pump**
 - **Sampling Equipment (Transducers, software, pump)**
- J. Level 1 Responses**
- K. Level 2 Responses**
- L. Level 3 Responses & Related Correspondence**
- M. Engineering and Special Reports**
 - **2013 Engineering Report – Landau and Assoc. - Digital**

- 2016 Engineering Report – Landau and Assoc. - Digital**
2018 Technical Report – Use of Chitosan – Landau and Assoc. – Digital
2019 Technical Report – Expanded Use of Chitosan – Landau and Associates - Digital
N. Port of Port Townsend Biochar Feasibility Study - Digital
O. Stormwater Sampling Manual – Department of Ecology 2015
P. Economic Impact Analysis: Draft Boatyard General Permit (Ecology 2015) - Digital

ACRONYMS AND ABBREVIATIONS


BMPs	Best Management Practices
CFR	Code of Federal Regulations
DMR	Discharge Monitoring Report
Ecology	Washington State Department of Ecology
mg/L	milligrams/liter
NPDES	National Pollutant Discharge Elimination System
RCW	Revised Code of Washington
SWPPP	Stormwater Pollution Prevention Plan
µg/L	micrograms per liter
WAC	Washington Administrative Code

CERTIFICATION

The Responsible Company Official certifying this boatyard-specific stormwater pollution prevention plan is entirely responsible for the current version of the SWPPP. For the Port of Port Townsend, the Responsible Official is the Executive Director.

CERTIFICATION BY THE EXECUTIVE DIRECTOR:

I certify under penalty of law that this document and all attachments were prepared and/or revised under my direction or supervision in accordance with a system design to assure that qualified personnel properly gathered and evaluated the information. Based on my inquiry of the person or persons who manage the systems or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Date	Revision	Executive Director Signature
4/17/19	Major update to 2015 Version include revisions to system description, treatment processes, BMPs, and Appendices additions.	

Date	Revision	Executive Director Signature

SWPPP Purpose

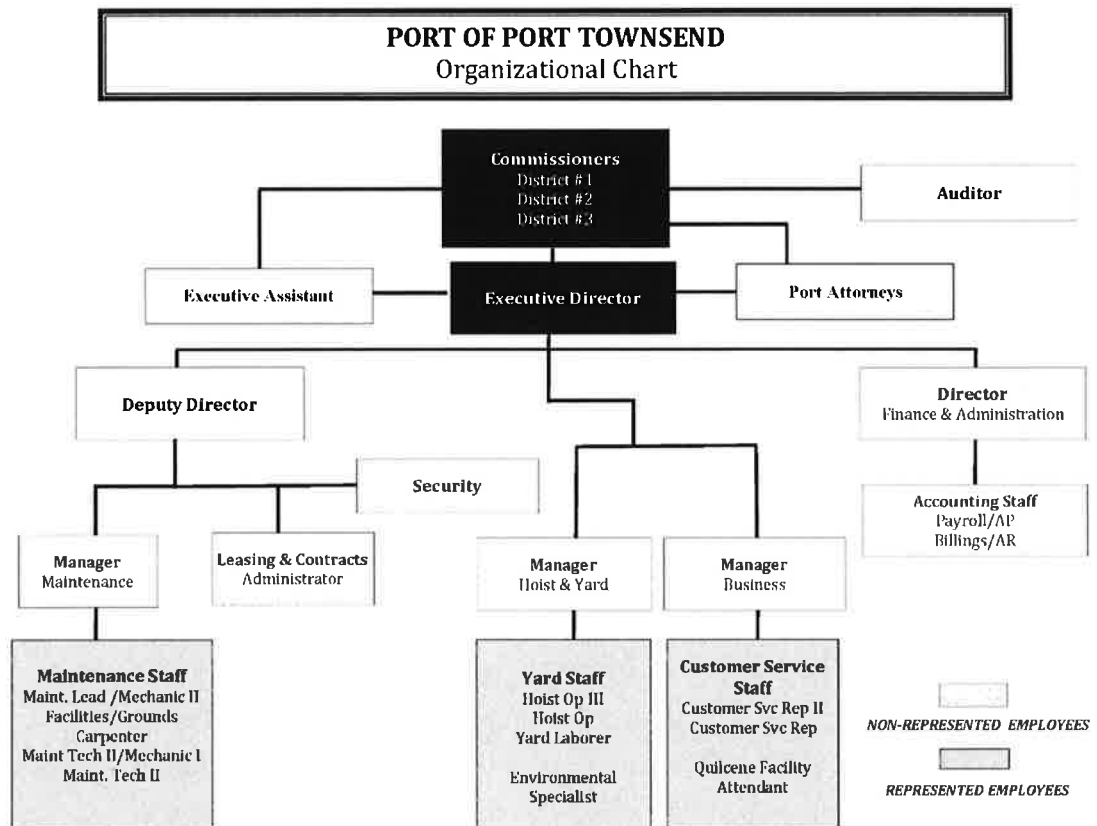
This Statewide general permit applies to boatyards that discharge stormwater runoff from areas with industrial activity directly to the ground, to a surface waterbody, or to a storm sewer system that drains to a surface waterbody.

SWPPP Organizational Notes:

A copy of the Boatyard General Permit is provided in Appendix A. . The BMPs provided in this document are those required of the Port. Additional BMPs are provided as Appendix B (These are the BMPs adopted as Appendix B of the Ports Rules and Regulations - current version.) Worksheets (completed) referred to in this SWPPP are provided in Appendix C.

1. POLLUTION PREVENTION TEAM

The current organizational chart for the Port of Port Townsend (Port) is provided below:



The Pollution Prevention Team for this facility is outlined in Appendix C on Worksheet #1.

This team is led by the Hoist and Yard Manager who has primary responsibility for implementation of this SWPPP.

The Pollution Prevention Team responsibilities include:

- Assisting the Hoist and Yard Manager in the implementation, maintenance, and modification of this SWPPP.
- Holding periodic meetings to review the overall operation of the BMPs.
- Sampling, inspections, operation and maintenance.
- Responding to emergency situations.
- Assuring training of team members in the operation, maintenance, and inspections of BMPs.

2. FACILITY ASSESSMENT

2.1 Facility Description

The facility conducts Boat Building and Repairing (Standard Industrial Code No. 3732). Activities conducted at the facility include:

- Pressure washing
- Bottom and top side painting
- Engine, prop, shaft, and rudder repair
- Hull welding and grinding
- Hull repair, joinery, and bilge cleaning
- Fuel and lubrication repair and replacement
- Buffing and waxing
- Marine sanitation device (MSD) repair and replacement
- Other activities necessary to maintain or construct a vessel.

2.2 Major Potential Sources of Water Contamination

2.2.1. Boatyard Stormwater:

The permitted facility is located in Port Townsend, WA (Figure 1) and covers an area of 20 acres, approximately 5 percent of which is impervious surface (asphalt, concrete, etc.) and 10 percent of the area is buildings. The Boatyard has capacity of up to 190 vessels at any given time.

Potential sources of pollution are the many ship and boat repair processes carried out throughout the Boatyard and listed above.

Stormwater is currently treated with multi-media filters located throughout the Boatyard.

2.2.2. Pressure Wash Facilities:

Pressure washing primarily of ship and boat hulls occurs on two “wash pads” located in the Port’s Boatyard. The largest is near the 300 ton haul out, and a smaller pad is located near the Yard Office.

Wastewater generated from these facilities is discharged under permit to the City of Port Townsend sewer after treatment.

Treatment occurs at a facility near the Yard Office. Wastewater from both wash pads is screened and send to pump chambers or sumps. Water from these is processed at the treatment facility where a coagulant is added and the water processed through a filter press and other filters prior to discharge to the City’s system. The filter press material is sent to the Jefferson County solid waste facility for disposal.

2.2.3. Roof Drainage:

Since 2013, the Port has been working on treatment of roof drainage. These areas are those where there is no stormwater exposure as a “boatyard” and therefore are exclusion zones or bypass areas. While metals removal is desirable, this effort this effort was not required as part operational BMP implementation.

