

# Stormwater Pollution Prevention Plan

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(boatyard name)

Prepared in accordance with the Boatyard General Permit of  
Washington State, effective June 1, 2011

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## **Table**

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1 - Site Map

## **Worksheets**

- 1 - Pollution Prevention Team
- 2 - Identify Areas Associated With Industrial Activity
- 3 - Material Inventory
- 4 - Description of Exposed Significant Material
- 5 - Potential Pollutant Source Identification
- 6 - List of Significant Spills and Leaks
- 7 - Non-stormwater Miscellaneous Discharges
- 8 - Record of Visual Inspections of Stormwater Discharges
- 9 - Non-stormwater Discharge Monitoring
- 10 - Minimum BMP Identification
- 11 - BMP Implementation
- 12 - Employee Training
- 13 - Illicit Discharges
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## Acronyms and Abbreviations

BMPs	Best Management Practices
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
DMR	Discharge Monitoring Report
Ecology	Washington State Department of Ecology
ER	Engineering Report
GFAA	Graphite Furnace Atomic Absorption
MDL	method detection limit
mg/L	milligrams/liter
ML	minimum level
MSD	marine sanitation device
NPDES	National Pollutant Discharge Elimination System
POTW	publicly owned treatment works
RCW	Revised Code of Washington
SARA	Superfund Amendments and Reauthorization Act
SMMWW	Stormwater Management Manual for Western Washington
SWPPP	Stormwater Pollution Prevention Plan
TCLP	toxicity characteristic leaching procedure
TSS	total suspended solids
USEPA	United States Environmental Protection Agency
µg/L	micrograms per liter
WAC	Washington Administrative Code

### Certification

Certification by Responsible Company Official: I certify under penalty of law that this document and all attachments were prepared 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.

Name \_\_\_\_\_ Title \_\_\_\_\_

Signature \_\_\_\_\_

Date \_\_\_\_\_

Note: this template for a boatyard stormwater pollution prevention plan was prepared for the express use of the Northwest Marine Trade Association and its boatyard members. The Responsible Company Official certifying this boatyard-specific stormwater pollution prevention plan is entirely responsible for the final product.

The original boatyard stormwater pollution prevention plan template was updated by the Clean Boating Foundation in accordance with the current Boatyard General Permit for the State of Washington (Ecology, June 2011). Questions regarding the template should be directed to the Clean Boating Foundation at 206-612-8919.

# ***1. Pollution Prevention Team***

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The Pollution Prevention Team for this facility is outlined in Worksheet #1. The Pollution Prevention Team responsibilities include:

- Assisting the yard manager in the implementation, maintenance, and modification of this SWPPP;
- Holding regular meetings to review the overall operation of the BMPs;
- Sampling, inspections, operation and maintenance;
- Emergency situations; and
- Training of team members in the operation, maintenance, and inspections of BMPs.

## 2. Facility Assessment

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### 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; and
- Other activities necessary to maintain or construct a vessel.

\*(Add other activities conducted at the boatyard if they are considered to be industrial in nature)\*

The facility covers an area of \_\_\_\_\_ acres, approximately \_\_\_\_\_ percent of which is impervious surface (asphalt, concrete, etc.) and \_\_\_\_\_ percent is buildings. The yard has capacity of up to \_\_\_\_\_ vessels at any given time. Approximately \_\_\_\_\_ vessels are hauled out of the water per year and about \_\_\_\_\_ 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.

### 2.2 Site Map

A Site Map is provided on Figure 1.

\*\* (draw a site map that includes either a scale or relative distances between structures and drainage systems, and identify significant features, including the following:

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

## **2.3 Identification of Industrial Activity Areas**

Worksheet #2 identifies areas associated with industrial activities. Areas separate from industrial activity, such as office buildings and employee parking lots, are generally not included in the Facility Assessment. However, these areas should be included if they contribute pollutants (including zinc from galvanized roofing) to the permitted stormwater discharge.

