

IC13. OVER WATER ACTIVITIES

Best Management Practices (BMPs)

A BMP is a technique, measure or structural control that is used for a given set of conditions to improve the quality of the stormwater runoff in a cost effective manner¹. The minimum required BMPs for this activity are outlined in the box to the right. Implementation of pollution prevention/good housekeeping measures may reduce or eliminate the need to implement other more costly or complicated procedures. Proper employee training is key to the success of BMP implementation.

The BMPs outlined in this fact sheet target the following pollutants:

Targeted Constituents	
Sediment	
Nutrients	
Floatable Materials	x
Metals	x
Bacteria	x
Oil & Grease	x
Organics & Toxicants	x
Pesticides	
Oxygen Demanding	x

MINIMUM BEST MANAGEMENT PRACTICES

Pollution Prevention/Good Housekeeping

- Move maintenance and repair activities on-shore, if feasible.
- Use ground cloths and/or secondary containment when painting boats on land.
- Shelter any blasting and spray painting activities.
- Post signs to indicate proper use and disposal of residual paints, rags, used oil, and other engine fluids.
- Keep boat motors well-tuned to prevent fuel and lubricant leaks.
- Recycle used motor oil, diesel oil, and other fluids and parts whenever possible.
- Maintain a clean working environment.
- Properly dispose of bilge water, ballast water, and wastewater.

Training

- Train employees on these BMPs, storm water discharge prohibitions, and wastewater discharge requirements.
- Provide on-going employee training in pollution prevention.

Provided below are specific procedures associated with each of the minimum BMPs along with procedures for additional BMPs that should be considered if this activity takes place at a facility located near a sensitive waterbody. In order to meet the requirements for medium and high priority facilities, the owners/operators must select, install and maintain appropriate BMPs on site. Since the selection of the appropriate BMPs is a site-specific process, the types and numbers of additional BMPs will vary for each facility.

- 1. Move maintenance and repair activities on-shore if feasible.**
 - Perform paint and solvent mixing, fuel mixing, and similar handling of liquids on-shore, to avoid spillage directly to surface water bodies.
 - Major hull resurfacing should occur on land.
- 2. Use ground cloths and/or secondary containment when painting boats on land.**
- 3. Shelter any blasting and spray painting activities.**
 - Hang wind-blocking tarps to prevent blasting dust and overspray from escaping.
 - Do not conduct these activities when wind conditions are such that containment is rendered ineffective.
- 4. Post signs to indicate proper use and disposal of residual paints, rags, used oil, and other engine fluids.**
- 5. Boats with inboard engines should have oil absorption pads in bilge areas that are changed when no longer useful or at least once a year.**
- 6. Keep boat motors well-tuned to prevent fuel and lubricant leaks.**

¹ EPA " Preliminary Data Summary of Urban Stormwater Best Management Practices"

7. **Recycle used motor oil, diesel oil, and other fluids and parts whenever possible.**
8. **Maintain a clean working environment.**
 - Utilize dry cleaning methods (e.g. sweeping). If washing is unavoidable, collect wash water for treatment and/or proper disposal.
 - Vacuum loose paint chips and paint dust to prevent paint and other chemical substances from entering waters.
 - Properly dispose of surface chips, used blasting sand, residual paints, and other materials. Use temporary storage containment that is not exposed to rain.
9. **Properly dispose of bilge water, ballast water, and wastewater.**
 - Collect bilge and ballast water that has an oily sheen for proper disposal.
 - Collect and properly dispose of wash water from washing painted boat hulls.
 - Pump bilge water into storage tanks on shore for analysis, treatment and proper disposal.
 - **DO NOT** discharge treated or untreated sewage from vessels to harbors.
 - Empty portable toilets into approved shore side waste handling facilities and MSDs should be discharged into approved pump out stations.
 - Use as fine a filter as is practical on the ballast water intake ports to eliminate as many organisms and as much particulate matter as possible.
 - Carry out physical or chemical sterilization or neutralization of ballast water *in situ*, and subsequent neutralization of the sterilant, if required, before discharge.
 - Dump estuarine or harbor ballast water at sea and take in fresh high salinity water to eliminate both pollutants and estuarine organisms.
10. **Minimize impacts of cleaning products.**
 - Clean parts without using solvents whenever possible.
 - Use nontoxic chemicals that do not harm humans or aquatic life.
 - Use phosphate-free and biodegradable detergents for hull washing.
 - Choose cleaning agents that can be recycled.

Training

1. **Train employees on these BMPs, storm water discharge prohibitions, and wastewater discharge requirements.**
2. **Train employees on proper spill containment and cleanup.**
 - Establish training that provides employees with the proper tools and knowledge to immediately begin cleaning up a spill.
 - Ensure that employees are familiar with the site's spill control plan and/or proper spill cleanup procedures.
 - BMP IC17 discusses Spill Prevention and Control in detail.
3. **Establish a regular training schedule, train all new employees, and conduct annual refresher training.**
4. **Use a training log or similar method to document training.**

Stencil storm drains

Storm drain system signs act as highly visible source controls that are typically stenciled directly adjacent to storm drain inlets. Stencils should read "No Dumping Drains to Ocean".

References

California Storm Water Best Management Practice Handbook. Industrial and Commercial. 2003.
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Model Urban Runoff Program: A How-To Guide for Developing Urban Runoff Programs for Small Municipalities. Prepared by City of Monterey, City of Santa Cruz, California Coastal Commission, Monterey Bay National Marine Sanctuary, Association of Monterey Bay Area Governments, Woodward-Clyde, Central Coast Regional Water Quality Control Board. July 1998 (Revised February 2002 by the California Coastal Commission).

Stormwater Management Manual for Western Washington. Volume IV Source Control BMPs. Prepared by Washington State Department of Ecology Water Quality Program. Publication No. 99-14. August 2001.

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