Work began with a feasibility study of the use of biochar and biochar / soils combinations (Appendix N). Based on the results of this study, implementation efforts completed the system which exists today.

This system consists of 17 “totes” which are containers filled with media. In most cases this media is biochar or biochar – soil combination.

2.3 Site Map

A site map is provided on Figure 2 that includes a scale and identifies significant features, including:

- All points of discharge (surface water, groundwater, sanitary sewer and storm drain system).
- Stormwater drainage and discharge structures.
- Outlines of the stormwater drainage areas for each stormwater discharge point (including discharges to groundwater).
- Paved areas and buildings.
- Areas of pollutant contact (actual or potential).

- Surface water locations (including wetlands and drainage ditches).
- Lands and waters adjacent to the site.
- Treatment units

Discharge from the Port's Boatyard discharge to a stormwater collection and treatment system occurs at Outfall A (Figure 2) within the Marina. This discharge contains flows from areas with industrial activity as defined in the permit. Outfall A discharges also include discharge from the Roof drainage system mentioned above.. Outfall B also discharges stormwater to the Marina from a portion of the site where there is no boatyard activity.

2.4 Identification of Activity Areas

The following completed worksheets (Appendix C) constitute an identification of applicable Industrial Activity Areas.

- Worksheet #2 (Appendix C) identifies areas associated with activities. This worksheet will be updated if site conditions change. See also Figure 2 which shows industrial and non-industrial stormwater drainage areas.
- Worksheet #3 (Appendix C) provides an inventory of materials handled or produced on the site that may, without proper BMPs, have the potential to be exposed and contribute pollutants to stormwater. This worksheet will be updated if additional materials that have the potential to expose pollutants to stormwater are handled or produced on the site.
- Worksheet #4 (Appendix C) provides a list of typical pollutant sources within the permitted area.
- Worksheet #5 (Appendix C) provides a list of significant spills or leaks of toxic or hazardous pollutants that have occurred on the site in the last five years as well as the cleanup response and additional preventive measures taken. This worksheet will be updated if any spills or leaks occur.
- Worksheet #6 (Appendix C) lists the anticipated non-stormwater miscellaneous discharges at the facility. These discharges are specified as to volume, frequency of discharge, expected duration of discharge, and BMPs or analysis to assure that these discharges do not contain pollutants. This worksheet will be updated if additional miscellaneous discharges occur or are planned at the facility.

3. STORMWATER MONITORING PLAN

3.1 Port's Stomwater System – Factors Affecting Monitoring

Topography / Drainage Grades: The first factor to understand about the Port's system is its lack of grade – the system is fairly flat. Therefore the system has been designed with a tide gate and flood control system (oversized pipes, tide gate and pumps) to assure that high tides and rainfall events do not flood the work area. Because of this, many pipes and catch basins remain partially full at all times. Further, the tide gates operation provides opportunity to both retain water and introduce salt water into the system depending on the conditions at the time.

Treatment: The history of the Port's system have led to improvements in stormwater treatment since construction. The system now consists of 6 drainage areas. Because of the history of the system, there are four (4) below ground vaults in the system intended to service as settling chambers (as part of the original design in the mid-1990's). The collection and treatment system has the following characteristics.

- Five (5) of the basins are treated with multimedia filters. Only the Basin 3 drainage discharges without treatment.
- Two (2) of the basins (Basins 1 and 2) have above ground treatment units (Stormwater Rx or "Aquip" units).
- Three (3) of the basins (East Sims, West Sims, and Basin 4) rely on in-ground mixed media filters for treatment.

Runoff Characteristics: The surface and slopes are not uniform for all the areas and the size of the drainage areas varies. Therefore, runoff characteristics (particularly timing) are expected to be different.

The system described above is more completely described in the 2016 Engineering Report prepared by Landau Associates (Appendix M).

Since that report, passive Chitosan addition was applied to the effluent from Basins 1, 2 and 4 prior to filtration. The nature of this addition is provided as Appendix M.

Chitosan addition is a passive system using "bags" of chitosan acetate. Each of these "bags" has a "life" of about 100,000 gallons. Meters on the Aquip Units will determine the need for replacement. For the Basin 4 drainage, chitosan will be changed at the same rate as the Basin 1 system since the pumps are similar. (check the areas of these two basins).

Boatyard Collection and Treatment Drainage Basins

Basin	Major Surface Characteristics	Size	Treatment
East Sims	Gravel		Filter
West Sims	Gravel		Filter
Basin 1	Gravel		Settling Vault / Chitosan & Aquip
Basin 2	Gravel & Pavement		Settling Vault / Chitosan & Aquip
Basin 3	Pavement		Settling Vault
Basin 4	Gravel		Settling Vault / 2 Filters (Chitosan prior to final)

3.2 Stormwater Monitoring Requirements – Frequency and Parameters

Sampling of stormwater discharge will be conducted (if reasonably possible) in the following months:

- October
- November
- January
- April
- May

Samples are to be analyzed for total copper and total zinc concentrations

However, as needed, the Port will gather additional data on suspended solids, and dissolved copper and zinc. These data will be used to help to improve treatment and maintenance of the system.

Benchmarks for Stormwater Discharge to Marine Water

Parameter	Seasonal Benchmark	Average	Maximum Benchmark	Daily
Total Copper (µg/L)	50		147	
Total Zinc (µg/L)	85		90	

3.3 Treatment System

The current treatment system has been modified to collect and treat the required storm event in all basins. Basins 1 and 2 have both involve re-designed multimedia filters (East Sims and West Sims) for their northern collection areas while flow to the respective basin vaults are pumped to above ground Stormwater Rx units. Basin 4 flows are collected and treated by two multimedia filters before discharge. All flow from the northern portion of the drainage area is collected and pumped to the southern filter (B6) even though a portion has been already collected and treated through the northern filter system (B5). Basin 3 collects stormwater primarily from asphalt areas used for parking and transit. Therefore, this flow only passes a settling chamber (Vault 3) prior to discharge.

3.4 Qualifying Storm Event

Before sampling the following will be assessed:

Rainfall has been in excess of 0.1 inches for the event. Data should be obtained from the Port Townsend Paper Company site or the Port Townsend "Bluff" weather station:

<https://www.wunderground.com/personal-weather-station/dashboard?ID=KWAPORTT9>

<https://www.wunderground.com/personal-weather-station/dashboard?ID=KWAPORTT50>

At least 3 of the 4 major basins should be "flowing" as indicated by:

- Basin 1: The Aquip pumps are running and the unit is discharging
- Basin 2: The Aquip pumps are running and the unit is discharging
- Basin 4: The pumps are running (discharge to the B6 filter system)

Flow must be verified by pump operation, obvious stormwater within the treatment unit, or other observable means flow verification. If flow conditions are met, sampling will be undertaken. For East and West

Sims Basins – Flow will be adequate if there is observable flow to the filter surface. If Basins 1, 2 and 4 are flowing, it is assumed Basin 3 is flowing.

Sampling Locations:

- East Sims Filter
- West Sims Filter
- Vault 1 Aquip Unit
- Vault 2 Aquip Unit
- Vault 3 Discharge Chamber
- Filter B6

3.5 Stormwater Analytical Procedures - See Section 6

3.6 Reporting of Analytical Results for Stormwater

3.6.1. Flow Based – Use of Transducer Data

Flow can be estimated using pressure transducers and calculations of flow based on water level and pipe size (.....). For Filter B6, two flow measurements will be required where flow from the northern portion of the shipyard will be combined from the flow from the south to get total flow through the filter.

Pressure Transducers are located at:

- CB26 – Entry to East Sims Filter
- CB34 – Entry to West Sims Filter
- CB21B – Entry to Vault 1
- CB37 – Entry to Vault 2
- CB41 – Entry to Vault 3
- CB63 – Entry to Vault 4 (Part of B6 flow)
- CB57A – Entry to B6 Filter (Part of B6 flow)

Using this approach, the total flow of the system can be calculated, and the proportion from each basin calculated. The analytical results can be flow weighted and a composite number calculated for each parameter.

