



OREGON Clean Marina GUIDEBOOK

April 2017





CLEAN MARINA

ACKNOWLEDGEMENTS

Since the inception of Oregon's Clean Marina program in 2005, the Oregon State Marine Board has been working directly with marina managers and staff to develop and implement best practices for preventing pollution throughout the state. With more than 50% of boat slips certified in Oregon after 10 years, the program continues to grow, creating enhanced water quality protections and increased member benefits.

The Clean Marina Program is leading the way in pioneering new and innovative ways to prevent pollution, reduce waste, and communicate best practices to boaters. This handbook provides a concise summary of the current laws, regulations, and best practices for the marina industry. It represents the collaborative approach required to preserve and steward our marine resources for future generations.

Becoming certified is free, easy, and helps to assure compliance with the laws and BMPs found in this handbook. The Clean Marina checklist functions as an environmental self-audit and allows marina managers to evaluate systems, structures, policies, and procedures within their facility. The process is scalable from small private marinas to the largest public ports. Completing the certification process entails having a Clean Marina representative perform a non-regulatory site visit to provide technical assistance and to distribute signs, brochures, spill prevention kits, and other tools to share BMP messages with boaters.

For more information on the certification process and to access clean boating tools and resources, please visit the Marine Board's website, www.boatorregon.com. You will find all our environmental programs and resources under 'Boater Info.'

Cover photograph: Promontory Park



The Oregon Clean Marina program and guidebook was originally developed in 2005 in close collaboration with the Clean Marina Stakeholders Committee. Sincere

gratitude goes to the Committee for sharing their wealth of knowledge and expertise and for taking time out of their busy schedules to review this resource. Experts were consulted from the: Oregon State Marine Board, Department of Environmental Quality, Department of Land Conservation and Development, Columbia River Yachting Association, Portland Marine Dealers Association, Waterfront Organizations of Oregon, Columbia Crossings, Rocky Pointe Marina and Boatyard, Detroit Lake Marina, Salmon Harbor Marina, Port of Newport, Port of Alsea, Port of Coos Bay/Charleston Marina, and BoatUS. Gratitude also goes to Florida Sea Grant and the Clean Marina program coordinators of many other states for sharing their program experience.

The structure and content of this guidebook and the Clean Marina program relies heavily on the excellent past work of others, particularly the Oregon Department of Environmental Quality's Best Management Practices for Oregon Marinas and the Connecticut Clean Marina Guidebook.

We would also like to thank the Oregon Department of Land Conservation and Development for its financial assistance with the creation of the 2005 Oregon Clean Marina program and guidebook.

The 2017 revision of the Guidebook was prepared by Oregon State Marine Board staff and reviewed by the Department of Environmental Quality, Electric Shock Drowning Prevention Association, Oregon Sea Grant, and several participants of Oregon's Clean Marina Program.



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Nonpoint source pollution

Nonpoint source pollution – pollution from diffuse sources – has become the leading cause of water quality impairment in the United States. In general, nonpoint source pollution results from snow or rain runoff transporting pollution from land-based activities (i.e. farming, urban areas, forestry, construction, paved areas) to waterbodies. Nonpoint sources pollute marine environments by adding excess nutrients, sediments, and toxicants to the water, which can lead to low dissolved oxygen, poor water clarity, inhibition of aquatic plant growth, and other negative human and aquatic organism health effects.

Why marinas?

The congregation of recreational boats at marinas, the activities that often occur at marinas, and the physical location of marinas in and near the water can result in significant impacts to local water quality.

Water quality at a marina is often a reflection of not only pollutants generated at the marina but also of pollutants resulting from several watershed sources that drain to the marina basin. While this “offsite” pollution production is something to be acknowledged, the pollution generated from marina activities and boats must also be addressed. Further, because marina basins are situated in areas protected from the wind and waves, and where currents are slower, they are often poorly flushed and more susceptible to damage from pollutants.

These pollutants include:

- Petroleum hydrocarbons from fuel, oil drippings, and solvents
- Nutrients and pathogens from sewage discharge and pet waste
- Toxic metal from anti-foulants and boat maintenance debris
- Liquid and solid wastes from boat maintenance and general marina activities
- Sediments from parking lot runoff and shoreline erosion
- Fish waste from dockside fish cleaning

The goal of the Oregon Clean Marina program is to protect and improve local water quality of Oregon waters by reducing pollution from marinas. The program provides the opportunity for marinas, boatyards, yacht clubs, and floating home moorages to receive recognition for helping to establish and promote a cleaner marine environment for Oregon.

If a facility is in compliance with environmental regulations and uses a high percentage of the recommended practices, it can be designated as an Oregon Clean Marina. Such certified marinas are authorized to fly the Clean Marina flag and use the logo in their advertising. The flag is a signal to boaters that a marina cares about the cleanliness of area waterways.

Clean Marina certification:

- Recognizes you for doing your part to protect water quality.
- Ensures your facility is in compliance with environmental regulations.
- Encourages responsible boaters to patronize your establishment.
- Provides guidelines with which to educate your staff and patrons on effective best management practices.
- Makes your marina more aesthetically attractive by reducing odor and visual impairments.
- Could reduce pollution clean-up costs.
- Makes you eligible for grant money and free technical assistance.
- Promotes your facility as eco-friendly.



How to Use this Guidebook

This guidebook is intended to be used as a reference manual. Refer to selected sections as needed for best management practice ideas and some pointers on legal requirements for various marina activities and facility management. The legal requirements described in this guidebook are only to help outline some of the major environmental laws and regulations that pertain to marinas and are not comprehensive. While the outlines can be used as guidance, compliance with laws and regulations can only be determined by the appropriate agency.

Become a Certified Oregon Clean Marina

A marina, boatyard, yacht club, or floating home moorage must meet all the environmental legal and regulatory standards required by the state and federal government, and then employ a percentage of BMPs described in this document to become certified as an Oregon Clean Marina. The criteria for certification are outlined in one of three certification checklists, based on facility type: marina, floating home moorage, or boatyard (Appendix K).

If you meet the requirements for certification, contact the Oregon Clean Marina Program at (503) 378-2625 to schedule a confirmation visit. A representative with the program will meet with you to verify the items checked on the checklist. If you do not yet meet the minimum percentage of criteria on the checklist, you can still join the program by signing a Clean Marina Pledge, which means you commit to becoming certified within one year. Program staff are always available to help answer questions as you work toward Clean Marina certification.

Once certified, you must confirm annually in writing that you continue to meet the award standards described on the checklist. Every three years, or if there is a change in facility ownership/management, the Clean Marina coordinator will meet with you in-person to reaffirm Clean Marina status.

General Guidance: In or Out of the Water?

This information can be used as a general guideline for whether or not a vessel should be taken out of the water for vessel repair and maintenance activities. Other sections in this guidebook give additional regulations and BMPs for individual activities and substances.

May be conducted on a vessel while **IN** the water:

- Routine engine tune-ups, oil changes, and other minor servicing and repair.
- Routine care and cleaning of rigging and fittings, interior surfaces, and “brightwork,” as long as these activities do not produce a wastewater.
- Painting/varnishing of interior surfaces.
- Routine sanitary pump-outs and maintenance of sanitary wastewater facilities.
- Bilge pump repair.
- Removal and replacement of an engine, when all discharges or spills of engine fluids are contained.
- Similar activities where an accidental spill can be contained on deck or within the vessel.

Should be conducted with the vessel **OUT** of the water (and within an area designed for that purpose, if pollutants may be released):

- Repairs requiring the dis-assembly of the outboard or lower drive units.
- Bilge repairs requiring opening the hull.
- Scraping, sandblasting, or painting the hull exterior or drive units.
- Interior or on-deck painting or similar activity involving aerosol application with a risk of over-spray or drip beyond the confines of the vessel.
- Hull exterior cleaning with agents other than fresh water or natural seawater. Wastewater from such cleaning should be collected and treated, or discharged into a community sewerage system (permission may be required).
- Any other activities involving the potential risk of an unconfined discharge of oil, chemical, nutrients, or other contaminants to waters of the state.



Boater Education, Employee Training & Signage

To fully implement Clean Marina practices at your marina, it is imperative to educate and train your boaters and employees. As participants become more knowledgeable and prepared, it will be easier for the facility as a whole to comply with laws and regulations and implement Best Management Practices (BMPs). When more people are involved and understand the possible consequences, it is more likely that someone will identify practices that can be improved. In addition, a better understanding by all participants may lead to the discovery of new BMPs.

Specific training may be required for different operational aspects; it will be required for marinas with environmental concerns such as hazardous chemicals and wastes, as well as for marinas with fuel operations. Refer to the sections on Fueling and Hazardous Waste for more detailed information and requirements on those topics.

LEGAL REQUIREMENTS:

There are no legal requirements regarding boater education for marinas.

BEST MANAGEMENT PRACTICES:

SIGNS: Post clear advisory and warning signs in appropriate locations at your marina. Signs should be made of durable material suitable for withstanding the marine environment. Ensure the following are clearly marked:

- Solid waste disposal facilities
- Recycling facilities
- Used oil receptacles
- Sanitary pumpout stations
- Storm drain catch basins should be marked to advise marina users not to discharge waste oils or other pollutants into the storm drain system.

RULES: Write specific BMPs into customer contracts and marina rules. Marina rules should be made enforceable and clearly described in customer contracts. Requiring observation of the rules as a term of tenancy should make them enforceable. See sample contract language in Appendix F.

Communicate that these rules are important for everyone, and important for the protection of boaters and the marine environment. These rules should:

- Identify all user responsibilities for each BMP adopted by the marina.
- Designate activities prohibited at the marina.
- Clearly designate areas for restricted activities (e.g. painting and scraping, or waste handling).
- Designate activities restricted to performance by authorized personnel.
- Outline procedures to address spills and provide emergency contact phone numbers. A specific contingency plan does not necessarily need to be detailed in a marina's rules, but the existence of the plan and where it can be accessed should be communicated.

TRAINING: Train employees about clean boating practices. Employees should receive specialized training for environmentally sensitive activities, such as:

- Fuel handling
- Waste handling
- Proper use of toxic materials, including cleaning agents and paints

Only trained personnel should perform the environmentally sensitive activities listed above.

EDUCATION: Distribute Clean Boater Guidebooks to customers (Appendix A). Contact the Marine Board for additional boater education materials, such as Boater Spill Kits to distribute to marina customers. Use newsletters, slip contracts, inserts in billing statements, or social media to distribute clean boating information to staff and customers.

INFORMATION:

- Post required BMP measures and emergency phone numbers in all applicable work areas.
- Host an environmental workshop for customers.
- Encourage staff to talk with boaters about environmentally sound boating habits, distribute free educational materials, answer questions, and share the location of services that support clean boating efforts.
- Provide a list of "yard rules" to your customers who do their own boat maintenance.

CONTRACTORS: Inform independent contractors of specific operational BMPs used at the facility through orientation and training. Required BMP measures for contracted work should be incorporated into contracts and specifications.



Fish Waste

Too much fish waste in a poorly circulated marina basin can lower oxygen levels in the water. As the waste decomposes, it can lead to foul odor and fish kills. Floating fish parts are also an unsightly addition to marina waters. Fish do naturally die in the basin area, but there are too many anglers cleaning their catch for the size of many of the harbors and basins to receive this material.

LEGAL REQUIREMENTS:

It is unlawful to dispose of a fish carcass into waters other than where the fish was caught. Anglers must retain enough of the carcass to identify the size, species and any fin clip. A fish carcass is defined as entrails, gills, head, skin, fins, and backbone [ORS 164.785].

BEST MANAGEMENT PRACTICES:

NO DUMPING: Prohibit disposal of fish wastes and shellfish carcasses in the marina basin. Post signs displaying the rules.

Do not permit fish cleaning on docks and floats. Encourage boaters to clean fish offshore where the fish are caught and discard of the fish in unrestricted waters, unless there are length limits for the type of fish caught.

FISH CLEANING: Install a fish cleaning station at your marina. You will need approval from DEQ.

Clearly identify the fish cleaning stations with signs that list the rules and regulations for their use. Direct rinsewater from fish cleaning areas to a sand filter or sanitary sewer. It should be free of solids. On-site septic systems can be quickly overwhelmed and should not be used as a disposal option for fish waste. Solids are often too rich in content for loading to small sanitary sewer systems. Fish waste solids should be stored in a holding tank designed for that purpose and managed off-site.

To get approval from DEQ, you must meet the following three criteria:

1. Fish residual discharge is less than 500 pounds per day,
2. The residual is cut into pieces of approximately one inch or smaller, and
3. The discharge is not into a zone with limited circulation.

DISPOSAL ALTERNATIVES: Use one of the following disposal methods:

- Compost fish waste where appropriate and use compost on landscaping.
- Encourage boaters to freeze fish parts and reuse them as bait or chum on the next fishing trip.

- Use grinder to make chum out of fish carcasses. Freeze and sell chum at marina store.
- Contact local fish processing plant to see if they will accept fish wastes.

If composting or freezing is not an option, encourage boaters to double-bag their fish parts and throw out in their regular trash.

For marinas that have large volumes of fish waste, disposal at sea may be an option. Contact DEQ or EPA for more information and approval requirements for this option.



*Fish cleaning table
Salmon Harbor Marina*

SECTION 1: RULES & BOATER EDUCATION

Aquatic Invasive Species

Aquatic invasive species (AIS) are non-native plants or animals that can cause harm to the environment, the economy, and human health when introduced into a new ecosystem. AIS can reduce populations of native species, degrade the local ecosystem, negatively affect human health, reduce property values, and affect the economy of water dependent communities such as marinas and recreational anglers. AIS can decrease fish populations by reducing their food sources, negatively impacting their reproduction, and/or reducing the oxygen content in the water. Zebra mussels, hydrilla, and other AIS can ruin boat engines and jam steering equipment and make lakes and rivers unusable by boaters and swimmers. Once established, management of AIS can be very expensive and extremely difficult, so the key is to prevent their introduction.

The most likely ways AIS can be transported into or away from marinas are by boats and marina equipment/infrastructure arriving or departing by land or water.



Zebra & quagga mussels

LEGAL REQUIREMENTS:

“Aquatic invasive species” means any aquatic species of wildlife or any freshwater or marine invertebrate, as specified by the State Fish and Wildlife Commission [by rule] as a prohibited species in OAR 635-056-0050, or any aquatic noxious weeds as specified by the State Department of Agriculture [by rule] in OAR 603-052-1200.

These species (such as zebra and quagga mussels, New Zealand mudsnails, hydrilla, etc.) may not be imported, possessed, sold, purchased, or transported in Oregon [OAR 635-056; OAR 603-052-1200].

Launching a boat with any aquatic species attached is prohibited within Oregon. The boat, trailer, or any attached apparatus outside of the hull (i.e. outboard motors) must be clean of all aquatic species [ORS 830.560].

Use of live bait is prohibited [ORS 498.222].

BEST MANAGEMENT PRACTICES:

EDUCATION:

- Distribute materials such as the Clean Boater’s Guide, AIS pamphlets, watch cards, or tip sheets.
- Post signs about AIS threats and prevention.
- Attend trainings or workshops about AIS threats and prevention. Know what AIS to look for.
- Inform boaters that they should avoid motoring through aquatic plants and should clean, drain, and dry their boats afterwards.

MONITOR BOATS: Check for boats traveling from out of state, major ports, or participating in events with boats from many places.

Recommend cleaning hull, underwater running gear, and systems which intake raw water:

- Before the boat travels out of the region and before it returns from another region.
- If the vessel is visibly fouled from another region.
- If the boat has arrived via water, have it cleaned out of water within one week of returning.

CLEAN, DRAIN, DRY: To prevent transporting AIS to or from waterways:

- **Clean** all aquatic plants, animals and mud from your boat, motor, and trailer and discard in the trash. Rinse, scrub, or pressure wash, as appropriate, away from storm drains, ditches, or waterways. Lawns, gravel pads, or self-serve car washes are best.
- **Drain** all standing water from your livewell, bilge, and internal compartments.
- **Dry** your boat between uses if possible. Leave compartments open and sponge out standing water. Find a place that will allow the anchor line to dry.

INSPECT BOATS: Inspect boats and equipment for plants and animals and remove them. Young zebra mussels can feel like sandpaper on smooth surfaces. Areas to inspect:

- Places where water can stand
- Vessel hull, including trim tabs
- Thru-hull fittings such as water intakes, gimbal area, transducers, pitot tube, rope lockers, bilges
- All surfaces that may have been exposed to water including cavitation plates, props, prop shafts, prop

- shaft support, prop shaft through-hull areas
- Trailers, including any pockets or hollow frames, around license plates and lights, fenders, springs, and hangers
- Other items such as anchors, ropes, fenders, PFDs, and toys
- Sailboats: Remove plants and animals from hull, centerboard or bilgeboard wells, and rudderpost area.
- For personal watercraft and jet boats, take the additional steps of:
 - Running engine for 5-10 seconds on the trailer to blow out excess water and vegetation from internal drive, and then turn off engine
 - Remove aquatic plants and animals from water intake grate, steering nozzle, and watercraft hull

RULES: Require all boats coming from other regions or other waterbodies to be cleaned prior to moorage in the marina basin by including the requirement in the slip contract and boatyard rules.

Prohibit disposal of bait (especially if purchased or collected in a different area) in the marina basin.



HULL PAINT: Recommend bottom paint that reduces the transport of hull-fouling AIS and is the least toxic: Boats that spend most of their time at the marina and do not travel long distances should have their boat hulls cleaned on a regular basis. This work should always be done with the boat out of the water and away from areas that might have wash water drain back into surface waters. Boatyards are the ideal place for this activity.

REPORT: Call 1-866-INVADER if you suspect AIS.

Pet Waste

Pet waste can contain harmful bacteria and parasites. If left on marina grounds, it will eventually enter the marina basin and contaminate the water and shellfish beds. The nutrients in pet waste may also encourage weed or algae growth in the marina basin, which can lead to lower oxygen levels in water. Pet waste is also unsightly and may be a source of customer complaints.

LEGAL REQUIREMENTS:

Polluting wastes, such as pet waste, may not be discharged into the waters of the state or placed in a location where it is likely to end up in the waters of the state [ORS 468B.025].