## **2.4 Inventory of Materials**

This section includes an inventory of materials handled on the site that may have the potential to be exposed and contribute pollutants to stormwater, an assessment of potential pollutants associated with those materials, and an explanation of how significant materials are managed to prevent pollution of stormwater.

Worksheet #3 provides an inventory of materials handled on the site that may have the potential to be exposed and contribute pollutants to stormwater.

Worksheet #4 describes significant exposed materials on the site. The category of significant materials includes, but is not limited to, sand blast grit; raw materials; fuels; solvents, detergents, plastic pellets, metal products; hazardous substances designated under Section 101 (14) CERCLA; chemicals reported under Section 313 of Title III of SARA, and waste products such as pressure wash water, spent sand blast grit, ash, slag, and sludge that have the potential to be released with stormwater discharges.

Worksheet #5 describes potential pollutant sources and related pollutants at the site, based on boatyard activities.

Worksheet #6 provides a list of significant spills or leaks of toxic or hazardous pollutants that have occurred on the site.

## **2.5 Non-Stormwater Miscellaneous Discharges**

The non-stormwater miscellaneous discharges at the facility are listed in Worksheet #7. These discharges are specified as to volume, frequency of discharge, expected duration of discharge, and BMPs to assure that these discharges are uncontaminated.



## **3. Monitoring Plan**

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Sampling of stormwater discharges will be conducted in January, April, May, October, and November of each year. Visual observations of stormwater discharges will be made weekly, as discussed in Section 3.5. Monitoring for and sampling of non-stormwater discharges will occur as ordered by Ecology, as discussed in Section 3.6. The results of sampling and analysis will be submitted to Ecology. If there is no discharge during the entire month, a report will be submitted stating that no discharge occurred. Monitoring records will be retained on site for a minimum of 5 years. Sampling of each type of discharge is discussed in the following sections.

\_\_\_\_\_ (name or position) is responsible for conducting stormwater sampling.

### **3.1 Stormwater Discharge Locations**

The following locations discharge stormwater from the property (as indicated on Figure 1):

- 1.
- 2.
- 3.
- 4.

### **3.2 Stormwater Sampling Locations and Rationale**

Discharges to surface waters will be monitored in accordance with the following list of designated sampling locations and the monitoring schedule (Table 1).

The following designated sampling locations will be monitored (as indicated on Figure 1):

- 1.
- 2.
- 3.

Samples will be collected from locations affected by boatyard related activities. If there are more stormwater discharge points than designated stormwater sampling locations at the facility, the designated sampling locations will be selected to ensure monitoring is representative of the overall discharge, based on the following rationale:

\*\*Add rationale for selection of designated stormwater sampling locations if there are more stormwater discharge points than designated stormwater sampling locations at the facility \*\*

In locations where stormwater runoff from a facility occurs as sheet flow, a collection point will be constructed to collect a sample. The samples will be collected during the first flush of the storm event. If stormwater discharges do not occur during the sampling period, then “no discharge” will be indicated on the Discharge Monitoring Report (DMR). Sampling results will be reported to Ecology in a DMR – either in a hard-copy paper version or via the online WAWebDMR form – by the 28<sup>th</sup> day of the month following the sample collection.

**TABLE 1  
STORMWATER MONITORING**

Category	Parameter	Units	Sample Point	Minimum Sampling Frequency	Sample Type
Stormwater	Total Copper	µg/L	Consistent Location	One Sample in October, November, January, April, May	Grab or composite
"	Total Zinc	µg/L	Consistent Location	One Sample in October, November, January, April, May	Grab or composite
"	Total Lead	µg/L	Consistent Location	One Sample in October, November, January, April, May	Grab or composite
"	Visual Monitoring	NA	Facility	Weekly (See S6.D.)	Visual
Stormwater to marine waters	BOD, NO3+NO2-N		Consistent Location (same as above)	One sample in November or December of 2012	Grab or composite
Stormwater to fresh waters	BOD, Total Phosphorus		Consistent Location (same as above)	One sample in November or December of 2012	Grab or composite
Non Stormwater Misc Discharges	Parameters, frequency and location as directed by Ecology order.				