Because the pressure transducer approach needs to be verified and the models verified, it may be necessary to use the Area

Based approach below. In addition, if all samples are within benchmark values, it may be easier to report using the area approach.

3.6.2. Area Based

The Area Based approach assumes uniform contribution of flow by unit of surface area. Therefore, an area with twice the area would theoretically provide twice the flow of the other. Only area with flow occurring will be used in the calculation. Analytical data would be weighted based on area, and then a composite concentration calculated.

3.6.3. Additional Event Sampling

According to Condition S9(D) of the permit, "If the Permittee monitors any pollutant at a designated sampling point (addressed in Condition S6 (Monitoring Requirement)) more frequently than required by this general permit using test procedures specified by Condition S6.C (Analytical Procedures), then it must include the results of this monitoring along with the data submitted in its monthly DMRs, as an electronic attachment or submittal to the Ecology Water Quality Permitting Portal."

This is interpreted as follows: Should sampling occur during more than one event during a reporting month, the results will be averaged to determine the reportable value. All values will be reported as an addendum to the DMR.

When sampling occurs in "non-sampling" months, then these results will also be reported as an addendum to the DMR, and these data used as part of the seasonal average calculation.

3.7 Stormwater Sampling Procedures

To the extent possible, all sampling will follow the guidance presented in the Stormwater Sampling Manual (Department of Ecology, 2015 – Appendix O).

Use of laboratory provided one liter containers will be used if at all possible. Once a sample is collected, bottle will be capped, sealed, and labeled.

The following items will be recorded at the time of sampling:

- Sampling location ;
- Date of sampling;
- Time of sampling;
- Name of the sampler(s);
- Unusual circumstances that may affect the sample results;
- Visual observations.

Following a sampling event, the lead person conducting the sampling will prepare a brief summary of the sampling event with documentation of rainfall, flow conditions, tide elevation, and other pertinent information relative to the sampling event.

3.8 System Maintenance and Management

System Maintenance and Management of the stormwater collection and treatment system consists of:

- Routine monitoring of performance of treatment units.
- Catch basin insert and system cleaning
- Monitoring pump performance / status

The procedures for these activities are under development and will be detailed as Appendix F.

4. PRESSURE WASH MONITORING PLAN

4.1 Pressure Wash Treatment System

Approximately 900 vessels are hauled out of the water per year and about 1000 vessels are pressure washed each year. While this activity is conducted year-round, the majority of the work takes place in the spring, summer, and fall. During these seasons, the facility regularly treats approximately 900 gallons of pressure wash water per day with a capacity of up to 1100 gallons per day. Boat washing is conducted within the wash pad areas, which are equipped with a slot drains and catch basins which collect the pressure wash water and convey it to a sump adjacent to the treatment facility. Pressure wash water is pumped from the sump into the treatment building where it is treated with lime

and flocculent agent to separate water from solids. The treated water is run through a filter press and a wash water filtration system (filter canisters) to filter out remaining solids from the wash water prior to sampling.

DMR's are submitted to the Department of Ecology electronically and hard copies are placed in Appendix E. The treated pressure wash water is discharged to the City of Port Townsend (City) Wastewater Treatment Facility. Collected solids are put through a filter press and delivered to the Jefferson County Waste Management Facility with final disposal in a Class D Regional Landfill (Roosevelt Regional Landfill). After use, the pad is cleaned of all debris, paint waste, sludge and other solids. The entire pad is then pressure washed into the collection sump which is treated as described above prior to discharge to the City's Wastewater System. When not use, the wash pads are allowed to discharge stormwater from the pressure wash pad to the stormwater system.

4.2 Monitoring Requirements – Frequency and Parameters

Sampling of pressure wash wastewater will be conducted in the following months:

- June
- July
- August
- September.

Samples are to be analyzed for total copper, total lead, total zinc, and pH.

4.3 Discharge Limits

Pressure wash water discharge limits are as follows:

Parameter	Maximum Daily (a)	Sample Point	Minimum Sampling Frequency	Sample Type
Total Copper	2.4 mg/L	Discharge from Pressure-Washing Wastewater Treatment System	Once in each of the months of June, July, August, and September	Grab or Composite
Total Lead	1.2 mg/L	Discharge from Pressure-Washing Wastewater Treatment System	Once in each of the months of June, July, August, and September	Grab or Composite
Total Zinc	3.3 mg/L	Discharge from Pressure-Washing Wastewater Treatment System	Once in each of the months of June, July, August, and September	Grab or Composite
pH	Within the range of 5.0 to 11.0	Discharge from Pressure-Washing Wastewater Treatment System	Once in each of the months of June, July, August, and September	Grab or Composite

- (a) Maximum daily effluent limit is the highest allowable daily discharge. The daily discharge is the arithmetic average measurement of the pollutant over a day. Averaging does not apply to pH, which must be reported as the highest and lowest values if more than one sample is taken in a day.

4.4 Sampling Location

As indicated above, sampling is required at the discharge point of the Wastewater Treatment System. A sampling port is used immediately after final wastewater filtration (canisters), and prior to discharge.

4.5 Pressure Wash Sampling Procedures

For the Pressure Wash Facilities, a grab sample is taken at the frequency required by the permit and previously outlined.

4.6 Pressure Wash Analytical Procedures – See Section 6

4.7 System Maintenance and Management - Described in Appendix G

5. ROOF DRAIN MONITORING PLAN

5.1 Treatment System

The drainage system consists of 17 treatment units attached to many of the downspouts of buildings throughout the boatyard. Two of the units were manufactured by Stormwater Rx while the remaining units were built by Olympic Biochar and the Port.

Tote No.	Installation Date	Bldg No.	Manufacturer	Media Type	Treated Surface Area (Sq. Ft.)	Drain Configuration
1	11/20/1914	11	Jofran	Biochar mix	3,000	Hard Plumbed
2	11/19/2014	5	Jofran	Biochar mix	3,000	Hard Plumbed
3	11/4/2014	7	Jofran	Biochar mix	3,000	Hard Plumbed
7	4/22/2015	20	Jofran	Biochar mix	2,400	Surface Flow
9	12/4/2014	4	Jofran	Biochar mix	2,500	Surface Flow
10	12/4/2014	4	Jofran	Biochar mix	2,500	Surface Flow
11	2/23/2015	20	Jofran	Biochar mix	1,290	Surface Flow
12	11/12/2014	12	Jofran	Biochar mix	1,500	Surface Flow
13	11/4/2014	9	Jofran	Biochar mix	3,000	Surface Flow
14	2/9/2016	13	Jofran	Biochar mix	2,400	Surface Flow
15	4/8/2015	25	Jofran	Biochar mix	800	Surface Flow
16	12/3/2014	8	Jofran	Biochar only	1,500	Surface Flow
17	12/3/14	8	Jofran	Biochar mix	1,500	Hard Plumbed
18	11/12/2014	12	Jofran	Biochar only	1,500	Surface Flow
21	4/27/2014	28	Jofran	Biochar/Compost	1,068	Surface Flow
22	4/27/2014	28	StormwaterRx	Sand/Activated Charcoal	1,068	Surface Flow
23	4/27/2014	10	StormwaterRx	Sand/Activated Charcoal	13,448	Hard Plumbed

The location of these units is shown on Figure 4.

The majority of this system (62%) drains to Basin 3 (Vault 3), and 23% is piped to stormwater collection along Haines Place where a stormwater pipe carries the flow to Outfall A. Small proportions of the system flow (15%) goes to Basin 1.

Design of the Port units is described in Appendix H

5.2 Monitoring Requirements – Frequency and Parameters

There are no specific monitoring requirements for this system since it is technically not covered under the permit (roof drainage).

However, this system has been shown to effectively remove metal contaminants, and it represents a considerable investment by the Port, monitoring is necessary to assess performance of the system and to determine maintenance over time.