Local ordinances may prohibit the leaving of pet waste on private property. Check with your municipality.

BEST MANAGEMENT PRACTICES:

PET AREA: Provide a dog walking area that is identifiable by signs. Encourage cat owners to maintain a litter box on their boat.

BAG IT: Require customers to clean up after their pets. Provide bags for boaters to scoop up waste and dispose of in trash.

RULES: Specify pet waste rules in marina slip contract.



SECTION 2: SOLID WASTE MANAGEMENT

Litter & Recycling



Routine marina and boating activities produce a variety of solid wastes. These include bottles, plastic bags, aluminum cans, coffee cups, six-pack rings, disposable diapers, paper, cigarette filters, and fishing line. This type of debris harms living organisms and their habitats if it enters the water. A litter free facility is more attractive to current and potential customers. In addition to proper garbage disposal and recycling, a critical emphasis in waste management is to reduce wastes at their source and reuse as much as possible. The least preferred method of managing wastes is to dispose of them in a landfill.

Goal: Manage and dispose of all solid waste properly; reduce, reuse, and recycle as much as possible. Check with your local Solid Waste Authority for information on what materials are allowed in dumpsters, what materials are recyclable, and whether composting is available.

LEGAL REQUIREMENTS:

Marina operators must provide areas to collect solid waste from their customers [33 USC 1905(a)(2), 33 CFR 151.05].

Polluting wastes may not be discharged into the waters of the state or placed in a location where it is likely to end up in the waters of the state [ORS 468B.025].

It is illegal to discharge plastic materials into ANY waterbody [MPPRCA].

No one may dispose of garbage except at a permitted disposal site such as a dump station [OAR 340-093-0040].

Open burning of petroleum-containing waste, plastics, garbage, and materials that generate dense smoke or noxious fumes is prohibited [OAR 340-264-0060].

BEST MANAGEMENT PRACTICES:

TRASH CONTAINERS:

- Place covered trash receptacles in convenient locations away from the water for use by marina patrons.
- Do not put trash or recycling containers on docks, as waste can easily blow into the water. If containers must be put near water, secure them so they do not topple.
- Post signs directing patrons to trash receptacles and recycling areas.
- Signs should clearly spell out rules and note any prohibited wastes (such as used oil, varnishes, antifreeze, batteries, and paints).
- If practical, lock trash receptacles at night to prevent “midnight dumping” since marina operators are responsible for the content of dumpsters.

TRASH COLLECTION:

- Train employees to pick up stray trash as a daily practice.
- Encourage boaters to exchange excess paints, thinners, and varnishes rather than dispose.
- Provide a bulletin board where boaters can post notices if they have or need a particular substance, or establish a paint and maintenance chemical swap area for customers.

RECYCLING:

- Provide clearly marked, conveniently located recycling containers for customers and staff to use, particularly for plastic, glass and metal food/beverage containers, cardboard, and other recyclables generated at your facility.
- Educate employees about separation requirements and your recycling program.
- Consider cooperating with other nearby businesses to simplify recycling and reduce costs. Your municipal



Recycling bins at Charleston Marina



Recycling bins at Oregon Yacht Club

recycling coordinator may be able to help you find or establish a cooperative business-recycling program.

- Purchase products made with recycled contents to close the recycling loop (i.e., create a market for the materials you recycle).
- Buy recycled printing and writing paper, towels, tissue, re-refined motor oil and antifreeze.
- Reuse or recycle empty drums and containers rather than disposing them. If not recycled, drums should be emptied and flattened according to local landfill specifications. Residues from the drum should be collected and managed properly.

PET WASTE:

- Require patrons to clean up after their pets.
- Make this convenient for customers by providing bags and trash receptacles for their use.



Doggie Bags
Rocky Pointe Marina

FISHING LINE:

- Consider installing a fishing line collection container where fishing activity takes place.
- Contact your local Oregon Fish & Wildlife Office (or call 503-947-6232) to find how to install a collection station. Local volunteers including conservation and sporting groups maintain the collection stations. Materials collected are reused, recycled, or properly disposed.

LEADERSHIP LEVEL:



- Conduct a solid waste audit or inventory to develop a source reduction strategy. Discovering the most commonly discarded items may help to identify key ways to reduce wastes.
- Reduce wastes at the source by focusing on durability, buying in bulk, minimizing packaging, and reducing product toxicity.
- Set source reduction goals and track their progress.
- Encourage tenants and contractors to participate in source reduction initiatives. Don't forget to promote your marina's source reduction activities and successes through marina newsletters or other communications.
- Many government and non-government organizations throughout the region offer volunteer opportunities that work to cleanup and restore local beaches, waterways and shorelines. Consider providing direct support for these efforts, including promoting events to both marina tenants and customers. Or, host your own event!



Recycling center at Salmon Harbor Marina

SECTION 3: STORMWATER MANAGEMENT



Stormwater runoff from parking lots and other impervious areas represents a significant mode of pollutant transport from land-based activities to receiving waterbodies. The runoff from parking areas, buildings, repair yards, and access roads can carry nutrients, metals, suspended solids, hydrocarbons and other potential pollutants into marina basins. Stormwater that is treated in some way to remove pollutants before it reaches the marina basin reduces the impact to aquatic and marine life.

There are many stormwater treatment BMP solutions, including oil–water separators, pre-settling basins, and detention or retention ponds; also, there are low impact development (LID) BMPs like bio-retention, rain gardens, permeable pavements, and green roofs. In recent decades, LID strategies have gained in popularity because they allow for natural ground infiltration. LID emphasizes conservation and use of on-site landscape features, distributes stormwater catch areas around the upland area of the marina, and offers an aesthetically pleasing alternative in stormwater treatment.

LEGAL REQUIREMENTS:

Any marina or boatyard that performs boat maintenance activities (including boat rehabilitation, mechanical repairs, painting, fueling and lubrication) or equipment cleaning operations and discharges stormwater from their industrial areas to surface waters of the state, or to storm drains that discharge to surface waters, needs a *NPDES* (National Pollutant Discharge Elimination System) stormwater permit [40 CFR 122.26; OAR 340-45].

- Under the permit, marina operators must develop a Stormwater Pollution Control Plan and implement best management practices to ensure that stormwater leaving the marina property will not harm the quality of the surrounding waters. All outfalls must be identified, numbered and sampled under the NPDES permitting system.
- For additional information, contact your local DEQ office: <http://www.deq.state.or.us/wq/stormwater/stormwater.htm>.

Construction or enhancement in wetland or riparian areas may require Army Corps and Department of State Lands permits [CWA §401; OAR 340-048].

BEST MANAGEMENT PRACTICES:

DESIGNATE WORK AREAS:

- Perform as much boat repair and maintenance as practicable inside work buildings.
- Where an inside workspace is not available, perform abrasive blasting and sanding within spray booths or tarp enclosures.
- Where buildings or enclosed areas are not available, provide clearly designated land areas as far from the water's edge as possible for debris-producing maintenance. Collect maintenance debris on tarps, filter fabric, or paved surface.
- Use vacuum sanders to collect dust and chips while sanding or removing paint from hulls.

CLEAN UP & CAPTURE:

- Establish a list of “yard rules” which do-it-yourselfers and contractors must follow when performing debris-producing boat maintenance.
- Clean hull maintenance areas immediately after any

maintenance is done to remove debris, and dispose of collected material properly.

- Sweep or vacuum around hull maintenance areas, parking lots, and driveways frequently, where appropriate.
- Capture pollutants out of runoff water with permeable tarps, screens, and filter cloths.
- Store all potential pollutants and hazardous materials such as pesticides, used oil containers, detergents, etc. under cover, preferably with double containment.

UPLANDS:

- Plant a vegetated filter strip or buffer between impervious areas and the marina basin. A vegetated filter strip is a densely vegetated strip of land engineered to accept runoff from upstream development as overland sheet flow.
- Provide low maintenance landscaping that contributes to retention and employs native vegetation and



- minimizes the use of lawns, fertilizers, and pesticides.
- Construct new or restore former wetlands where feasible and practical. Constructed stormwater wetlands are manmade shallow pools that create growing conditions suitable for wetland vegetation. Contact ACOE and DSL regarding permits for wetland construction or restoration.
- Minimize impervious areas on marina site by paving only where absolutely necessary.
- Use porous pavement or gravel for parking lots and lightly traveled access roads.
- Direct roof runoff to drywells or position downspouts so that they drain to vegetated areas. Avoid draining to concrete or asphalt. Contact DEQ about drywell construction and Underground Injection Control regulations.


FILTRATION METHODS & MAINTENANCE:

- Install oil/grit separators to capture pollutants in runoff. (Note: this practice requires a lot of maintenance.)
- Install sand filters. Intermittent sand filter facilities are underground vault-like facilities that capture, pre-treat, and filter the first flush of stormwater runoff. In some cases these facilities can include an aboveground storage facility to store the excess volume of runoff from larger storms. Contact DEQ about Underground Injection Control regulations.
- Use catch basins with deep sumps where stormwater flows to the marina basin in large pulses.
- Maintain catch basins regularly. Typical maintenance of catch basins includes trash removal if a screen or other debris-capturing device is used, and removal of sediment by a hired contractor or on-site wet-vacuum system. At a minimum, catch basins should be cleaned at the beginning and end of each boating season.
- All sediment traps and oil/water separators in the stormwater drainage system should be:
 - Inspected monthly and after each storm event.
 - Cleaned as necessary to ensure the interception and retention of oils and solids entering the drainage system.
 - Cleaned immediately when the unit exceeds 50% stored sediment capacity.
 - Cleaned of oily sheen with a skimming device or absorbent pads. This oil may be managed as used oil.
- Add filters to storm drains that are located near work areas to screen solid materials out of runoff.

- Place absorbent materials, such as bilge socks, in drain inlets to capture oil and grease.
- When undergoing construction, use devices such as hay bales, silt fences, storm drain filters, sediment traps, and earth dikes to prevent sediments from leaving construction areas.

EDUCATE: Mark the storm drain inlets with wording such as “Dump No Waste. Drains to Pacific Ocean.” Or, “Clean Marina. No Dumping.” Many local governments offer free stencils, paint, and other supplies at no charge. These labels help raise awareness to staff, boaters, and marina visitors about the link between the storm drains and water quality.

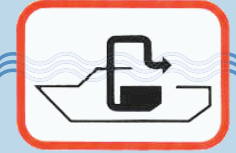
PORTLAND: If you manage stormwater on your property, you can receive up to a 100% discount on your on-site stormwater management charges because your actions help protect rivers, streams and groundwater from the damaging effect of stormwater runoff. Call 503-823-1371 for more information.

LEADERSHIP LEVEL: If interested in designing or constructing a stormwater treatment system, consult your local jurisdiction. Most cities and counties have design standards in place and can help in determining suitable BMPs for the marina. Additionally, consider using LID if adding a treatment BMP at the marina or if the marina will undergo redevelopment. It’s important to incorporate the marina’s location, design, and pollution potential when considering strategies that treat stormwater. 

You can find additional resources about LID at Oregon Department of Environmental Quality’s website below: <http://www.deq.state.or.us/wq/tmdls/lidmanual.htm>.



Bioswale at Channel Island Marina, Portland



Sewage Disposal

Sewage discharges from recreational boats can contribute to a decreased level of water quality. While individual boats may only release small amounts of treated and/or untreated sewage, there are more than 160,000 registered boats in Oregon. The cumulative effect of boater sewage discharges, including graywater, can make a difference to water quality and can be hazardous to human and environmental health. Human wastes contain disease-causing bacteria, viruses, and parasites. People who contact water contaminated with human wastes, or eat contaminated fish or shellfish, can become seriously ill. In addition, the nutrients in boat sewage, even if treated, can stimulate algal growth in such large numbers that their decomposition uses up oxygen necessary for fish to live.

LEGAL REQUIREMENTS:

Vessels are prohibited from discharging untreated sewage in freshwater waterbodies, rivers, bays, and within three miles of the coast [40 CFR 140; ORS 468B.080]. Vessels are prohibited from discharging treated sewage and/or graywater (water from kitchen, bath, or laundry wastes) on all freshwater lakes, impoundments, reservoirs not accessible by boat to the ocean, and while moored [ORS 468B.080].

A Water Pollution Control Facility Permit is required before construction if you are building an on-site sewage disposal system which [OAR 340-071]:

1. Has a projected daily sewage flow > 2,500 gallons, or
2. Handles sewage with a greater strength than residential wastewater, or
3. Uses a technology identified by DEQ as warranting regulation.

For floating buildings, floating homes, and combos, a continuous connection to a DEQ-approved sewage system is required for human sewage and gray water (water from sinks, showers, and other fixtures that may release detergents, soaps, oils, and other contaminants into the water) [ORS 468B.080].

For liveaboards and houseboats moored and used as dwellings longer than 10 days out of 30, a permanent and accessible means of disposal for human sewage is required at the marina or moorage [ORS 468B.080].

BEST MANAGEMENT PRACTICES:

RULES:

- Provide notice that the discharge of sewage is illegal in the marina basin and prohibit the discharge of sewage in your tenant lease agreement. For this to work, there must be adequate pumpout services, customers must be educated about how to manage their boat waste, and there must be strict enforcement.
- Have a written policy for any liveaboard boaters that they must keep their marine sanitation device discharge “Y” valve secured in the dockside pumpout position. Require liveaboards to keep a pumpout log book and/or conduct boat spot checks to confirm no discharges occur while boats are moored.

PROVIDE RESOURCES:

- Provide a means to collect and properly dispose of all

black water generated from boats.

1. If your marina services boats with holding tanks, install a pumpout. Select the type of pumpout system that meets the needs of your marina, your customers, and transients. Options include:
 - a. Pumpouts permanently fixed to the dock,
 - b. Mobile, hand truck, trailer mounted units, or
 - c. Pumpout boat
 2. If your marina services mostly smaller boats without holding tanks, install a portable toilet holding tank waste receptacle (dump station) in a convenient location near small slips and launch ramps.
- Use Clean Vessel Act (CVA) funds to greatly defray costs of installing and operating a pumpout. Contact the Marine Board for more information.

**LOCATION:**

- If the pumpout is permanently fixed, choose an appropriate location that is convenient and accessible to the most number of boats throughout the tidal cycle. Consider whether a gas dock, T-head, or separate bulkhead is most appropriate.
- Provide clean and attractive bathrooms for marina customers. Encourage customers to use them rather than the toilets or showers on their boats.

MAINTENANCE:

- Train staff to operate the pumpout. Boaters rely on functional pumpout facilities.
- Test pumpout equipment regularly with a vacuum gauge or bucket test.
- Upland waste holding tanks, if above ground, should be secured and have a secondary containment area, including a concrete pad. Inspect area regularly.

EDUCATE:

- Educate marina customers about the impacts of boat sewage and the proper way to manage it. Post signs in the marina outlining the rules for proper sewage handling.
- Encourage the boaters at your facility with marine heads to install holding tanks.
- Talk to liveaboard boaters about the marina's policies for waste disposal and about their options for proper disposal.



*Pumpout & dump station
at Port of Cascade Locks*

- Advertise pumpout services, provide clear signage regarding times of operation and whether there is a fee, and post a list of mobile pumpout services and emergency phone numbers.
- Provide clear instructions in pumpout use.
- Provide and promote biodegradable and non-toxic holding tank deodorant.
- Allow pumpout boats to service customers in your facility.

See Appendix D for more information about marine sewage management.



*Pumpout signage at
St. Helen's Marina*



Pumpout at Port of Arlington



Restroom at Port of Arlington

SECTION 5: HAZARDOUS WASTE MANAGEMENT



Hazardous Waste

Marina operators are responsible for determining which materials handled at their facilities are subject to regulation as hazardous materials and hazardous waste. They must also comply with regulations for handling, storage, transportation, and disposal of waste. This section discusses good housekeeping practices for hazardous materials storage to minimize the threat of release. A listing of potentially hazardous waste streams and disposal recommendations, as well as a much more detailed description of hazardous waste management, is included in Appendix C. Also, check the other sections of this guidebook for description of handling, storage, and disposal of particular types of potential hazardous waste.

LEGAL REQUIREMENTS:

A hazardous waste determination must be conducted to establish whether or not a solid or liquid waste is subject to hazardous waste regulations [RCRA; 40 CFR 262.11; OAR 340-101].

Determine your hazardous waste generator category and comply with corresponding requirements [RCRA; 40 CFR 262; OAR 340-102]. Generally, facilities that generate under 220 pounds of hazardous waste are conditionally exempt.

Reportable quantities of hazardous substances that are used, stored, manufactured or disposed of at business and government sites in Oregon are required to be reported annually to comply with state and federal Community Right to Know requirements. Facilities must submit their chemical inventory information using the Hazardous Substance Information Survey form supplied by the State Fire Marshal [ORS 453.307; OAR 837-085]. Keep copies of Material Safety Data Sheets (MSDS) for all hazardous substances used at your facility [Occupational Safety and Health Act of 1970, 29 USC Section 657].



Keep liquid wastes separate and do not dispose of them into the trash. Label the contents of hazardous waste container(s), including the accumulation start dates. Manage hazardous waste per regulations [OAR 340-102].

Personnel working in spill response or cleanup require training in accordance with applicable state and federal regulations [29 CFR 1910.120]. Any spills to the water that result in a sheen are required to be reported to the National Response Center (NRC) at 1-800-424-8802.



Flammable Safety Cabinet

Employees and contractors who may be exposed to hazardous materials are subject to training and educational requirements under the Occupational Safety and Health Administration (OSHA) Employee Right to Know Program. Employees handling used oil and hazardous waste may require training under state and federal hazardous waste regulation [40 CFR 262]. Free training is available at the DEQ: <http://www.deq.state.or.us/lq/training.htm#HW>.

BEST MANAGEMENT PRACTICES:**GO NON-TOXIC:**

- Inventory and review chemical products used in the marina. Where feasible, minimize the use and storage of hazardous materials onsite.
- Look for and encourage the use of less toxic products for cleaning, facility maintenance, and landscaping.