### 3.3 Sampling Procedures

1. Sample will be a grab sample or a composite sample. Grab samples are taken within the first hour after discharge begins. Composite samples are taken from one location at regular intervals throughout the duration of the discharge or from multiple locations at the same time.
2. Sample will be collected as close to the point of discharge as reasonably and safely practical.

3. Storm event samples will be collected after at least 0.1 inches of rain in a 24-hour period, preceded by at least 24 hours of less than trace precipitation.
4. Laboratory-supplied sample bottles will be used to collect the sample.
5. Samples will be collected from mid-flow, in a location with moderate flow.
6. Once sample is collected, bottle will be capped, sealed, and labeled.
7. The following items will be recorded at the time of sampling:
  - a. Time rainfall began;
  - b. Sampling location (when there is more than one);
  - c. Date of sampling;
  - d. Time of sampling;
  - e. How sample was collected (for example, “from a ditch by hand”);
  - f. name of the sampler(s);
  - g. number, types (parameters) of samples collected;
  - h. unusual circumstances that may affect the sample results; and
  - i. visual observations, as detailed in Section 3.5.
8. Samples will be sent to an Ecology approved laboratory for analyses of the applicable parameters, as indicated in Table 1.

### **3.4 Sample Analysis, Handling and Preservation**

Samples will be analyzed, handled, and preserved in accordance with Code of Federal Regulations Title 40, Part 136. Samples will be submitted to a laboratory accredited by the Washington Administrative Code *Accreditation of Environmental Laboratories*, Chapter 173-50 WAC. Copper, zinc and lead (if applicable) will be analyzed using EPA method number 200.8 or a similar method. For copper, the required method detection level (MD) is 0.4 µg/L and the minimum quantitation level (ml) is 2.0 µg/L. For zinc, the required MD is 0.5 µg/L and the ml is 2.5 µg/L. For lead, the required MD is 0.1 µg/L and the ml is 0.5 µg/L.

### **3.5 Visual Monitoring**

Visual monitoring of stormwater discharges will be conducted weekly at stormwater sampling locations, as well as at the time of stormwater sampling. Worksheet #8 provides a template for recording observations. The results of visual monitoring will be recorded in writing and kept with the SWPPP for a minimum of 5 years. Observations will include presence of floating materials, visible sheen, discoloration, turbidity, odor, and other physical attributes of the stormwater discharges. Observations of the performance of the Best Management Practices (BMPs) described in this document will also be made, and if necessary, failing practices will be corrected.

The results of each inspection (visual monitoring of stormwater discharges) event will be summarized on Worksheet #8 and will be attached to this SWPPP. Weekly visual monitoring reports will be signed by the person making the observations.

Any oil sheens observed during visual monitoring of stormwater discharges will be reported on the next scheduled DMR. The DMR will include the exact dates and times, the probable cause, and the steps taken or planned to reduce, eliminate, and prevent further contamination.

### **3.6 Non-stormwater Discharge Monitoring**

Upon order of Ecology, a survey of non-stormwater discharges will be conducted at the facility. These may include discharges from fire fighting activities, fire protection system testing and maintenance, dechlorinated potable water, uncontaminated condensate, uncontaminated groundwater, and dewatering activities. Worksheet #9 provides a template for collection of observations.

### **3.7 Health and Safety**

Monitoring personnel are trained in proper safety procedures. Stormwater monitoring may subject sampling personnel to hazardous conditions, such as the following:

- Hazardous weather conditions (e.g., wind, lightning, flooding);
- Sampling in confined spaces (e.g., manholes);
- Hazards associated with chemicals and biological hazards (e.g., rodents and snakes);
- Physical hazards (e.g., traffic, falling objects, sharp edges, slippery footing); and
- Lifting injuries from opening or removing access panels and manhole covers, etc.