Sampling parameters are:

- Total copper
- Total zinc

Based on previous sampling within the system, specific representative locations have been selected for performance monitoring.

The monitoring frequency should at a minimum be annual and occur in January of each year. If the treatment performance of various units is noted, this provides several months within which verification of performance for other similar units can be assessed. For those units where performance has been degraded, replacement of the media will be scheduled for the following summer (dry months).

5.3 Discharge Limits

There are no regulatory discharge limits for roof drainage, but given the benchmarks for zinc and copper for the overall boatyard, these levels seem appropriate when looking at breakthrough on the targeted monitoring locations.

5.4 Sampling Location

Since the roof drainage system was initiated, a couple locations have been monitored as indicator sites. These are:

- Unit 21 – Building 28 – Tote with compost
- Unit 22 – Building 28 – Stormwater Rx Unit with Rx media

Both of these units were removing zinc exceeding 99% in during the first year of operation (2014-15).

However, continued analysis of the 17 system totes is required. This will mean selective sampling and data development over several years.

5.5 Sampling Procedures

Sampling procedures involve use of sample bottles provided by the laboratory. Sampling occurs in the inflow to the treatment tote, and at the outfall (2 samples). These are processed as quickly as possible and transported to the laboratory.

5.6 Roof Drain Analytical Procedures - Refer to Section 6

5.7 System Maintenance and Management – Described in Appendix H.

6. ANALYTICAL PROCEDURES AND REPORTING

6.1 Sampling and Reporting

The Port's Environmental Specialist is responsible for conducting sampling. The results of sampling and analysis will be submitted electronically to Ecology. If there is no discharge during the entire month, no sample will be collected and a report will be submitted stating that no discharge occurred. Visual inspections of the site will be conducted weekly. Monitoring records will be retained on site for a minimum of 5 years.

When the Port applied for coverage under the Boatyard General Permit in 2011, stormwater discharge from Outfall "A" was considered to be representative of stormwater discharge from the boatyard. However, sampling of discharges from Outfall A has not practical for most of the time because of tide / weather combinations. The sampling and compositing procedure for stormwater outlined in Section 3 is now used to represent Outfall A. If stormwater discharges do not occur during the sampling period, then "no discharge" will be indicated on the Discharge Monitoring Report (DMR). Sampling results are reported electronically to Ecology in a DMR, no later than the 28th day of the month following the sample collection month.

Samples will be sent to an Ecology-certified laboratory (Spectra Labs, located at 26278 Twelve Trees Lane, Suite C, Poulsbo, WA) for analyses of the applicable parameters.

6.2 Sample Analysis and Preservation

Samples will be analyzed, handled, and preserved in accordance with Code of Federal Regulations (CFR) Title 40 Part 136. Samples will be submitted to Twiss Labs, a laboratory accredited under WAC 173-50, Accreditation of Environmental Laboratories. The required method detection limits and quantitation levels are shown in Table 2 below.

6.3 Analytical Methods

Parameter	Analytical Method (Accuracy)	Detection Limit (a)	Quantitation Level (b)
Total Copper	EPA 200.8 – ICP/MS ($\pm 0.1 \mu\text{g/L}$)	0.4	2.0
Total Zinc	EPA 200.8 – ICP/MS ($\pm 0.1 \mu\text{g/L}$)	0.5	2.5
Total Lead	EPA 200.8 – ICP/MS ($\pm 0.1 \mu\text{g/L}$)	0.1	0.5
pH	SM 4500-H ⁺ B – Meter (± 0.02 standard units)	NA	NA

Analytical methods are from “Methods for Chemical Analysis of Water and Wastes,” U.S. EPA, Environmental Monitoring Systems Laboratory – Cincinnati, EPA-600/4-020, Revised March 1983 and 1979; “Precision and Recovery Statements for Methods for Measuring Metals,” Appendix D of 40 CFR Part 136; and 40 CFR Part 136.3.

(a) **Detection Limit:**

The minimum concentration of an analyte that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero as determined from analysis of a sample in a given matrix containing the analyte by the procedure given in 40 CFR Part 136, Appendix B.

(b) **Quantitation Level** (also known as minimum level of quantitation or practical quantitation level):

- (1) The lowest level at which the entire analytical system must give a recognizable signal and acceptable calibration point for the analyte. It is equivalent to the concentration of the lowest calibration standard, assuming that the laboratory has used all method-specified sample weights, volumes, and cleanup procedures. The quantitation level is calculated by multiplying the method detection limit by 3.18 and rounding the result to the number nearest to $(1, 2, \text{ or } 5) \times 10^n$, where n is an integer. (64 FR 30417)
- (2) The smallest detectable concentration of analyte greater than the method detection limit where the accuracy (precision & bias) achieves the objectives of the intended purpose. (Report of the Federal Advisory Committee on Detection and Quantitation Approaches and Uses in Clean Water Act Programs, Submitted to the U.S. EPA December 2007)

6.4 Miscellaneous discharge monitoring

The non-stormwater miscellaneous discharge inspection shall determine the presence of non-stormwater discharges such as firefighting activities, fire protection system testing and maintenance, dechlorinated potable water, uncontaminated condensate, uncontaminated groundwater, and dewatering activities to the stormwater drainage system. Such discharges are conditionally approved provided they are in compliance with all applicable discharge limitations, including compliance with state water quality standards. These discharges will be documented on Worksheet 7 (and kept in Appendix C).

6.5 Visual Inspections

Visual inspections of the site will be conducted weekly by qualified personnel and the results will be recorded on Worksheet #8 (and kept in Appendix C) and kept with the SWPPP for a minimum of five years. Inspections will include: observations made at the stormwater sampling location (Outfall "A") where stormwater associated with industrial activity is discharged; observations for the presence of floating materials, visible oil sheen, discoloration, turbidity, odor, etc. in the stormwater discharge; observations for the presence of illicit discharges such as domestic wastewater, noncontact cooling water, or process wastewater; verification that the descriptions of potential pollutant sources are accurate; verification that the site map in the SWPPP reflects current conditions; and an assessment of all BMPs that have been implemented.

Inspection of BMPs will include an assessment of the condition of the BMP and whether it is likely to be effective in controlling pollutants from entering stormwater discharge; locations, reasons for maintenance, and schedule for maintenance for any BMP that requires maintenance; and locations where additional or different BMPs are needed and the corresponding rationale. Weekly inspection reports will be signed by the person making the observations.

7. BEST MANAGEMENT PRACTICES

Most stormwater BMPs implemented at the facility and listed in this SWPPP use the Presumptive Approach to demonstrate that the BMPs comply with state water quality standards and satisfy the technology-based treatment requirements of 40 CFR Part 125.3, as they were approved by Ecology and outlined in Stormwater Management Manual for Western Washington (Ecology, August 2012).

Technical basis for additional treatment BMPs such as the Stormwater Rx filtration systems installed in 2010 is described in the 2013 Level Three Engineering Report (Appendix M - Landau Associates 2013). The revisions made to the system in 2017 included treatment improvements, and relocation of one of the AQUIP units. These activities are supported by the information in the 2016 Level Three Engineering Report (Appendix M - Landau Associates 2016).

Permit required BMPs are summarized below.

7.1 Mandatory BMPs

As required by the Permit, the following mandatory BMPs will be implemented at this site by all boatyard employees, contractors, boat owners, and other customers. Because these BMPs reflect Port policy, they have been expanded and adopted by the Port as part of the Port's Rules and Regulations. To assist in implementation, this expanded list is provided as Appendix B. Mandatory BMPs are summarized in Worksheet #9 (Appendix C).

7.1.1. Use of Vacuum Sander

A vacuum sander or rotary tool meeting minimum performance standards shall be used for all paint removal where a sander is appropriate. Non-vacuum sanders and grinders are prohibited.