STORAGE:

- Storage practices for solid chemicals, chemical solutions, paints, oils, solvents, acids, caustic solutions, and waste materials, including used batteries, should prevent releases to the environment and inadvertent public contact.
- Use practices that prevent overfilling, tipping, or rupture. Flammable Safety Cabinets are ideal.
- Create a spill response plan.
- Observe the following practices:
 - Place any hazardous liquids that are stored outside on durable impervious surfaces, and within berms or impoundments with containment capacity equal to 110 percent volume of the largest tank or container.
 - Liquids should be stored under cover in closed containers. All tanks and drums should be kept closed.
 - Store incompatible or reactive materials securely and in separate areas.
 - Conform to fire regulations and local codes.

RECYCLE:

- Spent antifreeze, used oil, fluorescent light tubes, and batteries should be managed as universal waste and transported to a recycling facility (see Section: 6).

DISPOSAL:

- Follow recommended disposal methods for potential hazardous waste streams (see Appendix C).
- Spent solvents, paints, and sandblast residues may be hazardous waste and face additional requirements for proper disposal. Most important are keeping lids on the containers and labeling them appropriately.

ASSISTANCE:

- Check with your regional DEQ office about hazardous waste identification and management. The DEQ Hazardous Waste Technical Assistance staff aim to help you comply with the regulations and reduce your costs for hazardous materials and hazardous waste disposal. See <http://www.deq.state.or.us/lq/hw/technicalassistance.htm>.

In general, operate under the BMPs in this manual to prevent the release of contaminants and generation of hazardous waste. For example: use drip pans, drop cloths or tarps in painting operations to prevent releases, and work under cover when using hazardous materials or conducting shore side engine repair.

SECTION 5: HAZARDOUS WASTE MANAGEMENT

Rags & Oil Absorbent Pads

Contaminated rags that are improperly managed may pose fire, health, and environmental risks. Minimizing contamination of rags reduces health risks to workers and emissions of volatile organic compounds to the air, improves effluent discharge from industrial laundries if you use launderable rags, decreases liability risks, and saves money by minimizing solvent use. New rules are being developed for disposal of rags with solvents on them. Contact DEQ for the most current information at <http://www.deq.state.or.us/lq/hw/technicalassistance.htm>.

LEGAL REQUIREMENTS:

How used cloth rags are managed depends on what the rags are contaminated with [40 CFR 262.11]. If the used rag is:

- Dripping with used oil, manage as used oil.
- Contaminated with used oil, but not dripping, evaluate for hazardous waste then properly manage.
- Contaminated with paints or solvents, or other hazardous materials, manage as hazardous waste.
- Contaminated with other material (or only with mild cleaners or soaps), dispose of in regular trash.



Oil absorbent pads

If you lease rags and have them laundered, and they are contaminated with hazardous waste, you must manage them as hazardous waste until they are picked up for laundering. However, they do not require a hazardous waste manifest [40 CFR 262.11].

BEST MANAGEMENT PRACTICES:

USE:

- Keep oily rags separate from rags that have been contaminated with hazardous materials such as solvents.
- Remove excess solvent from rags by wringing or pressing excess into coverable container.
- Reduce the amount of solvent used in cleaning through improved work practices.
- Use solvents only when absolutely necessary. Use non-VOC cleaners.
- Reuse rags or absorbent pads that have soaked up ONLY gasoline.

LAUNDRY SERVICE:

- Use cloth rags that can be recycled by an industrial laundry service.
- Contract with a permitted industrial laundry service that will pick up soiled rags and deliver clean rags on a regular basis. The laundry service may require you to limit the solvent and other chemical content of the soiled rags because of the limits on their permit to discharge wastewater into the sanitary sewer.

STORAGE & DISPOSAL:

- Store ignitable rags in NFPA approved, labeled containers until they can be laundered.
- If rag or absorbent pad has soaked up ONLY diesel or oil:
 1. If the used oil collector will accept them for energy recovery, place in a covered container in the used oil collection area for pickup.
 2. If the rag or pad is dry and the used oil collector will not accept them, check that the landfill will accept them and then double bag and place in trash.

Degreasing/ Parts Washing

Degreasers used to clean metal parts may be organic solvents (chlorinated or non-chlorinated) or water-based cleaners. Organic solvents usually contain volatile organic compounds (VOCs) which can evaporate quickly. Many VOCs combine with combustion emissions to form ground level ozone, a major component of “smog.” Ozone damages lungs and degrades many materials. When solvents are released and reach water, even in very small quantities, they render the water unfit for human consumption and uninhabitable for aquatic life. Many organic solvents are also combustible, which may pose a fire hazard.

LEGAL REQUIREMENTS:

A hazardous waste determination must be conducted to establish whether or not disposal of waste solvents and parts washer solutions is subject to hazardous waste regulations [RCRA; 40 CFR 262.11; OAR 340-102-0011]. A hazardous waste determination must also be conducted on any materials used to clean a spill.

BEST MANAGEMENT PRACTICES:

ALTERNATIVES:

- Use water-based, non-VOC cleaners that are less hazardous than solvent-based degreasers. They are also less toxic and non-flammable. Don't use a toxic or flammable organic solvent if you don't have to.

USE:

- Any parts washer that uses VOCs at room temperature should follow these equipment design and operating procedures:
 1. The cover must be easily operated with one hand and closed whenever the parts washer is not being used for 2 minutes or more.
 2. Parts must be covered during draining.
 3. Waste solvent must be stored in covered containers.
 4. Cleaned parts must be drained for at least 15 seconds, or until dripping ceases, whichever is longer.
 5. Degreasing solvent must be sprayed as a compact fluid stream (not a fine, atomized, or shower type) and at a pressure that does not exceed 10 psi.
 6. Operation must cease at the occurrence of any visible solvent leaks.
 7. Post labels on or near each unit summarizing the applicable operating requirements.
 8. Keep monthly records on the amount of solvent added to each unit.

- If the use of VOC-based solvents is unavoidable, catch excess solvents in a pan and reuse.
- Do not mix or add other types of solvents to any degreaser.

DISPOSAL:

- Never discard any degreasing solvent into sinks, floor drains or onto the ground. It will ultimately find its way to local waters, and as little as a thimble full may render thousands of gallons of water uninhabitable for aquatic life or unfit for human consumption. You may be held responsible for remediation costs.



Parts washer

SECTION 6: UNIVERSAL WASTE MANAGEMENT

Oil & Used Oil



Marina operations that provide boat repair and maintenance services will probably generate used oil and other lubricants which must be managed properly to ensure compliance with state and federal regulatory requirements. Even small amounts of oil introduced into the marina environment can cause environmental problems, especially if they persist. Although some oil that spills into the water evaporates, petroleum hydrocarbons can remain suspended in the water column, concentrate on the surface, or settle to the bottom. Because of the properties of oil, a cup of oil can spread a very thin sheen over more than an acre of calm water. An oil sheen can block necessary oxygen and light from moving through the water's surface and can interfere with and harm the growth and reproduction of fish and bottom-dwelling organisms.

LEGAL REQUIREMENTS:

Manage used oil, and any materials used to clean a spill, in accordance with the requirements specified in [40 CFR 279], and outlined above. Label the tank or container "Used Oil" [40 CFR 279.22(c)].

Storage of used oil is subject to all applicable Spill Prevention, Control and Countermeasures [40 CFR 112]. Prepare a Spill Prevention, Control, and Countermeasures (SPCC) Plan if you store more than 1,320 gallons of used (or new) oil above-ground (containers of less than 55 gallons are exempt from the total) [40 CFR 112.1]. See Section 11: Emergency Planning for more information on SPCC Plans.

Report Spills. Any spill or release of petroleum that results in a sheen on the waters of the state, or a release of oil onto the ground surface of 42 gallons or more, must be reported immediately to both the:

- Oregon Emergency Response System (OERS) at 1-800-OILS-911 (or 1-800-452-0311) [OAR 340.142; ORS 466.635]; &
- National Response Center at 1-800-424-8802 [Section 311 of the Clean Water Act; 33 USC 1321].

Do not use dispersants! The use of dispersants, such as dishwashing soaps or detergents, on a fuel spill or sheen of any size on the surface water is prohibited. Dispersants may only be used with permission from federal or state authorities, and only in rare instances [40 CFR 110.4; ORS 468B.315].

WHAT IS USED OIL?

Used oil includes used motor oil, gear oil, greases, machine cutting and coolant oils, hydraulic oils, brake fluids, used crankcase (engine) oil, and used liquid and semi-solid gear, chain, and ball bearing lubricants. Materials that contain or are contaminated with used oil can also fall under the definition of used oil, such as used oil filters, oily rags and wipers, used absorbents, and oily wastewater.

IS IT HAZARDOUS?

Used oil is not considered hazardous waste unless it is mixed with a hazardous waste such as a chlorinated solvent. If used oil has been mixed with a hazardous waste, see Appendix C for management requirements.

HOW SHOULD A MARINA MANAGE THE USED OIL IT GENERATES?

Used crankcase oil, automatic transmission fluid, power steering fluid, and hydraulic fluid are all considered used oil and can be mixed and managed together.

If the used oil tests positive for hazardous constituents, it must be managed as hazardous waste (see Appendix C). If the used oil does not test positive for hazardous waste, it should be managed as follows:

1. Collect and store used oil in a secure collection tank or drum, separate from other wastes.
2. Dispose of the used oil by hauling or burning it:
 - Contract with a permitted waste oil transporter to haul oil to a permitted recycling facility; *or*
 - Burn the used oil in space heaters for energy recovery (i.e. to heat your shop), providing the heater burns only used oil generated on-site or received from "do-it-yourself" oil changers.

NOTE: Used oil heaters must:

- a. Have a maximum design capacity of no more than 0.5 million BTU's per hour; and
- b. Vent combustion gases outside the building; and
- c. Burn only used oil that you generate or that you have collected from your customers.

BEST MANAGEMENT PRACTICES:

STORAGE:

- Do not allow anything else, such as gasoline, solvents, paint, varnishes, pesticides, or antifreeze, to be added to the Used Oil container. The introduction of these materials will result in the mixture having to be managed as a hazardous waste, which is more difficult and expensive.
- Post signs indicating the importance of not contaminating the Used Oil collection bin.
- In general, engine oil, transmission fluid, hydraulic fluid, and gear oil are considered used oil and may be placed in the waste oil container. Check with your recycler before mixing any materials.
- Make sure containers are covered, on impervious surfaces, and have secondary containment (capacity equal to 110% of the volume of the largest storage tank or container). Secondary containment is not required if the container is indoors.
- Allocate an adequate waste storage facility based on the needs and size of your marina.
- Avoid storing Used Oil near the water and ensure the container is well labeled.



Waste oil tank at
Tomahawk Bay Marina

REUSE & RECYCLE:

- Burn your used oil in an approved used oil fuel space heater. This is a cost savings measure that eliminates the cost of waste oil removal.
- Have a registered used oil transporter haul the used oil offsite for recycling. Used oil that is recycled is subject to less stringent regulations than hazardous waste.
- Be aware that recycling liquid materials is a long-term obligation. Investigate waste haulers to ensure that they do actually recycle the collected material.
- Puncture and thoroughly drain used oil filters first. If you generate large numbers of filters, consider purchasing a filter crusher.

MAINTENANCE ACTIVITIES:

- Purchase a non-spill vacuum-type system for spill-proof oil changes, or to suction oily water from bilges. Consider renting the system to boaters who perform their own oil changes.
- Slip a plastic bag over used oil filters prior to removal to prevent drips.

- Use oil absorbent materials to clean up small drips and spills. Sell oil absorbent pads in the facility's store.

COLLECTION:

- Install collection facilities for used oil and used oil filters and encourage boaters to use them, or direct boaters to their municipal used oil collection facility, usually at the local transfer station.
- Collected oil should be recycled or burned in an approved heater; otherwise the marina may be subject to stricter regulations due to the increased generation of hazardous waste. Contact DEQ Technical Assistance for a consultation visit to ensure there is no change in generator status: <http://www.deq.state.or.us/lq/hw/>.
- Consider providing separate tanks for used oil, one for patrons to use and a secure tank for marina facility staff. Used oil contaminated with a hazardous substance is much more costly to dispose of than unpolluted used oil.
- Consider locking the tank or container's fill spout when not in use.
- If you collect customers' oil, remind boaters NOT to:
 - Mix used oil with antifreeze or hazardous waste
 - Burn used oil in residential boilers or space heaters.
 - Dump used oil overboard.
 - Pour used oil into sewers or storm drains.
 - Dump used oil on the ground; use it for weed control or to keep dust down.

TRAINING:

- Visually inspect the tank or container on a regular basis for leaks or malfunctions. Maintain written inspection records.
- Instruct all employees who handle used oil on the proper operation and management of the oil storage area. Assign one person the responsibility for monitoring oil storage.
- Educate customers and staff to not use soaps and detergents to clean up oily drips and spills on the water. It's illegal to do so!
- Avoid pumping bilge water that is oily or has a visible sheen. Use oil absorbent materials or an oil/water separator to remove oil before pumping.
- Purchase a portable or stationary oil/water separator to draw contaminated water from bilges, capture hydrocarbons in a filter, and discharge clean water.

SECTION 6: UNIVERSAL WASTE MANAGEMENT

Additional FAQ's: Used Oil

CAN USED OIL BE MIXED WITH DIESEL FUEL, AS RECOMMENDED BY THE MANUFACTURERS OF SOME DIESEL ENGINES?

The manufacturers of certain diesel engines recommend that you add used oil to diesel fuel. If you have a diesel engine of this type, you may mix your used oil with virgin diesel fuel according to the manufacturer's instructions. However, up until the point that the used oil is actually mixed with the diesel fuel, it must be handled exactly the same as any other used oil. This exemption applies only to used oil used in your own diesel engines. You may not add your used oil to diesel fuel that will be used in someone else's diesel engines. Nor may you accept used oil from someone else to put into your diesel fuel.

HOW SHOULD USED OIL ABSORBENT MATERIAL BE DISPOSED?

Materials that contain or are contaminated with used oil can also fall under the definition of used oil. The most common of these materials are used oil absorbent pads, rags and wipers, and absorbents (such as kitty litter and speedi-dri). Marina staff that produce waste oil absorbent material as a result of vessel maintenance at the marina must collect all used oil absorbent material, test for hazardous constituents, and transport either as hazardous waste or used oil, depending on the test results. However, if the absorbents do not have free-draining oil and are not going to be burned for energy recovery, they are no longer subject to regulation as used oil. In this case, these soaked absorbents must have a hazardous waste determination and be disposed of as hazardous waste (Appendix C) or double-bagged and discarded in trash.

Boaters or marina staff doing work on customers' boats dockside can dispose of oil absorbent materials generated while conducting maintenance by bringing the absorbent to a collection area provided by the marina. Boaters can also take their waste oil absorbents to a household hazardous waste collection facility for disposal. If the absorbent does not have free-draining oil and no such collection area is available, boaters may double-bag it and dispose of it in the regular trash.

ARE THERE ANY OTHER REQUIREMENTS?

On-board air conditioning systems may also generate used oils that are contaminated with refrigerants (such as Freon). This type of used oil must be recycled for its Freon content. See section on "Refrigerants" for more information.

Compressor Blowdowns

Air compressor blowdown water commonly contains lubricating oil or other potential pollutants. These hydrocarbons can contaminate surface and groundwater when improperly managed.

LEGAL REQUIREMENTS:

Waste compressor oil, filters and oil/water separator waste must be managed as used oil [40 CFR 279].

BEST MANAGEMENT PRACTICES:

- Either discharge air compressor blowdown water to sanitary sewer or contain it in a holding tank. Do not discharge this wastewater into a septic system.
- Remove or retain any floating layer of oil prior to discharge.
- Regularly inspect the exterior of air compressor equipment for the presence of oil leaks.
- Establish a preventative maintenance program which includes, but is not limited to, a schedule for cleaning parts, replacing oil, and replacing filters for the air compressor equipment as recommended in the manufacturer's specifications.
- Evaluate the need for installing a dehumidifying system in the air compressor that would reduce the moisture content of the compressed air and therefore the volume of wastewater generated. This practice may also prolong the life of the compressor by reducing loss of lubrication and rusting.
- Investigate purchasing an oil-free air compressor that would eliminate oil from the blowdown water.

Battery Replacement

Batteries must be replaced over time. If handled improperly, lead acid batteries pose certain hazards. Battery components are toxic and corrosive, and can also be a fire and explosion hazard. Lead and sulfuric acid can contaminate the air, soil, and water. Direct contact with sulfuric acid can burn the skin and eyes. Exposure to lead in the environment can pose a serious health hazard to children. Lead is also very toxic to aquatic life and can enter marina basins through stormwater when spent lead acid batteries are not managed properly. Spent batteries should be transported to a recycling facility.

LEGAL REQUIREMENTS:

Marinas that store less than 11,000 pounds (5,000 kg) of spent lead-acid batteries would be classified as “Small Quantity Handlers” under the Universal Waste Rule. Such handlers are required to do the following [40 CFR 273 Subpart B]:

1. Mark all batteries (or containers holding such batteries) with the words “Universal Waste – Batteries,” “Waste Batteries,” or “Used Batteries.”
2. Store batteries for no more than one year before sending them off-site for recycling.
3. Place any battery that shows signs of leakage, spillage, or damage in a container that is kept closed, is structurally sound, and is compatible with the contents of the battery.
4. Immediately contain any releases of batteries or electrolytes.
5. Before shipping batteries off-site, ensure that they are packaged, marked, labeled, and placarded in accordance with U.S. DOT rules for hazardous materials.
6. Ship the batteries to another Universal Waste handler, or to an authorized destination facility for recycling. Prior to shipment, ensure that the receiving facility agrees to receive the shipment. Any shipments that are rejected must be taken back, or directed to another handler or destination facility. In addition, if you transport batteries from one site to another, you must comply with Universal Waste transporter requirements [40 CFR 273 Subpart D].

A hazardous waste determination must be conducted on spilled acid and broken lead acid batteries, and any materials used to clean a spill, to establish whether or not their disposal is subject to hazardous waste regulations [RCRA; 40 CFR 262.11; OAR 340-102-0011].

If over 500 pounds of batteries are stored on-site, report the chemicals in lead acid batteries (sulfuric acid and lead) as part of your hazardous and toxic chemical inventory and notifications required under the state and federal Community Right-to-Know requirements [ORS 453.307; OAR 837-085; 40 CFR 355].