## 4. Best Management Practices

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The Boatyard General Permit for the State of Washington (Ecology, June 2011) requires the implementation of Best Management Practices (BMPs) to meet the following stormwater requirements:

- No discharge of oil;
- No discharge of floatables;
- No change in receiving water turbidity or color;
- No discharge of process water;
- Total Copper concentration in stormwater less than the maximum daily benchmark of 147 ug/L and the seasonal average benchmark of 50 ug/L;
- Total Zinc concentration in stormwater less than the maximum daily benchmark of 90 ug/L and the seasonal average benchmark of 85 ug/L;
- Total Lead concentration in stormwater less than the maximum daily limit of 185 ug/L.

**\*\*strike out Total Lead concentration limit item if yard is not located on Lake Union or the Ship Canal\*\***

**\*\*if discharging stormwater to an infiltration basin lined with adsorptive media, cut the final three bullets above and replace with:**

- Total Copper concentration in stormwater discharged to adsorptive media-lined infiltration basin less than the maximum daily limit of 1000 ug/L and the seasonal average limit of 1000 ug/L;
- Total Zinc concentration in stormwater discharged to adsorptive media-lined infiltration basin less than the maximum daily limit of 1020 ug/L and the seasonal average limit of 1020 ug/L. **\*\***

This SWPPP uses the Presumptive Approach to demonstrate that the stormwater management BMPs implemented at the facility comply with state water quality standards and satisfy the technology-based treatment requirements of 40 CFR Part 125.3 and Chapter 90.48 RCW. The stormwater management BMPs were approved by Ecology and outlined in *Stormwater Management Manual for Western Washington* (Ecology, February 2005).

### 4.1 Mandatory Boatyard BMPs

The following mandatory BMPs will be implemented at this site. These BMPs will be described in a handout which will be provided to all boatyard employees, contractors, boat owners, and other customers. The handout will be posted conspicuously within the work areas. Worksheet #10 provides documentation on how these BMPs will be implemented at the site.

#### 4.1.1 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. Alternatives to a vacuum sander will perform equivalently and be formally approved by Ecology before implementation.

#### **4.1.2 Tidal Grids**

Tidal grids shall only be used for emergency repair and marine surveying. Tidal grids shall not be used for surface preparation, painting, routine maintenance or other non-emergency uses.

#### **4.1.3 In-Water Vessel Maintenance and Repair**

Cleaning, repair, modifications, 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 vessel shall be hauled out to the upland portion of the facility covered by this general permit or a facility covered by an individual permit issued in accordance with the provisions of Chapter 173-220 WAC.

Repairs, modifications, surface preparation, or coating of topside or superstructure shall be limited to 25% of the topside or superstructure surface where the deck composes one collection surface. When stripping, sanding, scraping, sandblasting, painting, coating and/or varnishing any deck or superstructure of a vessel in-water, 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, drapes, shrouding or other protective devices shall be securely fastened 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 shall be done from a float or another boat. The cleanup of all collected materials shall be conducted daily to prevent their release into the environment and entry into waters of the state.

#### **4.1.4 Upland Vessel Maintenance and Repair**

When stripping, sanding, scraping, sandblasting, painting, coating and/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.

#### **4.1.5 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. No hull recoating work may be conducted on a marine railway unless the boat is at least one boat length from the high water level or unless all dust, debris and paint is contained and prevented from being exposed to the weather.

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. Sediment traps shall be installed in all storm drains to intercept and retain solids prior to their discharge into waters of the state. Sediment traps, storm drains and catch

basins shall be visually inspected weekly and cleaned, either manually or with a vacuum device, on a routine basis to prevent the entry of solids into waters of the state.

#### **4.1.6 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 and 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's license may purchase, handle and apply tributyltin.