Port Standards are as follows:

Sander:

- 98% dust extraction
- Suitable for lead abatement
- Electric or air powered

Vacuum:

- Static water lift = 60 inches minimum
- Air flow = 116 cfs minimum
- Power = 900 watts minimum
- Filter= 1 micron cartridge minimum, recommended filtration – 5 micron bag filter, plus a 1 micron cartridge filter, plus a 0.5 micron filter

7.1.2. In-Water Vessel Maintenance and Repair

Cleaning, repair, modifications, and surface preparation or coating of any portion of a vessel's hull while the vessel is afloat is prohibited. If this work is necessary, then the Port and customers must haul the vessel out onto the upland portion of a facility covered by this general permit or another facility covered by an individual permit issued in accordance with the provisions of Chapter 173-220 WAC.

Only minor in-water repair, modification, surface preparation, or coating of topside or superstructure is allowed, limited to 25% of the topside surface. When stripping, sanding, scraping, sandblasting, painting, coating and/or varnishing any deck or superstructure of a vessel in-water, the Port and customers must collect all particles, oils, grits, dusts, flakes, chips, drips, sediments, debris, and other solids to prevent their release into the environment and entry into waters of the State.

The Port and customers must securely fasten drop cloths, tarpaulins, drapes, shrouding, or other protective devices between various portions of the vessel or between the vessel and the dock, pier, boathouse, bulkhead, or shoreline to collect all such materials. No work from a float, a barge, or another boat is allowed. The Permittee must clean up all collected materials daily to prevent their release into the environment and entry into waters of the State.

7.1.3. Upland Vessel Maintenance and Repair

When stripping, sanding, scraping, sandblasting, painting, coating, or varnishing any portion of a vessel, all particles, oils, grits, dusts, flakes, chips, drips, sediments, debris and other solids shall be collected and managed to prevent their release into the environment and entry into waters of the state.

Drop cloths, tarpaulins, structures, drapes, shrouding, or other protective devices shall be secured around the vessel, as necessary, to collect all such materials. The cleanup of all collected materials shall be routinely undertaken to prevent their release into the environment and entry into waters of the state.

7.1.4. Solids Management

All particles, oils, grits, dusts, flakes, chips, drips, sediments, debris and other solids from work, service and storage areas of the boatyard shall be collected to prevent their release into the environment and entry into waters of the state. The minimum collection frequency is once per day when solids-generating activity is occurring. Solids shall be kept as dry as possible during collection and shall not be washed into any surface water or into a stormwater collection system.

Marine railways and dry docks shall be cleaned of all solids and garbage prior to being submerged to prevent such materials from being washed into waters of the state.

The Port has installed sediment traps in all storm drains to intercept and retain solids prior to their discharge into waters of the State. The Port must visually inspect sediment traps, storm drains, and catch basins weekly and clean these devices, either manually or with a vacuum device, on a routine basis to prevent the entry of solids into waters of the State.

7.1.5. Paint and Solvent Use

Paints and solvents shall be used in such a manner as to prevent their release into the environment and entry into waters of the state. Drip pans, drop cloths, tarpaulins or other protective devices shall be used during surface preparation, paint transfer, solvent transfer, paint mixing, and application unless completely enclosed in a building.

Painting of the hull surface over water is prohibited except for minor touchup, such as the vessel numbers, with non-metallic paints. When painting decks or superstructure, paint cans shall be placed in a drip pan on top of a drop cloth or tarpaulin. Paints and solvents shall only be mixed at secure locations onshore or onboard a vessel.

Paints containing tributyltin are prohibited from use on any vessel less than 25 meters in length (82 feet) except as applied by a licensed applicator for the painting of aluminum hulls of a vessel that is less than 25 meters in length, and for the painting of

outboard motors and outdrives of vessels less than 25 meters in length.

Only persons with a current Washington State Department of Agriculture pesticide applicator license may purchase, handle, and apply tributyltin.

7.1.6. Oils and Bilge Water Management

Hydraulic fluids, oily wastes, and petroleum products shall not be discharged to waters of the state. Bilge water discharges shall not cause any visible sheen in waters of the state.

Bilge waters shall not be discharged to waters of the state if solvents, detergents, emulsifying agents, or dispersants have been added to the bilge. If a vessel is moved prior to pumping out the bilge, absorbent pads shall be used to prevent the accidental discharge of oils to waters of the state.

Bilge water is not permitted to be discharged to the ground or to the Port's washdown water system. Vessel owners may elect to discharge bilge water to 300 gallon intermediate bulk containers (IBCs) provided by the Port. Transfer of bilge water to IBCs shall be conducted under the supervision of Port staff. Alternately, vessel owners may elect to contract for pump out services from a private sector service provider. Upon request, the Port will supply vessel owners with contact information for such service providers.

Bilge water collected by the Port will be stored in IBCs in either of two secured, locked areas of the facility: the long-term storage yard or the storage area adjacent to the 300 ton travelift pad. The number of IBCs and the area of storage will vary seasonally and depend on the type of work conducted in various areas of the boatyard/shipyard. When storage capacity is within 300 gallons of total holding capacity the Hoist and Yard Manager will call for service from a licensed carrier.

Drip pans or other containment devices shall be used during all petroleum product transfer operations to catch incidental leaks and spills. Absorbent pads and booms shall be available during petroleum transfer operations occurring over water.

7.1.7. Sacrificial Anode (Zincs) Management

Zincs used as sacrificial anodes shall not be disposed of into waters of the state. Spent zincs shall be stored in a covered container and be recycled for their material value.

7.1.8. Chemical Management

Solid chemical products, chemical solutions, paints, oils, solvents, acids, caustic solutions and waste materials, including used batteries, lead, and copper waste, shall be stored under cover on an impervious surface.

All chemical liquids and fluids shall be stored on a durable impervious bermed surface capable of containing 10 percent of the total tank and container volume or 110 percent of the largest tank or container volume, whichever is greater.

7.1.9. Wash Pad Decontamination

Prior to actively pumping or passively discharging any stormwater from the pressure wash pads to waters of the State, the Port must clean the pad of all debris, paint waste, sludge, and other solids. The Port must then pressure wash the entire pad into the collection sump and clean the pad and sump of all debris, wastewater, and other solids.

7.1.10. Sewage and Gray Water Discharges

Owners of vessels moored for repair or under repair at a permitted facility shall be notified in writing by the Permittee that this permit prohibits the discharge of sewage (including discharges from the vessel's galley) into waters of the state. Sanitary waste discharges shall be to either the sanitary sewer or into a holding tank. The Permittee shall make available to customers a list of contractors providing holding tank pump-out services.

7.2 Other Best Management Practices

The framework for additional operational and structural source control BMPs is outlined in Section S8 of the Permit. Consistent with Section S8(B)(3), the following applicable BMPs have been adopted by the Port:

7.2.1. Operational BMPs

This document must contain Operational Source Control BMPs listed as “applicable” in Ecology’s Stormwater Management Manual (SWMM), approved stormwater technical manuals chosen per Condition S8.A.3. Implementation activities to implement and improved these BMPs are outlined on Worksheet #10 (Appendix C).

Selected Operational BMPs are provided in Appendix B. These BMPs are applicable to all users of the Port.

Worksheet #10 contains an ongoing list of tasks which need to be completed in order to fully implement or improved Required Operational Source Control BMP compliance and programs for the Port.

7.2.2. Applicable Boatyard Structural Source Control BMPs

The SWPPP must include the Structural Source Control BMPs listed as “applicable” in Ecology’s SWMM, approved stormwater technical manuals chosen per Condition S8.A.3

- Use fixed platforms with appropriate plastic or tarpaulin barriers as work surfaces and for containment when work is performed on a vessel in the water to prevent blast material or paint overspray from contacting stormwater or the receiving water. Use of such platforms will be kept to a minimum and at no time be used for extensive repair or construction (anything in excess of 25 percent of the surface area of the vessel above the waterline).
- Use plastic or tarpaulin barriers beneath the hull to contain and collect waste and spent materials. Clean and sweep regularly to remove debris.

- Enclose, cover, or contain blasting and sanding activities to the maximum extent practicable to prevent abrasives, dust, and paint chips, from reaching storm sewers or receiving water. Use plywood or plastic sheeting to cover open areas between decks when sandblasting (scuppers, railings, freeing ports, ladders, and doorways).