BEST MANAGEMENT PRACTICES:

STORAGE:

- Avoid long-term storage of lead acid batteries by sending accumulated batteries to a reclaimer within six months of receipt. Limit accumulation of large quantities of spent batteries. If necessary, ship more frequently.
- Store spent lead acid batteries upright in a secure location, protected from the elements.
- Never stack batteries directly on top of each other. Layer with wood.
- Never drain batteries or crack the casings.
- Place cracked or leaking batteries in a sturdy, acid-resistant, leak-proof, sealed container (e.g. a sealable 5-gallon plastic pail). The container should be kept closed within the battery storage area.

TRANSPORT:

- Strap batteries to pallets or wrap batteries and pallet in plastic during transport.
- Keep written records of weekly inspections of spent lead acid batteries.



SECTION 6: UNIVERSAL WASTE MANAGEMENT

Antifreeze & Used Antifreeze

Antifreeze is a common engine coolant used in boats and automobiles. Environmental contamination can occur when antifreeze is improperly disposed of or handled. Antifreeze can pollute groundwater, surface water and drinking water supplies if dumped, spilled or leaked, and it is harmful to marine and aquatic life. While in an engine, antifreeze can become contaminated with lead or fuel to the point where it must be managed as a hazardous waste.

There are two types of antifreeze:

- Antifreeze with ethylene glycol – a greenish-yellow, odorless, sweet-tasting chemical that poses a serious health hazard to humans and animals if ingested
- Antifreeze with propylene glycol – usually pink in color, this version is less toxic and is recommended for use

Acceptable methods for managing used antifreeze include: recycling; disposal at a hazardous waste treatment, storage, or disposal (TSD) facility; or discharge to a wastewater treatment plant (with prior approval of the operator). Please note that many wastewater treatment plant operators prohibit the disposal of used antifreeze to their systems because of the possibility of damaging the treatment system. Antifreeze should not be disposed of by throwing it in the trash, pouring it down the storm sewer, or putting it into septic systems. Many storm sewers discharge directly to surface waters, such as ponds or streams. If poured into a septic system, the antifreeze may damage the system by killing the microorganisms necessary for waste decomposition.

LEGAL REQUIREMENTS:

Waste antifreeze can be either hazardous or non-hazardous, depending upon the levels of contaminants it contains (the most common contaminants are lead, benzene, and zinc).

In order to determine which is the case, the generator must either have their waste tested, or utilize reliable “knowledge of process” information for the waste (if available) [RCRA; 40 CFR 262.11; OAR 340-102-0011]. Such information could include testing by haulers or studies by industry trade groups. A hazardous waste determination must be conducted on any materials used to clean antifreeze spills [40 CFR 262.11].

Refer to DEQ’s Waste Determination Factsheet for more information: www.deq.state.or.us/wmc/hw/reslibhwgen.html.

Antifreeze that is hazardous waste must either be recycled or disposed of via a permitted hazardous waste hauler. While stored on-site, it must be managed in accordance with hazardous waste storage requirements [40 CFR 262.11; OAR 340-102]. Antifreeze that is determined to not be a hazardous waste is still considered a polluting liquid waste and may not be discharged into the waters of the state or placed in a location where it is likely to end up in the waters of the state [ORS 468B.025].

BEST MANAGEMENT PRACTICES:

STORAGE:

- Segregate used antifreeze from other wastes. Never mix antifreeze with other chemicals.
- Provide well-marked, coverable containers that are in good condition to collect antifreeze.
- Label the containers “Used Antifreeze.” Keep covered.
- Store in a container that can be completely drained with a wide opening. Provide containment to prevent spills from entering ground water or stormwater.

HANDLING:

- Choose the less toxic alternative: propylene glycol antifreeze (usually pink), which is substantially less toxic than ethylene glycol (usually green).
- Use drip pans and funnels when transferring antifreeze.
- Wear eye protection, clothing that covers exposed skin and rubber gloves when transferring antifreeze.
- Pour slowly and carefully to avoid splashing.
- Recover antifreeze used to winterize systems. Do not allow boaters to “blow out” antifreeze from the boat when it is put in the water for the first time.



Waste Antifreeze tank at Charleston Shipyard



RECYCLE: Recycling used antifreeze is the most environmentally safe and responsible option, but it may also be more cost efficient than disposing of the waste and buying new product. Antifreeze can be recycled via distillation, ion exchange and filtration.

Recycling options for antifreeze:

- Contract with an on-site mobile recycling service that is permitted by OR-DEQ to recycle antifreeze;
- Contract with a hauler that recycles the antifreeze off-site;

- Purchase on-site recycling equipment and recycle at your facility. Conduct a hazardous waste determination (i.e. test the residue or filter cartridge) at least one time to verify that the waste is not hazardous before recycling on-site. Keep a copy of the test results in your files.

A hazardous waste determination must be made on all wastes produced by the recycling process, such as filters and sludges, and the waste managed appropriately.

USED ANTIFREEZE MANAGEMENT

The Oregon Department of Environmental Quality (DEQ) has determined that used antifreeze that is recycled and properly managed according to the following “Best Management Practices” (BMPs) are presumed to comply with hazardous waste management requirements.

- The used antifreeze generator and the recycling facility maintain proof of recycling (e.g. a log for on-site recycling or an invoice or bill for off-site recycling).
- Employees who handle or otherwise manage used antifreeze know proper handling and spill response procedures.

USED ANTIFREEZE BEST MANAGEMENT PRACTICES:

- Used antifreeze is stored in containers that are in good condition and labeled with the words “Used Antifreeze.”
- Used antifreeze is not mixed with any waste or other material (e.g. solvents, cooling system flushes, used oil, motor fuels). Used antifreeze must be managed according to applicable hazardous waste regulations if it has been mixed with listed or characteristic hazardous waste.
- Antifreeze collection, storage and transport containers or tanks are dedicated solely to the transfer and storage of antifreeze, to prevent the risk of cross-contamination.
- Used antifreeze containers are kept closed, except when emptying or filling, to minimize the potential for spillage.
- Used antifreeze containers are located in a secure area and properly maintained so that they do not leak, rupture, or tip over when being opened, handled, or stored.
- Spills of used antifreeze are cleaned up immediately and appropriately managed. (Non-recyclable spill cleanup wastes must undergo a hazardous waste determination before disposal.)
- Volumes of accumulated used antifreeze are minimized by routinely recycling to reduce the potential for environmental harm.

Used antifreeze that is not legitimately recycled according to the above Best Management Practices is subject to management as a potential hazardous waste. Used antifreeze mixed with other waste or material, such as caustic radiator flushing chemicals or used oil, reduces the recyclability of the antifreeze and is not considered legitimate recycling under this policy.

USED ANTIFREEZE GENERATED BY DO-IT-YOURSELFERS:

Used antifreeze from households should be taken to a hazardous waste collection facility or collection event for proper recycling or disposal. If you live in the Portland metropolitan area, contact the Metro Recycling Information Hotline at 503-234-3000 for used antifreeze disposal/recycling locations. If you live outside the Portland metro area, contact the toll-free hotline at 1-800-732-9253 for facilities that accept used antifreeze for recycling or upcoming household hazardous waste collection events. If collection is not available in your community, contact the local sewer district to see if disposal of small amounts of used antifreeze to the sanitary sewer is permitted.

Never pour used antifreeze on the ground, down a dry well or storm drain, or in your septic system. Contact your local DEQ office for more information.

SECTION 7: FUELING



Fuel Docks

The small spills that occur during boat fueling can accumulate and become a much larger problem. As little as a quart of spilled oil, diesel, or gasoline can contaminate 100,000 gallons of water and prove deadly to marine life — especially juvenile fishes, shellfish larvae, and other essential sea life. Most fuel dock spills are small and result from overfilling boat fuel tanks, burps from air vent lines, and drips from the pump nozzle as it is being returned to the pump. Paying close attention to the activities of boat operators, the marina's policies and procedures, and the available resources for spill prevention and response, is critical in reducing fuel spill impacts to water.

LEGAL REQUIREMENTS:

All marine motor fuel-dispensing facilities are subject to the State of Oregon Fire Code Chapter 23, Section 2310 Marine Motor Fuel Dispensing Facilities. By reference, the State Fire Code adopts the National Fire Protection Association's (NFPA) Automotive and Marine Service Station Code (NFPA 30A).

The following requirements are listed in the Oregon Fire Code, Section 2310 as pertaining to marine motor fuel-dispensing facilities. It is not intended to be a complete list of requirements:

- Dispensing nozzles must be equipped with a listed automatic-closing nozzle without a latch-open device. [OFC, 2310.3.3; NFPA 30A, Section 11-4.2]. Remove fuel nozzle triggers that lock in the “on” position.
- All marine service stations must be attended by an employee responsible for supervising, observing, and controlling the dispensing of liquids whenever the station is open for business [OFC, 2310.3.2; NFPA 30A, Section 11-4.7].
- Portable fire extinguishers having a minimum rating of 20-B:C shall be provided as follows: [OFC, 2310.6.4]
 - One on each float.
 - One on the pier or wharf within 25 feet of the head of the gangway to the float, unless the office is within 25 feet of the gangway or is on the float and an extinguisher is provided thereon.
- Warning signs shall be prominently displayed at the face of each wharf, pier or float at such elevation as to be clearly visible from the decks of marine craft being fueled. Such signs shall have letters not less than 3 inches in height on a background of contrasting color bearing the following or approved equivalent wording:

WARNING
NO SMOKING--STOP ENGINE WHILE FUELING,
SHUT OFF ELECTRICITY.
DO NOT START ENGINE UNTIL AFTER BELOW
DECK SPACES ARE VENTILLATED.

If your facility stores more than 1,320 gallons of fuel in aboveground tanks or more than 42,000 gallons in underground tanks, your facility is required to have a Spill Prevention Control and Countermeasure (SPCC) Plan [40 CFR 112; OAR 340-141]

Any spill or release of petroleum that results in a sheen on the waters of the state must be reported immediately to:

- Oregon Emergency Response System (OERS) at 1-800-OILS-911 (or 1-800-452-0311) [OAR 340.142; ORS 466.652]
- National Response Center at 1-800-424-8802 [Section 311 of the Clean Water Act; 33 USC 1321].

The spiller is required to notify these agencies in the event of a spill. However, anyone is encouraged to report a spill if they see one.

Don't use soap or dish detergent to disperse an oil spill. Using detergents to disperse fuel worsens the problem and is against federal law (40 CFR 110.4).



BEST MANAGEMENT PRACTICES:

LOCATION & DISTRIBUTION:

- Locate fuel docks in protected areas to reduce potential for accidents due to passing boat traffic, and design them so that spill containment equipment can be easily deployed to surround a spill and any boats that may be tied to the fuel dock.
- Never block open the fuel nozzle trigger and always disable hands-free clips to ensure the boater remains with the nozzle to prevent overfilling. Hands-free clips are not allowed in Oregon. [OFC, 2310.3.3]
- Have the boat operator place an absorbent pad or suction cup bottle under the vent(s) to capture fuel spurts from the vent.
- Provide a stable platform for fueling personal watercraft, if your facility services significant numbers of them.

ABSORBENTS:

- Store spill containment and control materials in a clearly marked and easily accessible location, attached or adjacent to the fuel dock.
- Keep oil absorbent pads and pillows available at the fuel dock for staff and customers to mop up drips and small spills.
- Have a metal trash can available for the disposal of oil-soaked rags, pads, etc.
- Carry vent line whistles, vent cups, oil absorbent fuel collars and other fuel spill preventative devices in your store.

FUEL TANKS & LINES:

- Routinely inspect, repair, and/or replace fuel transfer equipment, such as hoses and pipes, and tanks.

- Place plastic or nonferrous drip trays lined with oil absorbent materials beneath fuel connections.

TRAINING:

- Train fuel dock staff to handle and dispense fuel properly. Fuel dock staff should be trained to:
 1. Fill tanks slowly and carefully. Prevent overfilling of gas tanks by listening to or keeping a hand at the air vent, if possible; a pronounced flow of air is emitted when the tank is nearly full.
 2. Remember that fuel expands in warm weather and to leave at least 5% of space in a fuel tank to allow for that expansion.
 3. Use a fuel collar or fuel bib and keep an absorbent pad or pillow ready to catch spills, drips, or overflow.
 4. Put a drip pan under portable fuel tanks. If possible, fill portable fuel tanks ashore.
 5. Prevent spills as well as respond to spills.
 6. Give information and direction to customers.

RESPONSE:

- Consider installing wired or wireless cameras and intercom to communicate with customers on the dock and know what is happening on the dock at all times.
- Always have a “Spills Aren’t Slick” sign with emergency spill reporting numbers clearly visible.
- Using detergents to disperse a fuel spill is illegal and the fines are expensive. Ensure customers do not use soaps in the event of a spill. Use oil absorbent pads instead.
- Display “No Smoking” signs on fuel docks.



Fuel dock at Port of Siuslaw

SECTION 7: FUELING

Portable Container Fueling



It is always preferable to have boats fuel on shore or at a fuel dock rather than transport fuel from an upland fueling facility to the boats. However, this is not always practical, and boaters will often use hand-held fueling containers or “jerry cans.” This over-water transport, storage, and transfer of fuel presents risks for spills, personal injury, and combustion from static shock. It is important to closely monitor and enforce fueling BMPs.

LEGAL REQUIREMENTS:

Dispensing into portable containers is subject to the State of Oregon Fire Code Chapter 23, Section 2304.

Six gallons is the maximum container size permitted to be filled at a fuel dock for transport (OFC, 2304.4).

BEST MANAGEMENT PRACTICES:

SAFETY:

- Always refill portable fuel containers on the pavement or dock to ensure a good ground. While the bed of your truck or the deck of your boat may seem stable, static electricity can build up and cause a spark.
- Ensure the nozzle stays in contact with the tank opening.
- Use a fuel siphon with a shut-off feature. If a siphon is not available, a nozzle/spout with a shut off is a good alternative.
- Go slowly, pour deliberately, and watch the container (especially the nozzle mechanism) for signs of wear.
- Since fueling boats with a portable container can take time, make sure the container is comfortable to carry, hold, and balance.

- Always store portable fuel tanks out of direct sunlight and keep in a cool, dry, place to minimize condensation.

SPILL PREVENTION:

- On the dock, put an absorbent pad under the container and wrap an absorbent pad around the fuel fill — this can easily be done by putting a hole in the pad.
- Place a plug of absorbent pad or paper towel in the nozzle when not in use to capture any extra drops that accumulate.
- Use a high flow funnel. Funnels can help prevent spills by making a larger opening for fueling.

Fuel Storage

There are many types of storage tanks. Knowing what type you have can help shape your maintenance procedures and spill prevention and response plan. Storage tanks can be single or double walled and above or below ground. Because they tend to be overlooked, fuel storage tanks require more specific maintenance.

LEGAL REQUIREMENTS:

If your facility stores 500 gallons or more of gasoline, diesel fuel, and/or fuel oil, either above- or under ground for dispensing or for on-site use, you must report storage of that substance to the State Fire Marshall under the Oregon Community Right to Know (CR2K). Submission of the annual CR2K survey also fulfills the reporting requirement of the federal Emergency Planning and Community Right-to-Know Act of 1986 [42 USC 11001 and 42 CFR 355].

Both above and underground storage tanks and their piping systems are subject to the National Fire Protection Association’s (NFPA) Automotive and Marine Service Station Code (NFPA 30A) and the Oregon State Fire Code.

Underground Petroleum Storage: Tanks with ten percent or more of total volume below ground (including the volume of connected underground pipes) are considered Underground Storage Tanks (USTs) and must meet certain requirements [OAR 340-150; 40 CFR 280] and be registered with Oregon DEQ. For tank requirements, see OAR 340-150-0001 through 340-150-0620.

If a facility has a total underground storage capacity of more than 42,000 gallons of petroleum product, it may require a Spill, Prevention, Control, and Countermeasure (SPCC) Plan [40 CFR 112.1].

There are additional requirements for facility owners or operators when they are closing USTs through removal or in-place abandonment [OAR 340-150-0180].

Aboveground Petroleum Storage: If your facility stores more than 1,320 gallons total of oil in aboveground tanks in containers greater than 55 gallons, the facility is likely required to have a Spill Prevention, Control and Countermeasure (SPCC) Plan [40 CFR 112.1]. (See Section 12: Emergency Planning for more details.)

Any spill or release of petroleum that results in a sheen on the waters of the state, or a release of oil onto the ground surface of 42 gallons or more, must be reported immediately to the:

- Oregon Emergency Response System (OERS) at 1-800-OILS-911 (or 1-800-452-0311) [OAR 340.142; ORS 466.635]
- National Response Center at 1-800-424-8802 [Section 311 of the Clean Water Act; 33 USC 1321].

A hazardous waste determination must be conducted for any materials used to clean a spill to establish whether or not disposal of the materials is subject to hazardous waste regulations [RCRA; 40 CFR 262.11; OAR 340-102-0011].

BEST MANAGEMENT PRACTICES:

PREVENTION & RESPONSE:

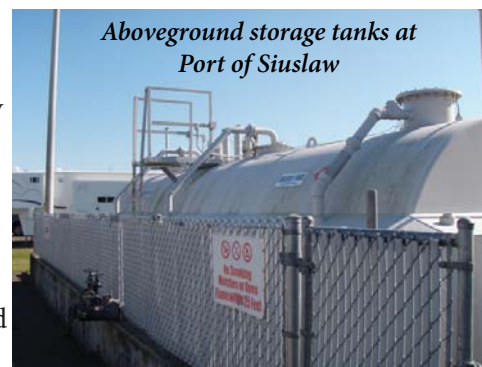
- Provide spill pads at the fill location to easily clean up small spills near sump and fill locations.
- Place pads in your sump bottom to identify when a leak or drip begins.
- Regularly inspect aboveground fuel storage tanks and associated piping for leaks.
- Develop an oil spill contingency plan, even if you are not required by law to prepare an SPCC Plan. A spill contingency plan and emergency response plan can be combined into one document. The plan should identify:
 1. Potential spill sources
 2. Oil and hazardous materials used or stored
 3. Spill prevention measures (e.g. security, inspection, containment, training, equipment)
 4. Spill emergency procedures, including:
 - Contact information of marina personnel qualified to lead spill response efforts.
 - Notification and spill containment measures.
- Post emergency phone numbers in an obvious location.
- Place a “How To” placard next to your electronic tank monitoring system for inventory control and leak detection.