#### **4.1.7 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.

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

#### **4.1.8 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.

#### **4.1.9 Chemical Management**

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

#### **4.1.10 Wash Pad Decontamination**

Prior to actively pumping or passively discharging any stormwater from the pressure wash pad to waters of the state, the pad shall be cleaned of all debris, paint waste, sludge and other solids. Then the entire pad shall be pressure washed into the collection sump and the sump cleaned of all debris and other solids.

#### **4.1.11 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.

### **4.2 Operational Source Control BMPs**

Other operational source control BMPs are discussed below. Implementation is outlined in Worksheet #11.

#### **4.2.1 Pollution Prevention Team**

The responsibilities and makeup of the pollution prevention team are presented in Section 1.

#### **4.2.2 Good Housekeeping**

The following good housekeeping activities should be implemented at the site:

- 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 render containment ineffective.
- Do not burn paint and/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. on shore.
- 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 and peat absorbents and rags for cleanup of liquid spills/leaks, where practicable.

### **4.2.3 Preventive Maintenance**

The following preventive maintenance activities should be implemented 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 ground water has not been and will not be contaminated by the soil.

- Construct impervious areas that are compatible with the materials handled. Portland cement concrete, asphalt, or equivalent material may be considered.
- Use drip pans to collect leaks and spills from equipment such as cranes, industrial parts, trucks, and other vehicles that are stored outside. Empty drip pan immediately after a spill or leak is collected in an uncovered area.
- Drain oil and fuel from filters before disposal. Discard empty oil and 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.
- Inspect advanced/enhanced stormwater treatment system regularly for proper performance and maintain system on manufacturer's suggested schedule or as needed.

#### **4.2.4 Applicable Boatyard Structural Source Control BMPs**

- 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% 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 and/or plastic sheeting to cover open areas between decks when sandblasting (scuppers, railings, freeing ports, ladders, and doorways).

#### **4.2.5 Spill Prevention and Reporting and Emergency Cleanup**

- Stop, contain, and clean up all spills immediately upon discovery. Do not flush absorbent materials or other spill cleanup materials to a storm drain or to surface water. Collect the contaminated absorbent material as a solid and place in appropriate disposal containers.
- Notify Ecology and the local sewer authority immediately (within 1 hour) if a spill of reportable quantities has reached or may reach a sanitary or storm sewer, ground water, 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 (NWRO) 425-649-7000**

**Olympia (SWRO) 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.

#### **4.2.6 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/management practices. Training will be scheduled and implemented by the Pollution Prevention Team as described in Worksheet #12.

#### **4.2.7 Inspections, Reporting and Recordkeeping**

- Submit all collected data to Ecology on the required DMR.
- Summarize and report monitoring data collected during the previous month on the form provided in the SWPPP.
- Postmark no later than the twenty-eighth (28th) day of the month following the sampling, unless otherwise specified.
- Send report(s) to the appropriate regional office of the Department of Ecology.
- Retain records of all monitoring information for a minimum of five years.
- Include all calibration and maintenance records and all 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:

1. Date, exact place, method, and time of sampling;
2. Individual who performed the sampling or measurement;
3. Dates the analyses were performed;

4. Name of the person(s) who performed the analyses;
5. Analytical techniques or methods used; and
6. Results of all analyses.

#### **4.2.8 Illicit Discharges**

Illicit (unpermitted) discharges of pressure wash process wastewater, domestic wastewater and noncontact cooling water to stormwater sewers or to surface waters and ground waters of the state are identified throughout the facility and documented in Worksheet #13. Such illicit discharges are eliminated following recommended BMPs from Volume IV of Ecology's SWMM for Western Washington:

- Conduct a field survey of buildings, particularly older buildings, and other industrial areas to locate storm drains from buildings and paved surfaces. Note where these join the public storm drain(s).
- During non-stormwater conditions, inspect each storm drain for non-stormwater discharges. Record all such discharges.
- Identify all connections of illicit discharges to storm drains or to surface waters and take the actions necessary to eliminate such discharges.