7.2.3. Pollution Prevention Team

The responsibilities and makeup of the pollution prevention team are presented in Section 1 and Worksheet #1 (Appendix C).

The Port and its marine trade tenants recognize that effective pollution prevention is a shared responsibility. Meeting stormwater benchmarks will require a full team approach which has been initiated with regularly occurring meetings with the Port Townsend Marine Trades Association and other Boat Haven tenants to discuss effective BMPs and how they will be implemented.

7.2.4. Good Housekeeping

Implement the following good housekeeping activities at the site:

- Abandoned or “orphaned” non-regulated hazardous waste such as paints, solvents and lead acid batteries shall be stored on secondary containment pallets located in the storage container adjacent to the boatyard washdown building. These materials will be taken to the Jefferson County Household Hazardous Waste Facility at the first opportunity.
- Clean regularly all accessible work, service and storage areas to remove debris, spent sandblasting material, and any other potential stormwater pollutants.
- Promptly contain and clean up solid and liquid pollutant leaks and spills including oils, solvents, fuels, and dust from manufacturing operations on any soil, vegetation, or paved area exposed to stormwater.
- Sweep paved material handling and storage areas regularly as needed to collect and dispose of dust and debris that could contaminate stormwater. Do not hose down pollutants from any area to the ground, storm drain, conveyance ditch, or receiving water unless necessary for dust control purposes to meet air quality regulations and unless the pollutants are conveyed to a treatment system approved by the local jurisdiction.

- Collect spent abrasives regularly and store under cover to await proper disposal.
- Dispose of greasy rags, oil filters, air filters, batteries, spent coolant, and degreasers properly.
- Convey sanitary sewage to pump-out stations, portable on-site pump-outs, or commercial mobile pump-out facilities or other appropriate onshore facilities.
- Maintain automatic bilge pumps in a manner that will prevent waste material from being pumped automatically into surface water.
- Prohibit uncontained spray painting, blasting or sanding activities over open water.
- Do not dump or pour waste materials down floor drains, sinks, or outdoor storm drain inlets that discharge to surface water. Plug floor drains that are connected to storm drains or to surface water. If necessary, install a sump that is pumped regularly.
- Prohibit outside spray-painting, blasting, or sanding activities during windy conditions that make containment ineffective.
- Do not burn paint or use spray guns on topsides or above decks.
- Immediately clean up any spillage on dock, boat, or ship deck areas and dispose of the wastes properly.
- Consider recycling paint, paint thinner, solvents, used oils, oil filters, pressure wash wastewater and any other recyclable materials.
- Perform paint and solvent mixing, fuel mixing, etc. onshore.
- Clean oils, debris, sludge, etc. from all BMP systems regularly, including catch basins, sedimentation basins, oil/water separators, boomed areas, and conveyance systems, to prevent the contamination of stormwater.
- Promptly repair or replace all substantially cracked or otherwise damaged paved secondary containment, high-intensity parking, and any other drainage areas, which are subjected to pollutant material leaks or spills.
- Promptly repair or replace all leaking connections, pipes, hoses, valves, etc., which can contaminate stormwater.
- Use solid absorbents, e.g., clay, peat absorbents, and rags for cleanup of liquid spills/leaks, where practicable.

7.2.5. Preventive Maintenance

Implement the following preventive maintenance activities at the site:

- Prevent the discharge of unpermitted liquid or solid wastes, process wastewater, and sewage to ground or surface water or to storm drains, which discharge, to surface water or to the ground. Floor drains in potential pollutant source areas shall not be connected to storm drains, surface water, or to the ground. Eliminate illicit non-stormwater discharges within 30 days of discovery.
- Conduct all oily parts cleaning, steam cleaning, or pressure washing of equipment or containers inside a building and/or on an impervious contained area such as a concrete pad. Direct contaminated stormwater from such an area to a sanitary sewer where allowed by local sewer authority, or to a storm drain.
- Do not pave over contaminated soil unless it has been determined that groundwater has not been and will not be contaminated by the soil.
- Construct impervious areas that are compatible with the materials handled. Consider using Portland cement concrete, asphalt, or equivalent material.
- Use drip pans to collect leaks and spills from equipment such as cranes, industrial parts, trucks, and other vehicles that are stored outside. After a spill or leak is collected in an uncovered area, empty drip pan immediately.
- Drain oil from fuel filters before disposal. Discard empty oil filters, fuel filters, oily rags, and other oily solid waste into appropriately closed and properly labeled containers and in compliance with the Uniform Fire Code.
- For the storage of liquids use containers, such as steel and plastic drums, that are rigid and durable, corrosion resistant to the weather and fluid content, non-absorbent, water tight, rodent-proof, and equipped with a close fitting cover.
- For the temporary storage of solid wastes contaminated with liquids or other potential pollutant materials use dumpsters, garbage cans, drums and comparable containers that are durable, corrosion resistant, non-absorbent, non-leaking, and equipped with either a solid cover or screen cover to prevent

littering. If covered with a screen, the container must be stored under a lean-to or equivalent structure.

- Store cracked batteries in a covered secondary container.
- Where exposed to stormwater, use containers, piping, tubing, pumps, fittings, and valves that are appropriate for their intended use and for the contained liquid.

7.2.6. Spill Prevention and Reporting and Emergency Cleanup

- Stop, contain, and clean up all spills immediately upon discovery. Collect the contaminated absorbent material as a solid and place in appropriate disposal containers. Do not flush absorbent materials or other spill cleanup materials to a storm drain or to surface water.
- Notify Ecology and the local sewer authority immediately (within one hour) if a spill of reportable quantities has reached or may reach a sanitary or storm sewer, groundwater, or surface water. A spill of reportable quantity is any amount of material that can cause sheen or any amount of material that can pose a threat to human health or the environment. Take reasonable steps to minimize any adverse impacts to waters of the state and to correct the problem. If you call in the spill report, follow up with written documentation covering the event within thirty (30) days unless Ecology waives or extends this requirement.

Ecology regional 24-hour emergency spill response numbers are:

- Bellevue (Northwest Regional Office): 425-649-7000
- Olympia (Southwest Regional Office): 360-407-6300

Place and maintain emergency spill containment and cleanup kit(s) at outside areas where there is a potential for fluid spills. These kits should be appropriate for the materials being handled and the size of the potential spill, and readily accessible to personnel responsible for spill response.

7.2.7. Employee Training

All employees who work in pollutant source areas will be trained in identifying pollutant sources and in understanding pollutant control measures, spill prevention and response, good housekeeping, and environmentally acceptable material handling

and management practices. Training will be scheduled and implemented by the Pollution Prevention Team as described on Worksheet #11 (Appendix C)

8. ILLICIT DISCHARGES:

The SWPPP must include measures to identify and eliminate the discharge of process wastewater, domestic wastewater, and other illicit discharges, to stormwater sewers, or to surface waters and groundwaters of the State. The Permittee can find BMPs to identify and eliminate the discharge of process wastewater, domestic wastewater, and other illicit discharges in Volume IV of Ecology's SWMM for Western Washington and Chapter 8 of the SWMM for Eastern Washington.

Worksheet 12

9. ENHANCED/ADDITIONAL BMPS

The trigger, identification, and implementation schedule for enhanced or additional BMPs are documented in Worksheet #13 (Appendix C). Note that if the trigger is the benchmark exceedance of a specific pollutant, then the enhanced or additional BMP analysis will be limited to controlling this specific pollutant.

The Boatyard General Permit for the State of Washington (Ecology, March 2011) requires adaptive management if benchmarks are exceeded. The three levels of response are listed below and records of each are kept on the Forms and attachments of Appendices J through M.

The following responses are required when any monitoring result exceeds a benchmark value in a sampling period. An exceedance of a seasonal average benchmark counts as one exceedance for Level Two and Level Three Responses, but no additional Level One Response is required for exceedance of a seasonal average.