STORAGE:

- Fueling facilities and storage areas must be secured when not in use by appropriate shutdown devices and security locks.
- If possible, cover the tank with a roof to prevent rainwater from filling the containment area.
- Keep the various tank fill locations free of debris and water that may accumulate from rain and wind events.
- Make sure all new piping and dispensers are double-walled with a sump that includes leak detectors.

TRAINING:

- Train each employee on what to do and who to contact when alarms go off.
- Conduct spill prevention and emergency response drills quarterly using different scenarios to test the readiness of staff. Afterward, discuss lessons learned.
- Log all trainings and keep in a central location for future reference.



SECTION 7: FUELING

Fuel tank Disposal

Improperly disposed fuel tanks can impact groundwater supplies and pose a serious fire safety risk.

LEGAL REQUIREMENTS:

If a portable or fixed tank for gasoline or an oil and gasoline mixture is empty, meaning drained of all material that can be removed from the container by normal methods like pouring or pumping, AND no more than one inch (or 3% by weight) of residue remains in the container, it can be disposed of as regular solid waste or can be recycled as scrap metal [40 CFR 261.7]. If a tank is not empty, it must be disposed of as hazardous waste [40 CFR 262.11].

Prior to closing underground storage tanks (UST) through removal or in-place abandonment, you must notify DEQ and follow applicable regulations [OAR 340-150].

BEST MANAGEMENT PRACTICES:

REUSE:

- Use, recondition, or recycle all usable fuel before disposing of the tank.

STORAGE:

- Store tanks awaiting disposal away from ignition sources like heat or sparks.
- Clearly label tanks “Waste Gasoline.”
- Large fuel canisters should be de-valved with a fire marshal permit or taken to a hazardous waste collection facility.

DISPOSAL:

- Disposable propane canisters should have their pressure released using an official puncturing device and used as scrap metal. These pressurized canisters could explode dangerously and should not be punctured with any other device. If you do not have the appropriate device, take the canisters to a hazardous waste collection facility.





Next to fueling and spills, vessel maintenance and repairs are the most likely sources of pollution from boats to local waters. Activities such as boat washing, topside repairs, and engine maintenance produce toxic or hazardous wastes that can go overboard. Like a drop of fuel, a little bit of dust from sanding or a cap-full of soap might not seem like a big deal, but with hundreds of other boats in the marina, the cumulative effects can be detrimental for marine habitat and wildlife.

Marina managers not only share the responsibility with boat owners to find solutions to maintenance needs, they are also responsible for monitoring the activities of customers to ensure they are not violating the law. Allowing illegal activities to occur puts management, staff, and the facility at risk by encouraging others to participate in illegal and unsafe practices. Posting, promoting, and enforcing the BMPs discussed in this handbook will help to keep the marina and tenants in compliance with federal, state, and local laws.

Boat Cleaning

Keeping a vessel clean is critical in protecting its value. But, many products used to clean boats contain toxic chemicals such as chlorine, phosphates, and ammonia. These products can enter the water during boat cleaning and poison marine life. The best way to keep toxic chemicals out of the water is to not use them at all. In many cases, “elbow grease” will go a long way.

LEGAL REQUIREMENTS:

No person shall cause pollution of any waters of the state or place or cause to be placed any wastes in a location where such wastes are likely to escape or be carried into the waters of the state by any means. [ORS 468B.025]

Except as provided in ORS 468B.053 or 468B.215, no person shall discharge any wastes into the waters of the state from any industrial or commercial establishment or activity or any disposal system, without first obtaining a permit. [ORS 468B.050]

BEST MANAGEMENT PRACTICES:

EDUCATE:

- Clearly post signs that any discharge of soaps and other pollutants to water is illegal.
- Enforce a “no visible plume” rule and report all discharges to 1-800-OILS-911 or DEQ’s Complaint Hotline: 1-888-997-7888.
- Encourage boaters to wash their boats on land where the washwater can be contained or filtered. Have a designated area at the marina for this activity.

ALTERNATIVES:

- Encourage boat washing with a sponge and plain water only.
- If detergents must be used, encourage the use of phosphate-free, biodegradable and non-toxic cleaners (see Section 10 for a table of non-toxic alternatives).



Boat washing stations, Tenmile Lake

- Though much less harmful, these cleaners can still cause damage to local marine life and should be used only on land when possible.
- For boats that do not have sloughing paint, they can be washed over grass or soil with a non-toxic detergent.

Require deep cleaning activities to be performed at a boatyard, or for trailerable boats, at a DIY carwash, where wastewater can be collected and treated.

SECTION 8: CLEANING, HAULING, & STORING BOATS

Bilge Cleaning

Bilge water can commonly contain oil, fuel, antifreeze, and other contaminants. Even small amounts of such materials introduced into the marina environment can cause environmental problems, especially if they persist. An oil sheen can block necessary oxygen and light from moving through the surface of the water. Oil can cause harm to juvenile fish, upset fish reproduction, and interfere with the growth and reproduction of bottom-dwelling organisms. To reduce the likelihood of a contaminated bilge-water spill in the marina, be sure to provide boaters the resources they need to deal with contaminated bilge-water.



LEGAL REQUIREMENTS:

Oily bilge water must not be allowed to enter the waters of the state [ORS 468B.305]. If oily bilge water cannot be sufficiently cleaned for legal discharge, make arrangements with a waste hauler to properly dispose of the bilge water.

Any spill or release of petroleum that results in a sheen on the waters of the state or a release of oil onto the ground surface of 42 gallons or more must be reported immediately to the:

- Oregon Emergency Response System (OERS) at 1-800-OILS-911 (or 1-800-452-0311) [OAR 340.142; ORS 466.652]
- National Response Center at 1-800-424-8802 [Section 311 of the Clean Water Act; 33 USC 1321].

Don't use soap or dish detergent to disperse an oil spill. Using detergents to disperse fuel worsens the problem and is against federal law (40 CFR 110.4; ORS 468B.315).

BEST MANAGEMENT PRACTICES:

USE ABSORBENTS:

- Before pumping out a bilge, visually inspect the bilge water to determine whether there is a visible oil sheen:
 - Use oil absorbent materials to remove oil before pumping a bilge.
 - Use an oil/water separator to remove oil from bilge water.
 - Don't use soaps and detergents to clean up oily bilge water.
- Require the use of bilge pads to help keep bilge water discharge clean. Have bilge pads on hand for marina patrons, or direct your tenants to a marina supply store in your area. The Clean Marina Program may also be able to provide supplies.

EDUCATE:

- Train employees and contractors on bilge cleaning BMPs.
- Educate customers to keep their engines properly maintained, to continually check and fix all leaks, and to keep an absorbent pad or pillow in the bilge to absorb small drips and spills.

- Provide notice that the discharge of contaminated bilgewater is illegal. Bilgewater cannot be discharged in parking lots, launch ramps, or directly to the water.



RESOURCES:

- Consider installing a bilgewater collection facility at your marina for customers.
- Post contact information for bilge cleaning services in a prominent place for tenants.

Winterizing Vessels ❄️

The activity of preparing a vessel for winter storage may contribute to nonpoint source pollution through the use of heavy equipment (fork lifts, cranes and travel lifts) as well as through various storage procedures (use of antifreeze and battery storage).

LEGAL REQUIREMENTS:

Please see Section 6: Universal Waste Management; Section 7: Fueling; and Section 10: Uplands & Building Maintenance for legal requirements for specific winterizing activities.

BEST MANAGEMENT PRACTICES:

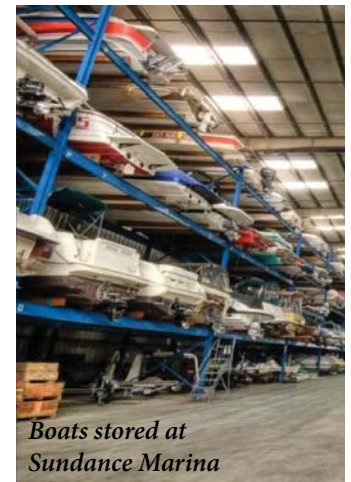
ALTERNATIVES:

- Use propylene glycol antifreeze (usually pink), which is less toxic than ethylene glycol (usually green), to winterize all systems except “closed” or freshwater cooling systems.
- Re-use or recycle antifreeze. Store used antifreeze in a container clearly marked “Used Antifreeze Only.”

STORAGE:

- Inspect and clean bilges prior to extended vessel storage. Clean all water, oil, or foreign materials from the bilge using absorbent material.
- Avoid the use of heavy-duty detergents containing ammonia, sodium hypochlorite, chlorinated solvents, petroleum distillates, acids, or lye.
- Encourage use of state-of-the-art dry rack storage facilities. They minimize the need for more intensive forms of hull maintenance.

- Prior to lowering a vertical lift or marine railway, clean up the device to prevent contamination of the receiving waters from oil or any hazardous substance.
- To reduce waste from contaminated gasoline in fuel tanks, store boat motors according to manufacturers’ guidelines.
- Keep fuel tank almost full or completely empty to prevent phase separation of the fuel.



Boats stored at Sundance Marina

Pressure Washing

When the marine organisms that accumulate on the bottom of a vessel are removed, fragments of bottom paint and hull materials are often chipped off in the process. In a concentrated form, these untreated particles can have localized water quality impacts. Pressure washing in particular removes antifouling paint from boat bottoms, which can get washed into the marina basin. Sediments contaminated with copper or other toxic ingredients in antifouling paints can result in future problems and expenses for the marina operator when faced with dredge material disposal.

LEGAL REQUIREMENTS:

After pressure washing, the paint chips and sludge in holding tanks or treatment units is a special waste that can only be disposed of at an approved facility [OAR 340-101-0040].

A NPDES wash water permit may be required if more than 8 boats and or other vehicles are washed per week [OAR 340-45]. For additional information, contact your local DEQ office.



Pressure Washing

BEST MANAGEMENT PRACTICES:

TECHNIQUES:

- Encourage boat washing with low-pressure water only. Where practical, use a regular garden-type hose and a soft cloth.
- Do not use soaps, solvents, and other chemicals. This allows more options for reuse or discharge of treated wash water and protects water quality.
- Minimize the amount of water used when boats are pressure washed out of the water. For example, wash the hull above the waterline by hand.
- Prohibit in-water bottom cleaning or hull scraping or any process that occurs underwater which removes antifouling paint from the boat hull. This practice makes it impossible to treat what is cleaned from the boat bottom.

TREATMENT OPTIONS:

- Collect and treat wash water. The following are options for collection and treatment:
 1. Wastewater from the washing operation can be collected and reused through a closed loop pressure wash system, or can be used after treatment to irrigate landscaped portions of the marina.
 2. Collect all of the wash water, treat it, and discharge to sanitary sewer or store for hauling to a sewage treatment plant. Discharge to the sanitary sewer or on-site septic system requires approval.
 3. Pressure wash water can also be directed to a holding or settling tank for treatment. If the wastewater does not contain chemical additives, it may be diverted into wetpond detention basins, vegetated buffers, or swales.
 4. If none of the above-mentioned practices is feasible and the only apparent option is to discharge pressure washing wastewater to a surface water or storm drain, wash water should be treated prior to discharge. Treatment options include filtering the wash water through catch basin inserts that will separate out debris, paint chips, and sediment. The use of filter fabric, oil/water separators, or sand filters should also be considered.

5. If there is a well nearby, pressure wash boats on an impervious surface as far as possible from the well, and treat the wash water to collect solids and sediments before discharge, preferably to the sanitary sewer.
- If collecting and treating wash water is not feasible:
 1. Wash boats on a level permeable surface (lawn, crushed stone, or sand) so that the wash water can infiltrate into the ground, if there is no drinking water well on the property.
 2. Place filter fabric over the permeable surface to collect solids and sediments. A hazardous waste determination should be conducted on collected pressure wash wastewater to establish whether or not disposal of the collected material is subject to hazardous waste regulations [40 CFR 262.11].
 3. To ensure that the wash water has enough time to settle into the ground, pressure wash boats as far away as possible from the water, preferably over a grassed or vegetated area. Add a row of hay bales between the water's edge and the pressure washing operation.
 4. If it is not possible to wash boats over a permeable surface, pump the wash water to a permeable surface for infiltration.

CONTAINMENT:

- If chemical additives, such as solvents or degreasers, are used, pressure washing must be conducted in self-contained systems that prevent any discharge to storm drains.



Pressure washing to remove invasive species over pervious ground

SECTION 9: ABANDONED & DERELICT VESSELS

Prevention & Disposal

Vessels are abandoned or become derelict for many reasons. Neglected, derelict, and abandoned vessels cause various problems in and outside of marinas, including water quality degradation, pollution, and damage to public and private property when they sink or go adrift. In marinas, they take up valuable slip space, can be a source of pollution, decrease the aesthetic value of the area, and create hazards for responsible boaters. Marinas can use various tools to address and prevent derelict and abandoned vessels.



Signs of a derelict vessel

Signs of a derelict vessel include: listing to one side; expired registration; large amounts of algae, moss, or other plant material covering the boat; bilge pump that runs frequently to expel water from the hull; leaking fluids such as oil, fuel, or waste; severe external deterioration of wood, paint, or other materials; liveaboards who throw waste or other materials into the water; drifting from moorage or docks; appearance of being illegally moored; and no movement in more than 30 days.

LEGAL REQUIREMENTS:

If you are a public facility and a vessel meets the definitions of abandoned or derelict, you have the authority to seize the vessel and may qualify for OSMB's ADV Removal funding to help defray the costs to remove, store, and dispose of the vessel (ORS 830.908 through 830.948). Be sure to call OSMB staff first for resources and to confirm funding availability.

Private and public facilities can use possessory liens to gain titles to vessels that are repaired, stored, moored, towed, etc. at the request of the owner or lawful possessor of the boat (ORS 87.152 through 87.214).

All recreational vessels, whether titled with Oregon (ORS 830.770) or Documented with the USCG (ORS 830.775), must display current registration decals while on the water (even if the boat never leaves the dock).

Floating homes and boathouses must be titled with the Marine Board and display a license plate in plain sight with numbers given by the Marine Board (ORS 830.850 through 830.860).

BEST MANAGEMENT PRACTICES:

PREVENTION:

- Tie each vessel to an owner & keep their contact information current; follow-up on boats with expired registration tags.
- Commercial vessels that are no longer doing commercial business need to be registered with the State as a recreational boat.
- Consider requiring all vessels to be: insured; in seaworthy condition; and to move under their own power at least once per year.

COMMUNICATION:

- If a vessel is evicted from your facility because of vessel issues, consider alerting facilities nearby.
- Call OSMB if a boat appears to have become derelict and marina staff are unable to contact the owner.
- Call 911 if the boat is involved in an emergency.

END-OF-LIFE OPTIONS:

- Let owners know their options to get rid of their boat:
 - Call the local landfill to see if they will accept boats and what the requirements are. The owner will likely need to drain and remove engine blocks and fuel tanks prior to dropping off a vessel. Metals can be recycled.
 - Call the nearest boatyard or salvage company to see if they can dispose of the boat and what they will charge.

LEADERSHIP:

- If available, OSMB can provide funding to support a Vessel Turn In Program to dispose of high risk recreational vessels from marinas. Owners can voluntarily surrender their vessels for disposal at no cost to them. This provides a proactive alternative to seizing abandoned or derelict vessels and can reduce overall removal costs to the State.



SECTION 10: UPLANDS & BUILDING MAINTENANCE

Facility Cleaning

Many common cleaning products contain hazardous chemicals that with repeated or excessive contact may lead to lung problems, brain and nerve damage, cancer and even death. Hazardous chemicals can often be found in drain cleaners, floor-care products, window sprays, and bathroom cleaners. These products can enter the water and poison marine life. For example, degreasers dry the natural oils fish need for their gills to take in oxygen. Phosphates can cause excessive algae growth and lead to the depletion of oxygen in the water. Other cleaning agents can cause death, cancer, and other harm to aquatic organisms.

READ THE LABEL: Cleaning products labeled “DANGER” or “POISON” are typically most hazardous. Others may be labeled “CAUTION” or “WARNING” because they are skin or eye irritants. The best alternative is to use the least-hazardous cleaner for the job. Look for the words “phosphate-free” and “non-toxic” on the label before you buy a cleaner. Not only will it protect staff from inhaling toxic fumes and potential burns on the skin, it will have less of an impact on the environment because of the lower concentrations of chemicals and carcinogens.

LEGAL REQUIREMENTS:

There are no legal requirements to use environmentally preferable products. Note that waste-cleaning products must be disposed of in accordance with hazardous waste disposal requirements.

No person can cause any pollution in state waters, or discharge any wastes that reduce water quality standards established by DEQ, without a permit [ORS 468B.025 and ORS 468B.050].

The Coastal Zone Act Reauthorization Amendments of 1990 Chapter 5 sets out pollution prevention guidelines for Marinas and Recreational Boaters. Amendments require that nonpoint source pollution from marinas be contained.