#### **4.3 Enhanced/Additional BMPs**

In addition to the operational and structural source control BMPs listed in Sections 4.1 and 4.2, the boatyard may implement enhanced/additional BMPs if necessary because of a notice from Ecology, facility changes, self-inspection, or if monitoring values exceed benchmark values. A schedule for implementation must be entered into the SWPPP within thirty (30) days of a determination of necessary improvements or exceedance of benchmark values. The trigger, identification and implementation schedule for enhanced/additional BMPs are documented in Worksheet #14. Note that if the trigger is the benchmark exceedance of a specific pollutant, then the enhanced/additional BMP analysis will be limited to controlling this specific pollutant.

The Boatyard General Permit for the State of Washington (Ecology, June 2011) requires adaptive management if benchmarks are exceeded. The three levels of response are:

**Level One Response** – Each time a sample exceeds a benchmark, a facility inspection is conducted to identify and evaluate possible sources responsible for the benchmark exceedance and the SWPPP is updated to identify and evaluate additional source control methods to address the benchmark exceedance. Operational source control BMPs are documented in Worksheet #11. Enhanced/additional BMPs are documented in Worksheet #14.

**Level Two Response** – Whenever four samples exceed a benchmark, a Source Control Study is conducted to identify and evaluate possible structural source control and treatment BMPs to address the benchmark exceedance. The Source Control Study at a minimum considers covering hull preparation areas, treatment of stormwater, and diversion of stormwater to the municipal sewage treatment plant. The Source Control Study is submitted to Ecology.

**Level Three Response** – Whenever six samples exceed a benchmark, an Engineering Report is prepared to document selection and design of a structural source control or treatment BMP to address the benchmark exceedance. The Engineering Report is submitted to Ecology within three (3) months of initiating a Level Three

Response and the SWPPP is updated. Enhanced/additional BMPs are documented in Worksheet #14. Before implementation of the preferred option, a modification of coverage is obtained from Ecology.

The potential enhanced/additional BMPs include:

### **Structural Source Control BMPs**

- Enclose and /or contain all work while using a spray gun or conducting sand blasting;
- Install additional controls at pressure wash pad to prevent pressure wash water from reaching drainage system;
- Isolate and segregate pollutant causing materials to minimize exposure the stormwater runoff;
- Install new impervious surface in work area to improve sweeping efficiency;
- Cover and berm pollutant causing activity;
- Berm or slope the ground surface in work areas to prevent run-on of uncontaminated stormwater and runoff of contaminated stormwater to outside areas;
- Enclose pollutant causing activity in a building; and
- Divert stormwater to the municipal sewage treatment plant.

### **Treatment BMPs**

Appropriate treatment BMPs will be selected based on the pollutant requiring removal and other site specific criteria. As described at the beginning of this section, this SWPPP uses the Presumptive Approach to demonstrate that the stormwater management BMPs implemented at the facility comply with state water quality standards and satisfy the technology-based treatment requirements of 40 CFR Part 125.3 and Chapter 90.48 RCW. Therefore, Volume V of the *Stormwater Management Manual for Western Washington* (Ecology, February 2005) will be used to select treatment BMPs.

The potential treatment BMPs for implementation at boatyards are:

- Catch basin inserts;
- Oil water separation;
- Wet Pond/Wet Vault;
- Sand Filter;
- Media Filter (Stormwater Rx, etc.)
- Biofiltration Swale;
- Constructed Wetland;
- Infiltration with appropriate pretreatment ;
- Manufactured Storm Drain Structures (Stormceptor, Vortechincs, etc.); and
- High Efficiency Street Sweepers.

Design, construction, and operation of treatment BMPs will be in accordance with Volume V of the *Stormwater Management Manual for Western Washington* (Ecology, February 2005).

## **5. References**

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*Guidance Manual for Preparing/Updating a Stormwater Pollution Prevention Plan for Industrial Facilities* (Ecology, April 2004).

*The Boatyard General Permit* (Ecology, June 1, 2011).

*Stormwater Management Manual for Western Washington – SWMM* (Ecology, February 2005).