9.1 Level One Response

Each time a monitoring result for any parameter is above a benchmark value, the Permittee must take all of the following actions. For example, if a single sample for a monitoring period yields analytical results exceeding benchmarks for total copper and total zinc, then a Level One Response is required for each parameter, and the two results represent

two exceedances. A Level One Response is not required after four, five, or six exceedances.

- (a) Conduct an inspection of the permitted facility as promptly as possible after the monitoring results become available;
- (b) In addition to the elements identified in Condition S6.D (Visual Inspection Requirements), the inspection must:
 - Identify and evaluate possible sources of the exceeding parameter in the discharge,
 - Identify source/operational control methods by which the contamination can be reduced, and
 - Evaluate which improvements or changes to the SWPPP are necessary to control the exceeding parameter;
- (c) Summarize the inspection results in a Level One Response Form, including remedial actions taken or planned, and place them in the SWPPP, described in Condition S8 (Stormwater Pollution Prevention Plan); and
- (d) Submit a copy of the completed Level One Response Form to Ecology at the same time as submitting the corresponding DMR.

9.2 Level Two Response

During the effective term of the permit, when four monitoring results (potentially including the seasonal average) have accumulated for any one parameter at any stormwater monitoring location and exceed the benchmark for that parameter (e.g., three copper values from one monitoring location and one copper value from another monitoring location), the Permittee must perform the following actions.

- (a) Investigate all available and applicable stormwater treatment BMPs to reduce contaminant levels below the permit benchmark values. At a minimum, these must include examination of the options for covering the hull preparation area, treating the stormwater runoff, land infiltration of stormwater runoff, and sending the stormwater runoff to the municipal sewage treatment plant.
- (b) Prepare a Level Two Source Control Report outlining potential stormwater treatment practices or structures that may be appropriate at that location. These treatment practices or structures must be prioritized in the report according to expected cost and ease of

installation. Ecology recommends the Permittee review Ecology Publication Economic Impact Analysis: Draft Boatyard General Permit (Appendix P) for some options and the approximate cost of the options.

- (c) Submit the Level Two Source Control Report to Ecology within 3 months of reporting the fourth value above a benchmark.

9.3 Level Three Response

During the effective term of the permit, when any six monitoring results (potentially including the seasonal average) have accumulated for any one parameter at any stormwater monitoring location and exceed the benchmark for that parameter (e.g., four zinc values from one monitoring location and two zinc values from another monitoring location); or when the monitoring results for any two samples exceed a parameter benchmark value during the coverage under this permit if a Level Two Response requirement had been triggered for that same parameter under the previous Boatyard General Permit (issued June 1, 2011), the Permittee must install treatment as described in Subsection (a) below, unless the Permittee can demonstrate that treatment is either not feasible or not necessary as described in Subsection (b) below.

(a) Treatment

- i. The Permittee must prepare an Engineering Report that includes the following items, at a minimum:
 - Brief summary of the treatment alternatives considered and the reasons the proposed option was selected. The report must include cost estimates of ongoing operation and maintenance, including disposal of any spent media.
 - The basic design and construction data for all treatment devices and structures that are to be installed, including a characterization of the stormwater runoff influent and the sizing calculations of the treatment units.
 - A description of the treatment process and operation, including a flow diagram.
 - The types and amounts of chemicals used in the treatment process, if any.
 - A proposed schedule for implementation of the preferred option. Implementation must be completed within 12 months of the time when Ecology accepts the Engineering Report.

- Results expected from the treatment process, including the predicted characteristics of the stormwater runoff discharge.
 - A statement expressing sound engineering justification (through the use of pilot plant data, results from similar installations, and/or scientific evidence) that the proposed treatment is reasonably expected to meet the permit benchmarks and limits.
 - The Engineering Report must be prepared and certified by a licensed professional engineer unless the Permittee can demonstrate engineering competence and receives an exemption from Ecology.
- ii. The Permittee must submit the Engineering Report to Ecology within 3 months of reporting the six monitoring results above a benchmark. Ecology typically completes review of a well-done Engineering Report within 60 days. Failure to submit an acceptable Engineering Report may result in an order, penalty, or both. The Permittee must notify Ecology at the time the new or modified treatment BMP is in place and operational. Level One and Level Two Reports are not required for benchmark exceedances for the same parameter(s) that may occur during the period the preferred option is being put into place and started up.

(b) Demonstration that Treatment is Not Feasible or Not Necessary

Within 3 months of reporting the six monitoring results above a benchmark, the Permittee must submit to Ecology a demonstration that additional treatment BMPs are not feasible or not necessary. Ecology may subsequently approve modification of the permit in accordance with Condition S1.C (Modification of Permit Coverage) if the Permittee:

- i. Requests such a modification,
- ii. Fulfills all the requirements specified in Condition S1.C, and
- iii. Demonstrates to Ecology's satisfaction that one or more of the following conditions apply:
 - Installation of necessary treatment BMPs is not feasible by the Level Three deadline, up to a maximum of 15 months following reporting the six monitoring results above a benchmark.
 - Installation of treatment BMPs is not feasible or not necessary to prevent discharges that may cause or contribute to violation of a water quality standard.

In this context, "not necessary" means that even without the installation of additional treatment BMP(s), the permitted discharges would not cause or contribute to a violation of water quality standards. Likewise, "not feasible" means that specific local conditions would prevent the Permittee from installing the BMP(s), such as the Permittee's landlord or the local fire marshal refusing to allow the installation. "Not feasible" does not include a Permittee's financial limitations. RCW 90.48.520 states, "In no event shall the discharge of toxicants be allowed that would violate any water quality standard, including toxicant standards, sediment criteria, and dilution zone criteria."

10. INSPECTIONS, REPORTING AND RECORDKEEPING

10.1 General Procedures

The following procedures will be followed for all inspections, reporting and recordkeeping:

All required monitoring data will be provided to Ecology on the required DMR.

Worksheet forms will be used to summarize and report as applicable on the Worksheets in Appendix C.

DMRs will be delivered electronically no later than the twenty eighth day of the month following the sampling, unless otherwise specified.

All Ecology correspondence and reports will be sent to the appropriate Ecology regional office.

Records of all monitoring information will be maintained for a minimum of five years.

Records will include all calibration records, maintenance records, original recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for the boatyard general permit.

For each measurement or sample taken, the following information will be recorded:

- Date, exact place, method, and time of sampling.
- Individual who performed the sampling or measurement.

- Dates the analyses were performed.
- Name of the person(s) who performed the analyses.
- Analytical techniques or methods used.
- Results of all analyses.

10.2 Oversight of Do-It-Yourselfers and Independent Contractors

The Port will notify all owners of vessels moored at the Port in writing that the Port's Boatyard NPDES permit prohibits the discharge of sewage (including discharges from the vessel's galley) into waters of the State, and that sanitary waste must be discharged to either the sanitary sewer or into a holding tank. The Port has a list of contractors providing holding tank pump-out services available for customers.

The Port will provide a handout describing best management practices (BMPs) and provide copies to all employees, contractors, boat owners, and other customers, as appropriate. The Port will post these BMPs conspicuously within the work areas.

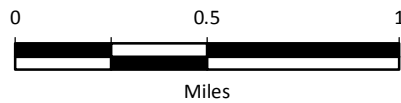
Vessel owners are required to sign an agreement prior to morrage or haulout that acknowledges that they have read, understood, and will abide by the BMPs. The Port will use the following process to resolve non-compliance of BMP's with vessel owners and contractors:

- 1st Incident - Environmental Specialist discusses the non-compliance issue with owner/contractor and works to resolve the issue
- 2nd Incident - Port delivers a written warning stating that further failure to abide by the BMP's will result in a Stop Work Order and/or expulsion from the facility.
- 3rd Incident - Stop Work Order and/or Notice of Eviction delivered to vessel owner and/or contractor

Each of the above steps in the compliance process involve increasing fees to compensate the Port consistent with the Port's Rules and Regulations (Section 5.06).