BEST MANAGEMENT PRACTICES:

ALTERNATIVES:

- Always try cleaning with water and a coarse cloth first. Clean more often with fresh water only. If you must use a cleaner, use the product sparingly.
- Sweep or vacuum floors often to minimize the need for chemical cleaners.
- Consider non-toxic alternatives for cleaning products. Even non-toxic substances can cause temporary harm to the environment and should therefore be used sparingly. (See non-toxic alternatives to typical cleaning products listed in Table 1.)
- Consider safer alternatives. Find suggestions at these website:
 - saferproducts.gov
 - saferchemicals.org
 - epa.gov/saferchoice
- Read product labels. Avoid cleaning products with:
 - alcohol
 - ammonia
 - bleach
 - butyl cellosolve
 - cresol
 - dye
 - ethanol
 - formaldehyde
 - glycols
 - hydrochloric acid
 - hydrofluoric acid
 - lye
 - naphthalene
 - PDCBs (paradichlorobenzenes)
 - perchloroethylene
 - petroleum distillates
 - phenol
 - phosphoric acid
 - propellants
 - sulfuric acid
 - TCE (trichloroethylene)



ALTERNATIVES TO TOXIC CLEANING PRODUCTS

TOXIC PRODUCT

ALTERNATIVE

All Purpose Cleaner	Mix 1 cup white vinegar with 2 gallons water.
Air Freshener	Leave out an open box of baking soda.
Aluminum Cleaner	2 tbsp cream of tartar in 1 qt hot water
Ammonia-Based Cleaners	Vinegar, salt, and water.
Bleach	Borax or hydrogen peroxide
Brass Cleaner	Worcestershire sauce. Or paste made of equal parts of salt, vinegar, and water.
Carpet/Upholstery Cleaner	Sprinkle on dry cornstarch and then vacuum.
Chrome Cleaner/Polish	Apple cider vinegar to clean; baby oil to polish.
Copper Cleaner	Lemon juice and water. Or paste of lemon juice, salt, and flour.
Deck Cleaner	Mix 1 part white vinegar and 8 parts warm water.
Drain Opener	Disassemble and replace or use plumber's snake. Or flush with boiling water + ¼ cup baking soda + ¼ cup vinegar.
Fiberglass Stain Remover	Baking soda paste.
Fuel Oil Stain	Baking soda. Wait 20 minutes and rise with clean water.
Floor Cleaner	Mix 1 cup white vinegar with 2 gallons water.
General Cleaner	Baking soda and vinegar. Or lemon juice combined with borax paste.
Hand Cleaner	Baby oil or margarine.
Head/Toilet Cleaner	Pour in baking soda and use a brush.
Metal Polish	Undiluted lemon oil with sponge. Rinse well.
Mildew Remover	Make a paste using equal parts of lemon juice and salt or white vinegar and salt.
Plastic Surfaces	Mix 1 part white vinegar and 2 parts warm water.
Scouring Powders	Baking soda or salt. Or rub area with one-half lemon dipped in borax, then rinse.
Shower Cleaner	Wet surface, sprinkle with baking soda, rub with scouring cloth.
Stainless Steel Cleaner	Baking soda or mineral oil for polishing, vinegar to remove spots.
Varnish Cleaner	Wipe with ½ cup vinegar and ½ cup water solution
Vinyl	1 tsp baking soda and 1 tsp toothpaste. Apply with rag and rinse well.
Window/Mirror Cleaner	Mix 2 tbsp vinegar in 1 qt of water or rub glass with newspaper.
Wood Polish	3 parts olive oil and 1 part white vinegar (for interior unvarnished wood only).



SECTION 10: UPLANDS & BUILDING MAINTENANCE

Landscaping



Excess pesticides and fertilizer that you put on your lawn and plantings can eventually run off into the marina basin and harm marine and aquatic life. Landscaping techniques can be used to reduce environmental impacts on marina basins and can save money by requiring less water and maintenance, while creating an attractive location for customers.

LEGAL REQUIREMENTS:

Before disposing of old or unused lawn additives, particularly pesticides, conduct a hazardous waste determination to establish whether or not their disposal is subject to hazardous waste regulations [40 CFR 262.11; OAR 340-102-0011].

Anyone in Oregon who advertises, operates as, or uses the title of a landscape contractor or landscape business must be licensed with the Landscape Contractors Board (LCB). Contact your local Oregon OSHA office for additional information.

A Pesticide Applicator License is required for those using and applying “Restricted Use Pesticides.” Contact Oregon Department of Agriculture for more information.

BEST MANAGEMENT PRACTICES:

PLANTS:

- Avoid planting invasive species. Invasive species multiply rapidly and take over areas very quickly. They often provide little to no environmental benefit for other plants and animals in the area and can increase the marina’s reliance on fertilizers and pesticides.
- Use native plants for landscaping, which are adapted to the local climate. They have ways to defend against local pests and weeds, so less herbicide, pesticide, and insecticide is needed. In addition, native plants require little to no extra watering. Native plants can be purchased at your local nursery.
- For more info on Oregon’s native plants and/or native plant landscapers, visit: www.plantoregon.com and www.plantnative.org.
- Plant a vegetated filter strip or buffer between

impervious areas and the marina basin. A vegetated filter strip is a densely vegetated strip of land engineered to accept runoff from upstream development as overland sheet flow.

- If you use a landscaper, consider using an Ecological Business Certified Landscaper. See <http://ecobiz.org/>.



Vegetated buffer

MAINTENANCE:

- Save water by watering in the early morning or late afternoon. Oscillating sprinklers can lose up to 50% of water to evaporation on hot days.
- When it comes to fertilizer, more is not better! The excess nutrients from unused fertilizer will run off into the marina basin and potentially cause an algal bloom. Plus, the more you fertilize, the more frequently you have to mow.
- Do not apply pesticides near the water or just before a rainfall or windy day.
- Aerate the lawn to greatly increase water and nutrient absorption. Leave grass clippings where they fall since they act as a natural organic fertilizer.
- Use compost or composted fish waste as fertilizer for your plants.
- Reduce the need for herbicides by hand pulling weeds often. The more often it is done, the less time it takes. Try to pull weeds before they release their seeds.
- If you must use fertilizer, apply it in late April and again in September. If a third treatment is needed, apply in late May. Apply only a half-pound of nitrogen per 1,000 square feet of lawn at each application. To figure this out, divide 100 by twice the percentage of nitrogen (N) in the fertilizer. This will give you the application rate in pounds of fertilizer per 1,000 square feet of lawn.



Native plant restoration at Oregon Yacht Club

Floor Drains

Repair shop wastewater typically contains chemicals such as oils, degreasers, gasoline, diesel, detergents, heavy metals and antifreeze. In some instances it may contain solvents. If discharged through a dry well or septic system to the ground, these chemicals may render drinking water supplies unfit for human consumption. If discharged directly or indirectly to surface water these chemicals can be toxic to fish and other aquatic life.

LEGAL REQUIREMENTS:

Any hazardous waste and used oil which may end up going down a floor drain must be managed in compliance with applicable regulations. See Section 5: Hazardous Waste Management and Section 6: Universal Waste Management.

BEST MANAGEMENT PRACTICES:

- Avoid or minimize the use of any ammoniated, petroleum or chlorinated solvent-based cleaning agents.
- Sweep or vacuum floors often and immediately before floor washing.
- Insure that all chemicals used in areas with floor drains are contained.
- Clean up fluid spills quickly with absorbent material.
- Cover floor drains if there is a spill. There are inexpensive covers available for this purpose.
- Avoid installing new floor drains. Close existing floor drains or connect them to the sewer system, if available, and never to drain fields. The drains can be permanently sealed with concrete if they do not connect to a sewer or holding tank.

Sacrificial Anodes

Sacrificial anodes fight corrosion in salt water by deterring corrosion of metal hull and engine parts. In the past, zinc was the most common anode used to fight corrosion. However, elevated levels of zinc in marina sediments have been found to be associated with boat operation and maintenance. Zinc, in high concentrations, can be toxic to marine life, and can be potentially toxic to humans who eat contaminated shellfish or fish. Fortunately, aluminum anodes are typically cheaper than zinc, last longer, work better in brackish environments, and are better for the environment.



Sacrificial anode near boat prop

LEGAL REQUIREMENTS:

A hazardous waste determination must be performed on waste anodes being disposed of [RCRA; 40 CFR 262.11; OAR 340-102-0011]. However, if the anodes can be recycled as scrap metal, they do not have to be managed as hazardous waste.

BEST MANAGEMENT PRACTICES:

- Recycle anodes with other scrap metals. Scrap metal dealers will take spent anodes.
- Store anodes with other recyclable scrap metals in clearly marked containers protected from the elements.
- Aluminum anodes are typically cheaper than zinc, last longer, work better in brackish environments, and are better for the environment (less heavy metals).
- For freshwater environments, magnesium anodes protect metals better. However, magnesium is a good choice for freshwater only. If any of your boating is also in brackish or salt water, fit aluminum anodes.

SECTION 10: UPLANDS & BUILDING MAINTENANCE

Fixed & Floating Structures

The quality of a marina is reflected in the care and maintenance provided by management and staff. Marina structures themselves may introduce pollutants to the marine environment as they degrade or leach over time. Maintenance of these structures can also be a source of pollution. Selection of suitable repair or replacement materials and thoughtful maintenance practices will help reduce this pollution.

LEGAL REQUIREMENTS:

All expanded polystyrene or whitebead foam placed in the water after January 1, 1992 must be encapsulated with concrete, wood, galvanized steel, plastic or fiberglass. A permit for installation is required from the Oregon State Marine Board [OAR 250-014-0030]. The permit can be found online: <http://www.oregon.gov/OSMB/forms-library/Documents/Environmental/FoamCertForm.pdf>.

Any person who plans to “remove or fill” material in “waters of the state” are required to obtain a permit from the Department of State Lands (DSL). It is necessary to obtain all required authorizations from DSL prior to conducting work such as dredging (including maintenance dredging), construction or placement of new docks, pilings, ramps, floats, piers, travel lift wells, seawalls, bulkheads, rip rap, stormwater outfall pipes, and/or mooring fields waterward of the high tide line in the tidal, coastal, or navigable waters of the state [OAR 340-048].

The U.S. Army Corps of Engineers (ACOE) has jurisdiction over the above-listed activities in tidal, coastal, or navigable waters as well, pursuant to Section 10 of the Rivers and Harbors Act of 1899 [33 USC §401 et seq.] and Section 404 of the Clean Water Act [33 USC §1344 et seq.]. Call or email your nearest ACOE office for more information. In many cases, the DSL and ACOE removal/fill permits can be submitted jointly.

BEST MANAGEMENT PRACTICES:

MAINTENANCE & MATERIALS:

- Keep all docks, floats, and bulkheads in good working order by conducting routine maintenance.
- Regular maintenance can add years of life to the system. Maintenance actions can range from tightening

hardware and pipes, adjusting floats, cleaning junction boxes, fixing dock surface problems, reinstalling hardware, and removing organic growth, which hastens the breakdown of the dock structure. In all these scenarios, the key environmental concern involves capturing items that could get into the water.

- Galvanized structures release high levels of zinc. Consider using other materials or coat galvanized areas with epoxy to reduce or eliminate highly concentrated zinc discharges.
- For new construction and replacement of timber, make sure to check with Oregon Department of Fish & Wildlife guidelines regarding treated wood and other dock materials to install the product that is the least harmful to the environment but that also suits your requirements.



Bird eating foam



Well maintained facility at Promontory Park

- For use below the water, concrete pilings or other materials (e.g. plastic, recycled materials) with degradation times greater than 10 years are encouraged.
- Conduct scraping, sanding, painting, and sandblasting of in-water and landside structures using the same management principles recommended for vessels.
- Where feasible, floating structures should be removed to shoreline facilities for scraping, painting, and major repairs. Tarps, rags, lanyards, and dustless power tools can help with containment when removal is not feasible.

VEGETATION:

- Use natural vegetation for shoreline stabilization whenever feasible. Maintain this cover in good condition by prompt repair and reseedling of washouts and other losses of vegetation.
- If natural vegetation is not a feasible option, riprap revetments are generally encouraged over vertical bulkheads, because sloping riprap embankments provide greater habitat and reduce wave reflections.

FOAM FLOTATION:

- Limit flotation materials to properly encapsulated expanded polystyrene foam or extruded polystyrene foam (XPS). XPS does not easily disintegrate and is less likely to cause pollution or accidental ingestion.

- Un-encapsulated whitebead foam harms birds and fish that mistake it for food and degrades water quality; it is also illegal on Oregon waters.
- Reuse whitebead foam only if it is properly encapsulated.
- Used whitebead foam should be recycled where facilities exist.
- If neither option is appropriate, used foam must be disposed of at an appropriate upland disposal site.

PERMITTING:

- Design all marina expansions to minimize adverse impacts on basin flushing, water quality, and adjacent coastal resources including shellfish beds, wetlands, and submerged aquatic vegetation.
- Keep copies of all coastal permits in an easily accessible file. As management changes, pass on the information about coastal permits to the incoming marina manager.
- Before doing ANY work that you think might be in the state’s permitting jurisdiction, contact the Oregon Department of State Lands to discuss the work that you would like to do or to schedule a pre-application meeting. Some of the maintenance work you want to do may not require any prior authorization or may be eligible for a shortened permit process.



Encapsulated foam floats for a floating home

SECTION 10: UPLANDS & BUILDING MAINTENANCE

Dredging

Maintenance dredging is another source of pollutants at marinas. Dredging temporarily disturbs bottom habitat communities, increases turbidity, and may re-suspend contaminated bottom sediments. Improper disposal of dredge spoils may adversely affect marine environment and human health.

LEGAL REQUIREMENTS:

Any person who plans to “remove or fill” material in “waters of the state” are required to obtain a permit from the Department of State Lands (DSL). It is necessary to obtain all required authorizations from DSL prior to conducting work such as dredging (including maintenance dredging), construction or placement of new docks, pilings, ramps, floats, piers, travel lift wells, seawalls, bulkheads, rip rap, stormwater outfall pipes, and/or mooring fields waterward of the high tide line in the tidal, coastal, or navigable waters of the state [OAR 340-048].

The U.S. Army Corps of Engineers (ACOE) has jurisdiction over the above-listed activities in tidal, coastal, or navigable waters as well, pursuant to Section 10 of the Rivers and Harbors Act of 1899 [33 USC §401 et seq.] and Section 404 of the Clean Water Act [33 USC §1344 et seq.]. Call or email your nearest ACOE office for more information. In many cases, the DSL and ACOE removal/fill permits can be submitted jointly.



Testing sediments before dredging at the Port of Bandon

The Endangered Species Act (ESA) and other laws prohibit dredging during critical migration or spawning periods of important species of finfish, shellfish, and wildlife. Contact the Oregon Fish and Wildlife Department regarding the set periods when in-stream work can occur.

Comply with local, state and federal fill requirements [CWA §401; OAR 340-048]: Manage dredged material according to all approved permits and in a manner consistent with existing Oregon solid and hazardous waste regulations. Testing of the sediment is required prior to any maintenance dredging.

BEST MANAGEMENT PRACTICES:

DISPOSAL:

- When upland disposal is planned (permits may be required):
 1. Use appropriate measures to minimize water quality impacts, reduce turbidity from return waters, and assess any potential impacts to ground water quality.
 2. Use technical documents prepared by the Army Corps of Engineers when designing containment facilities.
 3. Provide appropriate setbacks between the toe of the slope and marine waters, wetlands, and intertidal flats.
 4. Employ sediment and erosion control techniques that prevent erosion of containment dikes and deposition of sediments into wetlands and waters.
- Conduct appropriate testing of sediments to be dredged in order to evaluate potential impacts from

return waters, leachate, and runoff and for selecting an appropriate disposal site and containment design.

ALTERNATIVES:

- Marinas requiring maintenance dredging more frequently than once every four years should investigate practical alternatives to increase circulation or reduce sediment accumulation.

PERMITTING:

- Before doing ANY work that you think might be in the state’s permitting jurisdiction, contact the Oregon Department of State Lands to discuss the work that you would like to do or to schedule a pre-application meeting. Some of the maintenance work you want to do may not require any prior authorization or may be eligible for a shortened permit process.

Upland Engine Operations

Working on boat engines has potential environmental impacts. If engine fluids are not well managed, they may be transported by stormwater into the marina basin, where they can harm fish and other aquatic life. If certain fluids are mixed, they may become subject to hazardous waste requirements and become more expensive to dispose. Waste fluids from upland engine operations may include: engine oil, gasoline, diesel fuel, transmission fluid, power steering fluid, brake fluid, hydraulic fluid and antifreeze, all of which are recyclable liquids. Many of these fluids can be hazardous, and may pick up contaminants (e.g. lead from bearings) during use in an engine.



Outboard motor

LEGAL REQUIREMENTS:

A hazardous waste determination must be conducted to establish whether or not disposal of waste fluids is subject to hazardous waste regulations [RCRA; 40 CFR 262.11; OAR 340-102-0011]. A hazardous waste determination must also be conducted on any materials used to clean a spill.

If stale gasoline cannot be reconditioned, dispose of it as hazardous waste [40 CFR 262.11].

BEST MANAGEMENT PRACTICES:

MAINTENANCE:

- Inspect fuel lines for leaks or potential leaks such as cracks and loose connections. These can be persistent sources of engine fluids to the bilge.
- Use propylene glycol antifreeze (usually pink) to winterize all systems except “closed,” or freshwater cooling systems. Propylene glycol antifreeze is much less toxic than ethylene glycol antifreeze. Use the minimum amount of antifreeze necessary for the job.
- Where appropriate, add stabilizers to fuel to protect engines against corrosion and the formation of sludge, gum, and varnish. Stabilizers are available for gasoline and diesel fuels, and for crankcase oil. This also eliminates the problem of stale fuel disposal in the spring. Check manufacturer’s warranty on engine before adding fuel stabilizers.
- Fill fuel tanks to 85-90% full to prevent flammable fumes from accumulating and to minimize the possibility of condensation leading to corrosion.



Boat engine maintenance

- Do not fill the tank more than 90% full if the boat has an external overflow vent. The fuel will expand as it warms in the springtime, and fuel will spill out the vent line of a full inboard tank.

DISPOSAL:

- Never pour waste fluids down any drains, including stormwater drains, or onto the ground. Exception: waste fluids may be discharged into sealed and permitted blind sumps that capture contaminants for proper treatment and disposal.
- Do not dispose of liquid waste in dumpsters.
- Recycle fluids whenever possible. In general, the purer the waste stream, the higher the value to the recycler. Never mix gasoline, antifreeze, or chlorinated solvents into used oil because it may cause the used oil to become a hazardous waste, therefore requiring higher disposal costs.
- Household hazardous waste programs may accept unwanted gasoline and gas/oil blends generated by individual boat owners. Encourage marina patrons to dispose of their waste gasoline through their own municipal household hazardous waste collection programs, if appropriate.



Scraping and Sanding

Hull paints often contain heavy metals and other toxins. Sanding chips and dust that fall onto the ground can enter a marina basin through stormwater runoff. Paint chips and sanding debris can be particularly dangerous when shellfish ingest them and the shellfish are then ingested by other animals, including humans. The biggest issues arise from do-it-yourself boaters that walk away from a sanding job and leave the mess to be blown by the wind or washed away by the rain. Cleaning up the mess after-the-fact costs more money than containing the dust while working, so be sure to put in place good maintenance procedures.

LEGAL REQUIREMENTS:

Determine whether sanding dust is hazardous and manage accordingly [RCRA; 40 CFR 262.11; OAR 340-102-0011]. If the sanding dust is not hazardous, it must be handled as a Special Waste (because most bottom paints contain pesticides). Special Waste may be disposed of at a solid waste landfill if the site meets the design criteria of 40 CFR 258.40 for new municipal solid wastes landfill units [OAR 340-093-0190 (f)].

It is against the law to cause pollution to any waters of the State or place any wastes in a location where such wastes are likely to escape and be carried in to waters of the state [ORS 468B.025]. Paint chips and sanding residue commonly contain chemicals that are harmful to aquatic life.

For employees working on boats, OSHA's Occupational Safety and Health Standards for Shipyard Employment applies.

BEST MANAGEMENT PRACTICES:

WORK AREAS:

- Conduct sanding and scraping away from the water's edge. Designate an indoor or upland area for debris-producing maintenance such as scraping, sanding, and sandblasting. The boat maintenance area can be a temporary structure or plastic sheeting provided to minimize the spreading of dust and windblown material. The work area should be marked with signs.
- Place drop cloths or tarps under vessels when sanding or scraping. Weight the bottom edges of tarps and drop clothes to keep them in place.
- Consider installing an impervious pad for conducting debris-producing maintenance.

CLEAN UP:

- Clean up all debris, trash, sanding dust, and paint chips immediately after any maintenance or repair activity.
- When sanding or grinding hulls over a paved surface, vacuuming or sweeping loose paint particles is the preferred cleanup method. Do not hose the debris away.
- Dispose of non-hazardous waste, paint chips and sanding waste in a covered dumpster or other covered solid waste receptacle.

ACTIVITY:

- Avoid scraping or sanding on windy days, unless

conducting activity in an enclosed structure.

- Use dustless or vacuum sanders when sanding. These tools can collect over 98% of dust generated instead of releasing it into the air. Workers can use this equipment without full suits or respirators and have less cleanup when the job is done.

CUSTOMERS:

- Require customers and contractors to use dustless or vacuum sanders. Rent or loan the equipment to them and post signs indicating their availability.
- Provide a covered collection drum for the dust from vacuum sanders and other scraping debris.
- Prohibit sanding and scraping boats that are in the water, to the greatest extent practicable.
- If sanding, scraping, or grinding must take place while the boat is in the water, use tarps and sheeting installed between the vessel being worked on and the floats or walking surface to prevent ANY materials from falling or being blown into the water. The sheeting should have a tight seal to prevent leakage of any paint chips or dust outside the work area. Remove the sheeting carefully to prevent the loss of waste material to the water.
- Where feasible, encourage boat maintenance and storage practices that minimize the need for scraping and sanding.

Paint Stripping

Many paint strippers are solvent-based, and contain chemicals that are dangerous to humans, such as methylene chloride. Some are flammable and most can cause water and air pollution if not handled properly. There are some less environmentally damaging and less hazardous paint strippers available on the market.



LEGAL REQUIREMENTS:

A hazardous waste determination must be conducted to establish whether or not disposal of used paint strippers is subject to hazardous waste regulations [RCRA; 40 CFR 262.11; OAR 340-102-0011]. A hazardous waste determination must also be conducted on any materials used to clean up a spill. Manage waste accordingly.

Businesses engaged in paint stripping must minimize the evaporative emissions of methylene chloride from paint strippers into the air by using available control technologies and management practices [40 CFR Part 63 Subpart HHHHHH]. See your local DEQ office for additional details if this applies to you.

BEST MANAGEMENT PRACTICES:

ALTERNATIVES:

- Consider alternatives to chemical paint stripping depending on the characteristics of the surface being stripped, the type of paint being removed, and the volume and type of waste produced. Alternatives include scraping, sanding, and/or abrasive blasting. Use a heat gun to remove paint and varnish where appropriate.
- If paint strippers must be used, use less toxic alternatives such as soy-based or water-based products which are less hazardous.

APPLICATION:

- Use only the minimum amount of paint stripper needed for a job.
- Reduce the chance of spills during transport by storing unused paint stripper where it's used most in the shop. Keep the product in secondary containment.
- Encourage careful use by informing all workers and operators of the hazardous nature of solvents and the purchasing and recycling costs.
- Train employees to use less paint stripper, to properly store new and used paint strippers, to use wise clean-up procedures, and to prevent leaks and spills.

Teak Refinishing

Teak cleaners that contain acids and caustics can be toxic to marine life when spilled in the water.

LEGAL REQUIREMENTS:

A hazardous waste determination must be conducted for spent teak cleaner and for any materials used to clean a spill [RCRA; 40 CFR 262.11; OAR 340-102-0011]. Manage accordingly.

BEST MANAGEMENT PRACTICES:

- Avoid teak cleaners containing acids (such as phosphoric acid or oxalic acid) or those labeled "caustic, corrosive, or acidic."
- Clean teak with a mild, phosphate-free detergent with bronze wool, if possible.
- If sanding teak, use a dustless or vacuum sander.
- If possible, conduct teak refinishing in upland maintenance area. If not possible, use safer cleaners and avoid flushing excess teak cleaner and teak oil into the marina basin.

SECTION 11: PAINTING & FIBERGLASS

Antifouling Paint



Antifouling bottom paint is intended to discourage aquatic organisms from attaching themselves to the underwater portion of a boat's hull. The most common biocide used in bottom paint is copper (tin has been banned in most marine applications). The toxins in antifouling paints enter the environment through spillage, sanding, sand blasting, or scraping. Antifouling paint chips left on the ground or driveway can be transported into the water by stormwater runoff. Because copper is a biocide, it can harm the marine life living in and around marina basins.

LEGAL REQUIREMENTS:

The use of antifouling tributyltin (TBT) containing paints is prohibited on vessels less than 25 meters (82 feet) in length, unless the vessel hull is aluminum [Organotin Antifouling Paint Control Act 33 U.S.C. 2401].

A hazardous waste determination must be conducted to establish whether or not disposal of traditionally used antifouling paints, in solid or liquid form, is subject to hazardous waste regulations [RCRA; 40 CFR 262.11; OAR 340-102-0011]. A hazardous waste determination must also be conducted on any materials used to clean a spill.

Abrasive Blast Media Containing Pesticides (such as paint chippings) must be handled as Special Waste. This waste may be disposed of at a solid waste landfill if the site meets the design criteria of 40 CFR 258.40 for new municipal solid waste landfills [OAR 340-093-0190 (f)].

A pesticide applicator license from ODA is required for businesses that apply antifouling bottom paints using a spray applicator [OAR 603-057].

It is against the law to cause pollution to any waters of the State or place any wastes in a location where such wastes are likely to escape and be carried into waters of the state [ORS 468B.025]. Paint chips and sanding residue commonly contain chemicals that are harmful to aquatic life.

The International Maritime Organization's International Convention on the Control of Harmful Anti-Fouling Systems on Ships, which prohibits the use of harmful organotins in antifouling paints, took effect on Sept. 17, 2008. The United States, as well as many other countries, has ratified the treaty.

BEST MANAGEMENT PRACTICES:

ALTERNATIVES:

- Switch to long-lasting, low-toxicity or non-biocide antifouling paint.
- Recommend coating alternatives based on use patterns, performance, and cost to your customers. Stock only those in the ship store.
- Stay informed about the latest antifouling products, their effectiveness and their environmental impacts. Pass on the information to your customers. See scorecard: <http://www.northwestgreenchemistry.org/>.
- Discourage use of antifouling paint on boats kept in fresh water.
- Recommend that boats that are rack stored or trailered use alternatives to antifouling paint such as polyurethane, bottom wax, or non-metallic epoxies,

since antifouling paint is not necessary for boats that are not continuously in the water.

ACTIVITY:

- Use dust-collecting sanders when sanding anti-fouling paint.
- Sandblasting is not recommended for removal of antifouling paint.
- Sweep and collect paint chips (don't hose) immediately after scraping or sanding.
- Mix paints and solvents away from the water and prevent dripping into the water. Avoid mixing paint or cleaning brushes on open floats or anywhere over water.
- Use drip pans, tarps, and sheeting to contain droppings and spilled materials. Drip pans should be used for



all paint mixing, solvent transfer, or equipment clean-up operations unless the operations are conducted in

controlled areas away from storm drains, surface waters, shorelines, piers, docks, or floats.

- Weight the bottom edges of tarps and plastic sheeting to keep them in place.
- Mix only enough paint necessary for a job.
- Save excess or unused antifouling paint for future uses.
- Reuse solvents and thinners by draining the clean

product off the top once solids settle out.

RULES:

- Prohibit in-water bottom cleaning, hull scraping, or any process that occurs underwater that could remove antifouling paint from the boat hull. It is impossible to treat what's cleaned from the boat bottom.
- If in-water bottom cleaning is allowed, require that customers or contractors use only soft sponges to clean marine growth and use stainless steel pads or brushes only on unpainted metal areas (never on bottom paint). Colored plumes of paint in the water near underwater cleaning activity should not occur.

Abrasive Blasting

Abrasive blasting uses sand, glass or plastic beads, walnut shells, metal shot or grit, baking soda, dry ice pellets, or other abrasive material with air pressure or water pressure to remove paint. Traditional abrasive blasting of large boat hulls is a messy job resulting in many hundreds of pounds of spent abrasive mixed with bottom paint. While the abrasive can be relatively cheap, the labor is costly and the potential environmental impacts are large.

LEGAL REQUIREMENTS:

Determine if your blasting wastes are hazardous [RCRA; 40 CFR 262.11; OAR 340-102-0011] and manage accordingly.

Abrasive Blast Media Containing Pesticides (such as paint chippings) must be handled as Special Waste. This waste may be disposed of at a solid waste landfill if the site meets the design criteria of 40 CFR 258.40 for new municipal solid wastes landfill units [OAR 340-093-0190 (f)].

Emissions causing a nuisance or resulting in particulate fall-out on neighboring properties or into state waters are prohibited [OAR 340-208-0300 through 0450].

BEST MANAGEMENT PRACTICES:

CONTAINMENT:

- If abrasive blasting must be done, perform it within well-ventilated spray booths or plastic tarp enclosures away from the water to minimize the spreading of dust and windblown material, and to prevent residue from being carried into surface waters.
- Prohibit uncontained blasting in the marina.
- If tarp enclosures are used, avoid blasting on windy days. Because tarps are not rigid, they do not eliminate wind flow through the blasting area, and so they allow the wind to carry blasting material and residue into surface waters.
- Store spent sandblasting grit, scrapings, and debris under cover in a manner that minimizes contact with process water or stormwater.

ALTERNATIVES:

- Consider alternatives to abrasive blasting on-site, such as dustless sanders or contracting the work off-site.
- Use natural sources for blasting media, like sand, baking soda, and walnut shells. Reuse this media by screening out the impurities between uses.
- Recycle used blast media. Investigate companies that recycle used blast media into new media or other products.

SECTION 11: PAINTING & FIBERGLASS

Hull and Topside Painting

Hull and topside paints may be toxic and inhalation may cause cancer. If spilled, they may harm aquatic life and water quality. Additionally, the fumes released by some paints can contribute to air pollution.



LEGAL REQUIREMENTS:

A hazardous waste determination must be conducted on painting wastes and materials used to clean up spilled paint to establish whether their disposal is subject to hazardous waste regulations [RCRA; 40 CFR 262.11; OAR 340-102-0011].

Paint cans and other containers that have residues of hazardous (e.g. oil-based) paints must be handled as hazardous waste unless they have been “emptied,” which means:

- Drained of all material that can be removed from them by normal methods (e.g. pouring or pumping), AND
- No more than one inch (or 3% by weight) of residue remains in the container [40 CFR 261.7].
- “Emptied” containers of hazardous paints and those that have dried out residues of non-hazardous (e.g. latex) paints may be recycled as scrap metal, or disposed of in the regular trash.

If paint or varnish that is discharged into the navigable waters of the state causes a visible sheen, report the spill to the National Response Center at (800) 424-8802 [§311 of the Clean Water Act; 33 USC 1321].

It is against the law to cause pollution to any waters of the State or place any wastes in a location where such wastes are likely to escape and be carried in to waters of the state [ORS 468B.025]. Paint chips and sanding residue commonly contain chemicals that are harmful to aquatic life.

BEST MANAGEMENT PRACTICES:

REDUCE & REUSE:

- Avoid the problem of having leftover paint by mixing only as much paint as is needed for a given job.
- Consider sharing leftover paints with customers or setting up an exchange area for customers to swap unused items. Contact DEQ Technical Assistance to ensure a leftover paint swap area does not change your hazardous waste generator status.
- Reuse solvents and thinners by draining the clean product off the top once solids settle out.
- Encourage the use of non-toxic, high bonding, and easily cleaned hull coatings.
- Use low-VOC, high solids content, and water-based paints and surface preparation products instead of traditional paints and primers.

ACTIVITY:

- Use brushes and rollers instead of paint sprayers whenever possible, since paint spraying is potentially more wasteful and more harmful to the environment.
- Use drip pans for all paint mixing, paint transfer, and/or equipment clean up.
- Material captured in drip pans should be used or

returned to the original container if possible.

- Limit in-water painting to interior surfaces and bright work, where paint materials and spills can be contained and prevented from entering the water. Do not allow in-water hull scraping or any process that occurs underwater to remove paint from the boat hull.
- Although it is not advised to conduct painting while the boat is in the water, if it must be done, transfer the paint to the vessel in a small (less than one gallon), tightly covered container. Small containers mean small spills.

DESIGNATE:

- Store all paint in a centralized, covered area. Return all unused paints to that area. Immediately and properly manage empty containers.
- Designate an upland area for debris-producing maintenance activities such as sanding and painting.
- Do as much work as possible away from the water, including mixing paints and/or cleaning brushes.
- Use tarps or drop cloths to collect drips. Weight the bottom edges of tarps and sheeting to keep in place.
- Contain and clean up spilled paint or varnish immediately.

Paint Spraying

Paint spraying has potential air and water quality impacts. Most paints contain volatile organic compounds (VOCs) that evaporate quickly and are ignitable. Many paints are also toxic and inhalation may cause cancer. If spilled, they may harm aquatic life and water quality.

LEGAL REQUIREMENTS:

You must determine if your painting wastes (including leftover paints, spray gun solvents, and rags), or any materials used to clean a spill, are hazardous [RCRA; 40 CFR 262.11; OAR 340-102-0011] and manage accordingly.

A pesticide applicator license from ODA is required for businesses that apply antifouling bottom paints using a spray applicator [OAR 603-057].

It is against the law to cause pollution to any waters of the State or place any wastes in a location where such wastes are likely to escape and be carried in to waters of the state [ORS 468B.025]. Paint chips and sanding residue commonly contain chemicals that are harmful to aquatic life.

A Basic or General Air Quality Discharge Permit from DEQ may be required if using paint sprayers that discharge VOCs [OAR 340-216-8010].

BEST MANAGEMENT PRACTICES:

APPLICATION:

- Whenever possible, use brushes and rollers instead of paint sprayers, which are more wasteful and harmful to the environment than applying paint by hand.
- Avoid unprotected paint spraying. Paint spraying may be conducted (in order of preference):
 - Inside of commercial shipyard facilities that are designed for this activity;
 - Inside designated structures with ventilation and filter systems;
 - At designated shore-side areas away from open water, with temporary structures or plastic sheeting provided to minimize the spreading of overspray; or
 - In covered slips, with tarps and sheeting installed with a tight seal between the vessel being worked on and the floats or walkway surface. Be sure to remove the protective sheeting with care to prevent loss of accumulated waste material into the water.
- Use spray equipment with high transfer efficiency. Paint guns used in spray booths should be either High Volume Low Pressure (HVLP) or High Efficiency Low Pressure (HELP), which are much more efficient. These paint guns produce little overspray, use less paint, and cut down on air pollution.
- If spraying outdoors with protective sheeting, avoid working on windy days when controlling the protective

covering and the paint spray is difficult.

- Prohibit paint spraying on the water without protective sheeting.
- Encourage the use of non-toxic, high bonding, and easily cleaned hull coatings.



CLEANUP:

- Limit the amount of leftover paint and decrease solvent use by using a smaller paint spray gun cup.
- Reuse solvents and thinners by draining the clean product off the top once solids settle out.
- Clean paint guns in an enclosed gun cleaner and capture all solvents.
- Spent paint gun solvent must be treated as hazardous waste and should never be discharged into drains or onto the ground.
- Solvents should be recycled either in an onsite distillation unit or by a permitted recycling facility.
- Evaporation of waste solvent or waste solvent-based paint constitutes illegal disposal of hazardous waste.

SECTION 11: PAINTING & FIBERGLASS

Varnishing

Spills of oil-based varnishes may be detrimental to the marine and aquatic environment. Since they are petroleum-based, spills may have a similar impact as oil spills. Chemicals in varnishes can be highly flammable and potentially harmful to human health.

LEGAL REQUIREMENTS:

Many varnishes are composed of hazardous materials. You must determine if your waste varnish is hazardous [RCRA; 40 CFR 262.11; OAR 340-102-0011]. A hazardous waste determination must also be conducted for any materials used to clean a spill. Manage hazardous waste accordingly.

Don't use soap or dish detergent to disperse an oil spill. Using detergents to disperse fuel worsens the problem and is against federal law (40 CFR 110.4).

BEST MANAGEMENT PRACTICES:

- Avoid the disposal problem of leftover varnish by mixing only as much as is needed for a given job.
- Consider sharing leftover varnishes with customers or setting up an exchange area for customers to swap unused items.
- Use less hazardous, water-based varnishes that pose less of a threat to human health or the environment.
- In case of spills of varnish on land, use absorbent material to clean it up and collect contaminated soils.
- Spills in waterways should be contained and mopped up with booms or pads that repel water but absorb petroleum.

Waxing

A good coat of wax can help prevent surface buildup on a boat. However, there are a few environmental impacts from compounding and waxing a hull. Basic pollution prevention techniques and proper management of the substances used to restore fiberglass hulls will help keep waxes and cleaners out of the environment.