Compliance will be determined as part of the Port's weekly inspection process and by day to day observations by staff.

In addition to the weekly inspection and report, non-compliance will be documented on Worksheet #14 and will be maintained as part of Appendix C.



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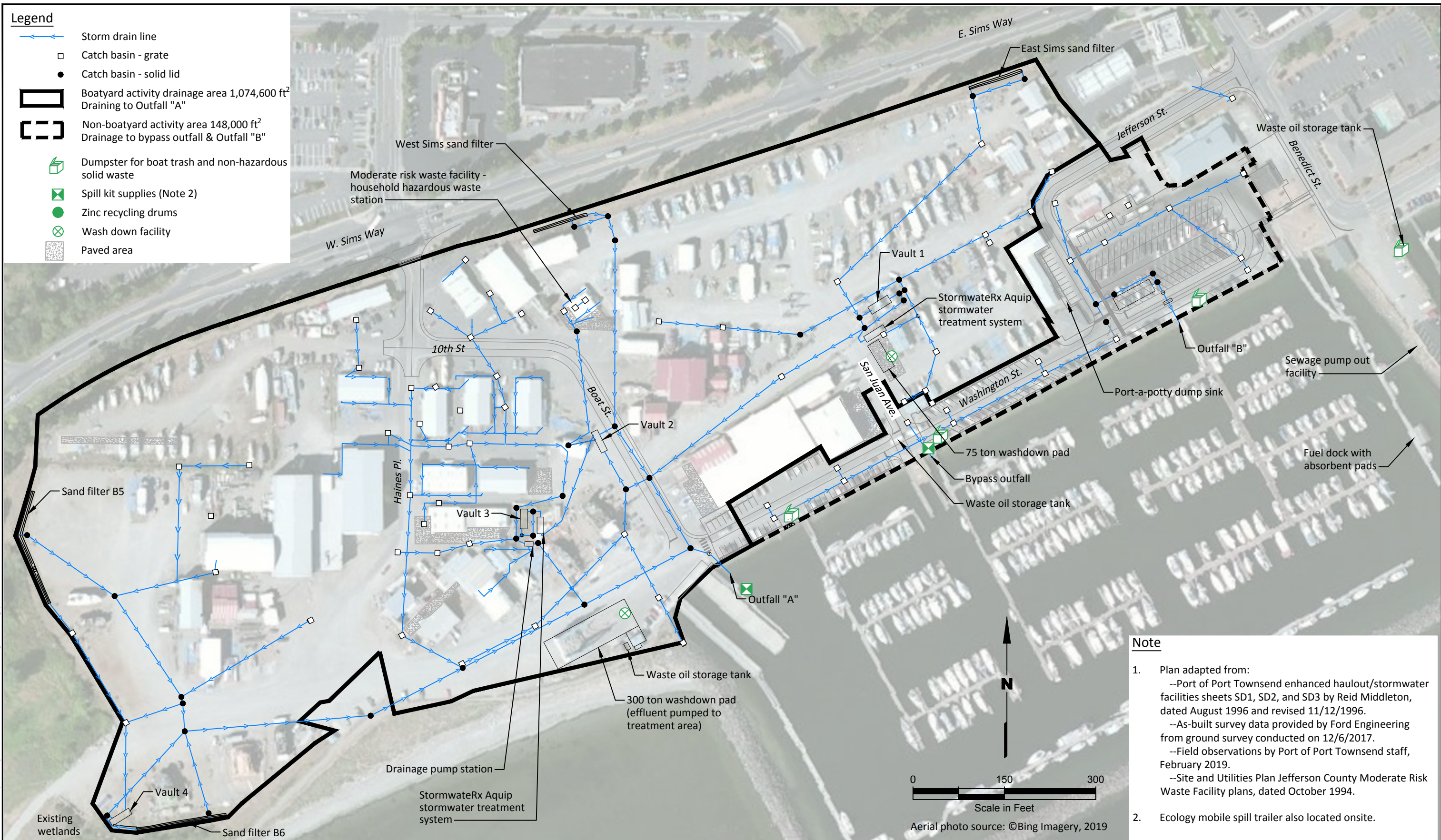
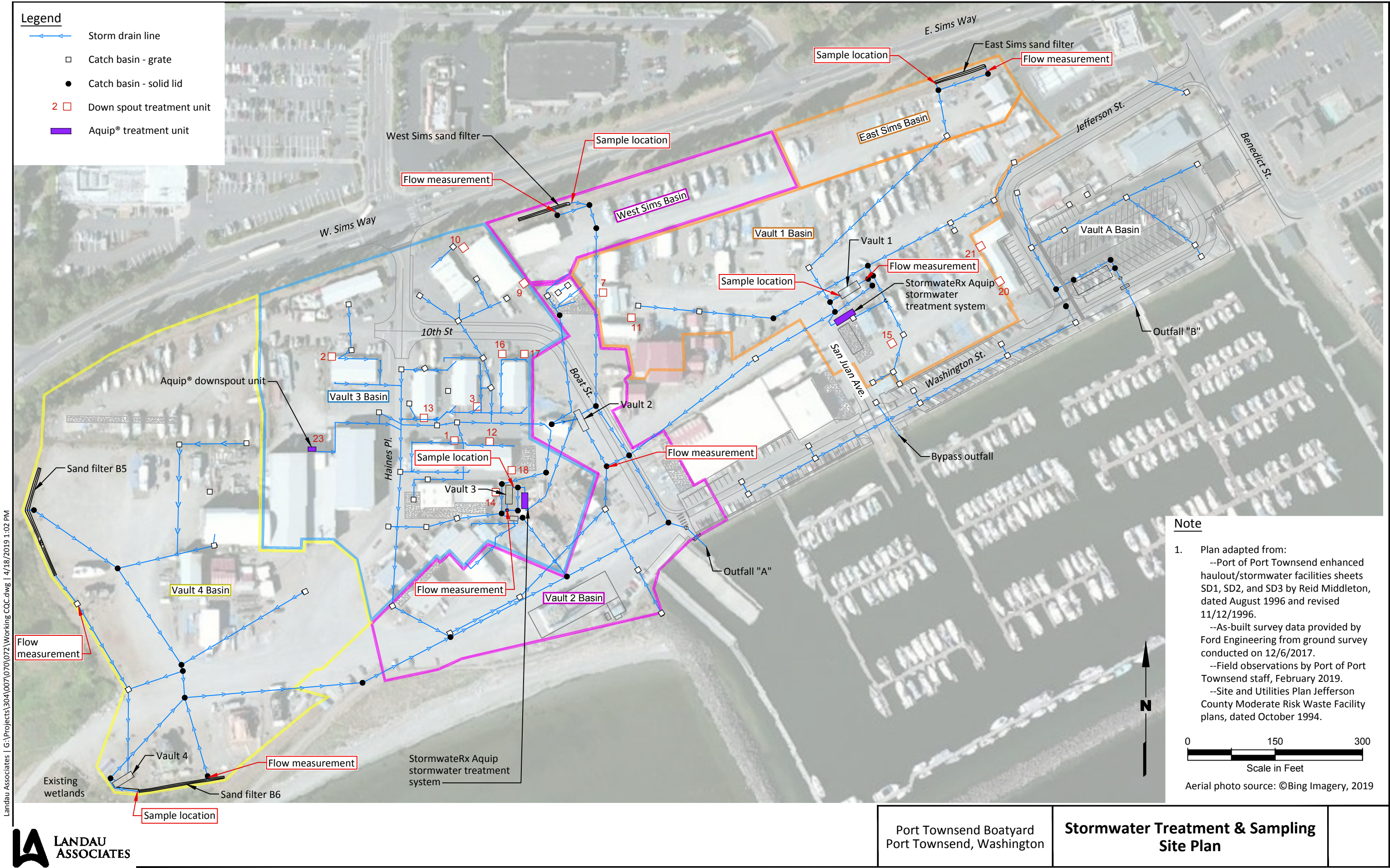


Figure 3 &4 Combined



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