LEGAL REQUIREMENTS:

Most stain removers, rubbing compounds and waxes are not hazardous materials, although some have hazardous constituents. If any of the products you use contain hazardous ingredients, you must determine if the waste materials that are generated are hazardous [RCRA; 40 CFR 262.11; OAR 340-102-0011] and manage accordingly.

BEST MANAGEMENT PRACTICES:

- Purchase products that are non-hazardous. If possible, use phosphate-free, biodegradable and non-toxic soap when prepping a hull. When removing tough stains, use only as much stain remover as necessary, or use a more abrasive rubbing or polishing compound.
- Conduct compounding and waxing on land, away from the water.



Fiberglassing

The processes involved in fiberglassing, whether using epoxy, polyester, or vinyl ester resins for small or big jobs, can have environmental impacts. Some of the materials used in the fiberglassing process can be dangerous to workers. Some resins, catalysts and the solvents used for cleanup can be flammable, irritate the skin and respiratory system, and may cause cancer.

LEGAL REQUIREMENTS:

Styrene, the primary component of gelcoat and other polyester resins, is an ignitable chemical. Therefore, cans or containers of waste resins may be regulated as ignitable hazardous waste. Certain hardeners and accelerators may also be regulated as hazardous waste [RCRA; 40 CFR 262.11; OAR 340-102-0011].

Chlorinated solvents and the rags used to apply them must be managed as hazardous waste [RCRA; 40 CFR 262.11; OAR 340-102-0011].

If you store over 500 gallons of a hazardous substance requiring a Material Safety Data Sheet (such as a solvent), you must report storage of that substance to the State Fire Marshall under the Oregon Community Right to Know (CR2K). Submission of the annual CR2K survey also fulfills the reporting requirement of the federal Emergency Planning and Community Right-to-Know Act of 1986 [42 USC 11001 and 42 CFR 355].

If you manufacture hulls or decks for recreational boats made from fiberglass or aluminum and emit 10 tons or more per year of any one federally designated hazardous air pollutant (HAP) like styrene, toluene, or xylene, and/or 25 tons or more per year of all HAPs combined, several EPA air emission standards must be followed [40 CFR 63, Subpart VVVV].

BEST MANAGEMENT PRACTICES:

- Minimize waste by working with small batches of resin.
- Avoid putting liquid hardener in the trash, since it can spontaneously combust when mixed with sawdust and other materials.
- Aliphatic esters (such as AcraStrip 600) can often effectively replace acetone or MEK for cleaning out fiberglass and resin equipment.



SECTION 12: SPILL PREVENTION & EMERGENCY PLANNING

Emergency Planning

Being adequately prepared for emergency action can potentially reduce the overall environmental impact of a spill, fire, or other event. Avoid the confusion, panic, and expense that can result from a spill, fire, or other emergency event by thinking ahead. Being prepared for emergencies not only decreases the amount of time needed to respond, but can also reduce impacts to people and the environment. Well-managed marinas have an ongoing equipment maintenance and inspection program, detailed emergency response procedures, consistent staff training, and adequate spill cleanup materials on hand.

LEGAL REQUIREMENTS:

You need to prepare a Spill, Prevention, Control, and Countermeasure (SPCC) Plan, which outlines a facility-wide plan to prevent and clean up oil and gasoline spills [Clean Water Act, 40 CFR 112] if your facility stores gas or oil:

1. Above-ground in any size tank(s) with a total aggregate volume over 1,320 gallons (containers of less than 55 gallons and/or permanently closed storage tanks are exempt from the total); or
2. In underground storage tanks with total capacity greater than 42,000 gallons (unless the tanks are compliant with the state requirement for USTs)

Contact the Marine Board for a template and/or sample plan to get you started.

If your facility is a Large or Small Quantity Generator of hazardous waste, you must prepare a hazardous waste contingency plan [40 CFR 262.34]. This plan is to ensure you and your employees are adequately prepared to handle hazardous waste and to respond to any emergencies that might arise. The plan does not have to be written, though a written plan would be easier to develop and implement.

If you have a marine service station, you must design and manage it to prevent spills, fire, and other dangers as required in the National Fire Protection Association's (NFPA) Automotive and Marine Service Station Code (NFPA 30A). These requirements are adopted locally. Check with your municipal fire marshal for local requirements.

Reportable quantities of hazardous substances that are used, stored, manufactured or disposed of at business and government sites in Oregon are required to be reported annually to comply with state and federal Community Right to Know requirements. Facilities must submit their chemical inventory information using the Hazardous Substance Information Survey form supplied by the State Fire Marshal [ORS 453.307; OAR 837-085]. Keep copies of Material Safety Data Sheets (MSDS) for all hazardous substances used at your facility [Occupational Safety and Health Act of 1970, 29 USC Section 657].

Any spill or release of petroleum that results in a sheen on the waters of the state, or a release of oil onto the ground surface of 42 gallons or more, must be reported immediately to the:

- Oregon Emergency Response System (OERS) at 1-800-OILS-911 (or 1-800-452-0311) [OAR 340.142; ORS 466.635]
- National Response Center at 1-800-424-8802 [Section 311 of the Clean Water Act; 33 USC 1321].

HAZWOPER training requirements may apply to marine oil spill emergency response [29 CFR 1910.120(q)(6)]. Requirements and training guidance for post-emergency response are in HAZWOPER paragraph (q)(11) and in OSHA Instruction CPL 02-02-051, Inspection Guidelines for Post-Emergency Response Operations Under 29 CFR 1910.120. HAZWOPER does not apply to incidental releases that are limited in quantity and pose no safety and health threat to employees working in the immediate vicinity of the spill. Make sure to call for appropriate response if the spill is outside of you and your employees' response expertise.



Dockside oil spill kit



BEST MANAGEMENT PRACTICES:

SPILL RESPONSE:

- Assess potential hazards at your facility, both manmade (fuel spill or fire) and natural (flooding, storms, earthquake, tsunami).
- Store spill containment and control materials in a clearly marked location, readily accessible. Depending on a marina's activities, different equipment and training requirements may apply. Generally, a spill response kit should include:
 - Absorbent pads and booms (small and large)
 - Empty sandbags
 - Sewer pipe plugs
 - Dry absorbent
 - Square end shovels
 - A pry bar
 - Curtain boom (long enough to span the mouth of the marina and to completely encircle the largest vessel in moorage)
 - Drain covers
 - Fire extinguishers
 - A copy of the facility's spill contingency plan
 - Petroleum-resistant gloves and splash protection for staff who handle fuels and petroleum products.
- Response equipment should be regularly inspected, maintained, and replaced. Keeping a list of equipment on site, and its inspection/maintenance schedule, is a good way to ensure the marina is well prepared.
- Develop emergency response plans that include written procedures for action addressing potential emergency situations. Keep the plan in an accessible location.

EMERGENCY PLANS:

- Emergency response plans should:
 - Include a site plan of the facility, showing valves, pipes, tanks, structures, roads, hydrants, docks, power and fuel shutoffs, hazardous material storage locations, telephones, and location of emergency response materials.
 - Describe type, amount, and location of hazardous and potentially hazardous materials on-site.
 - Identify which staff member will take what action in the event of an emergency.
 - Specify what spill type staff are allowed to clean up.
 - Designate one person as the spokesperson for the marina.

- Include a list of emergency phone numbers for:
 - › USCG National Response Center: 1-800-424-8802 [for spills]
 - › OR Emergency Response System: 1-800-OILS-911 (1-800-452-0311)
 - › Local fire and police
 - › Facility owner
 - › Local harbormaster
 - › Neighboring marinas that have emergency response equipment
 - › Spill response contractors
- List and describe actions to be taken during an emergency and what equipment should be deployed.
- Indicate when additional resources should be called for assistance.
- Update the plan as needed each year.
- Review the emergency response plan with employees and train them on proper use of containment material.
- Inform local fire department and harbormaster of your emergency response plan.
- Invite the U.S. Coast Guard (USCG) and local fire department to demonstrate emergency response procedures at your facility.

SPILL PLAN:

- Develop an oil spill contingency plan, even if you are not required by law to prepare an SPCC Plan. A spill contingency plan and emergency response plan can be combined into one document. The plan should identify:
 - Potential spill sources
 - Oil and hazardous materials used/stored in the area
 - Spill prevention measures (e.g. security, inspection, containment, training, equipment)
 - Spill emergency procedures, including:
 - › Contact information of marina personnel qualified to lead spill response efforts.
 - › Notification and spill containment measures.

SEVERE WEATHER: Develop an action checklist for severe weather. Preparations to reduce environmental risks include securing all dumpsters, removing or securing all objects that could potentially blow or wash away, and securing waterside sewage pumpouts and/or dump stations.

SECTION 12: SPILL PREVENTION & EMERGENCY PLANNING

Oil Spill Response

Even small spills are a problem because their cumulative impact is significant. As little as a quart of spilled oil, diesel, or gasoline can contaminate 100,000 gallons of water and prove deadly to marine life — especially juvenile fish, shellfish larvae, and other sensitive and essential sea life. Careless engine maintenance, refueling habits, and improper disposal of oil and contaminated bilge water all contribute to this cumulative problem. By using best management practices, many of these small spills can be prevented and the impacts of spills that do occur can be minimized.

LEGAL REQUIREMENTS:

If your facility stores a certain amount of gas or oil, it may require a Spill Prevention Control and Countermeasure (SPCC) Plan [40 CFR 112]. See section that follows for additional details on the SPCC.

Any spill or release of petroleum that results in a sheen on the waters of the state must be reported immediately to the:

- Oregon Emergency Response System (OERS) at 1-800-OILS-911 (or 1-800-452-0311) [OAR 340.142; ORS 466.652]
- National Response Center at 1-800-424-8802 [Section 311 of the Clean Water Act; 33 USC 1321].

The spiller is required to notify these agencies in the event of a spill. However, anyone is encouraged to report a spill if they see one.

A hazardous waste determination must be conducted for any materials used to clean a spill to establish whether or not disposal of the materials is subject to hazardous waste regulations [RCRA; 40 CFR 262.11; OAR 340-102-0011].

Don't use soap or dish detergent to disperse an oil spill. Using detergents to disperse fuel worsens the problem and is against federal law (40 CFR 110.4).

BEST MANAGEMENT PRACTICES:

SPILL RESPONSE SUPPLIES:

- Store spill containment and control materials in a clearly marked and easily accessible location. This locker or cabinet should contain:
 - Absorbent pads and booms (small and large)
 - Empty sandbags
 - Sewer pipe plugs
 - Dry absorbent
 - Square end shovels
 - A pry bar
 - Curtain boom (long enough to span the mouth of the marina and to completely encircle the largest vessel in moorage)
 - Drain covers
 - Fire extinguishers
 - A copy of the facility's spill contingency plan
 - Petroleum-resistant gloves and splash protection for staff
- Consider the size of potential spills that could occur at your facility when calculating the amount of boom and other supplies needed.
- Keep oil absorbent pads and pillows available at the fuel dock for staff and customers to mop up drips and small spills during fueling. (See Section 7: Fueling for more details)
- Response equipment should be regularly inspected, maintained, and replaced. Keeping a list of equipment on site, and its inspection/maintenance schedule, is a good way to ensure the marina is well prepared for spills.
- Carry vent line whistles, oil absorbent fuel collars, air/fuel separators, and other fuel spill preventative devices in your facility's store.



Emergency fuel shut off at Port of Gold Beach

CLEANUP:

- If a spill occurs, cleanup efforts should commence immediately, taking precedence over normal work.
- Boaters should be informed that if they cause or see a spill, they are required to report it. Reporting a spill does not automatically mean fines will be given. But, there can be fines for not reporting. It's always best to report a spill.
- If you have an oil, gas, or diesel spill on water:
 - Stop the flow.
 - Contain the spill.
 - › Deploy containment booms to minimize the threat of a release to water or to minimize spread if the spill has reached the water.
 - Call:
 - › Oregon Emergency Response System at 1-800-OILS-911 (or 1-800-452-0311) and
 - › U.S. Coast Guard's National Response Center at 1-800-424-8802.
 - › To the best of your ability, be ready with the following information:
 - » Where is the spill?
 - » What spilled?
 - » How much spilled?
 - » How concentrated is the spilled material?
 - » Who spilled the material?
 - » Is anyone cleaning up the spill?
 - » Are there resource damages (e.g. dead fish or oiled birds)?
 - » Who is reporting the spill?
 - » How can we get back to you?
- If a spill occurs on land, cover the spill with absorbent material such as kitty litter, sawdust, or oil absorbent pads. Do not use straw.
- Staff can respond to oil or diesel spills, but spilled gasoline is best left to evaporate as the explosion hazard is too high to recover.
- Remove all sources of ignition and move people away from the area until the fumes are gone. If the spill contains many gallons or there is risk of combustion, especially from gasoline vapors confined in a small space, call the local fire department immediately.

DISPOSAL:

- Properly characterize the cleanup waste and dispose of it to a facility authorized to handle that type of waste.



Fuel bib used at Port of Gold Beach



Emergency response supplies at Crater Lake boat dock

SECTION 12: SPILL PREVENTION & EMERGENCY PLANNING

Spill Prevention, Control, and Countermeasure Plans



The federal Clean Water Act requires facilities that store any kind of oil in certain volumes to prepare and implement a Spill Prevention, Control, and Countermeasure (SPCC) Plan to prevent the discharge of oil from a facility into navigable waters or adjoining shorelines. SPCC Plans require that your facility have adequate containment, such as berms and dikes around aboveground fuel tanks, to protect the soil and water in the event of a spill [40 CFR 112]. SPCC Plans are federal requirements administered by the U.S. Environmental Protection Agency (EPA).

DOES YOUR MARINA REQUIRE A SPCC PLAN?

Your facility needs to develop a SPCC plan if it does any of the following:

- Stores oil aboveground in any size tank(s) with a total aggregate volume over 1,320 gallons (containers of less than 55 gallons and/or permanently closed storage tanks are exempt from the total); or
- Stores oil in underground storage tanks with total capacity greater than 42,000 gallons (unless the tanks are compliant with the state requirement for USTs)

AND

- Could reasonably be expected to discharge oil to a “navigable water of the United States” or “adjoining shorelines” considering a possible worst-case scenario. (This criterion applies to just about every marina in the state, since a facility cannot take into consideration any man-made impediments to the flow of oil.)

NOTE: “Oil” is defined in Section 311(a)(1) of the Clean Water Act as “oil of any kind or in any form including, but not limited to, petroleum, fuel oil, sludge, oil refuse, and oil mixed with wastes other than dredged spoil.” EPA interprets this definition to include crude oil, petroleum, and petroleum-refined products, as well as non-petroleum oils such as vegetable and animal oils.

NOTE: “Navigable waters” are broadly defined under the Clean Water Act and the Oil Pollution Act to include all waters that are used in interstate or foreign commerce, all interstate waters including wetlands, and all intrastate water including wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds.

WHAT IS AN SPCC PLAN?

The Plan describes oil handling operations, spill prevention practices, discharge or drainage controls, and the personnel, equipment and resources at the facility that are used to prevent oil spills from reaching navigable waters or adjoining shorelines. Each SPCC Plan is site specific, but must address the following:

- Operating procedures that prevent oil spills;
- Control measures installed to prevent a spill from reaching the environment; and
- Countermeasures to contain, clean up, and mitigate the effects of an oil spill that reaches the environment.

WHO WRITES AN SPCC PLAN?

The facility can prepare its own plan in most cases. However, there are different levels of facilities, which affects who can certify the plan. The owner or operator of a qualified facility can self-certify the facility’s SPCC Plan. There are two types of qualified facilities. To determine if your facility is a qualified facility and what type it is, you’ll need the following information:

- The total capacity of aboveground oil storage containers at the facility and
- Information on oil spills from the facility for the past three years.

Follow the table on the next page to determine if you can self-certify your SPCC Plan:

If the facility total aboveground oil storage capacity is 10,000 gallons or less ...		
And...	And the facility has...	Then the facility is a:
Within three years prior to the Plan certification date, or since becoming subject to the SPCC rule if in operation for less than three years, the facility has not had: A single discharge of oil to navigable waters or adjoining shorelines exceeding 1,000 gallons, or Two discharges of oil to navigable waters or adjoining shorelines each exceeding 42 gallons within any 12-month period.	No individual aboveground oil containers greater than 5,000 gallons;	Tier I Qualified Facility: Complete and self-certify Plan template (Appendix G to 40 CFR part 112) in lieu of a full PE-certified Plan or other self-certified SPCC Plan.
	Any individual aboveground oil container greater than 5,000 gallons;	Tier II Qualified Facility: Prepare a self-certified Plan in accordance with all applicable requirements of §112.7 and subparts B or C of the rule, in lieu of a Professional Engineer (PE)-certified Plan.

Tier 1 Qualified Facility SPCC Plan Template: <http://www.epa.gov/oil-spills-prevention-and-preparedness-regulations/tier-i-qualified-facility-spcc-plan-template>.

An owner/operator that certifies a facility’s SPCC Plan attests that he/she is familiar with the SPCC requirements and has visited and examined the facility. The owner/operator also certifies that:

- The Plan has been prepared in accordance with accepted and sound industry practices and standards and with the rule requirements;
- Procedures for required inspections and testing have been established;
- The Plan is being fully implemented;
- The facility meets the qualifying criteria;
- The Plan does not deviate from rule requirements except as allowed and as certified by a PE;
- Management approves the Plan and has committed resources to implement it.

PROFESSIONAL ENGINEER (PE) CERTIFIED SPCC PLANS

If your facility does not qualify as either a Tier I or Tier II qualified facility, then you must follow the requirements of 40 CFR 112.7 and subparts B or C of the rule, and have the SPCC Plan certified by a Professional Engineer (PE).

A PE must also be involved when you deviate from any of the SPCC requirements (i.e. either by providing environmentally equivalent alternatives or a contingency plan instead of secondary containment). You can still self-certify the SPCC Plan, if your facility is a Tier I or II qualified facility, but the deviation must be certified by a PE.

The facility owner or operator is responsible for preparation of the SPCC Plan, but it must be certified by a PE who will confirm that:

- The PE is familiar with the requirements of the rule;
- The PE or his agent has visited and examined the facility;
- The SPCC Plan has been prepared in accordance with good engineering practices, including consideration of applicable industry standards, and with the requirements of the rule;
- Procedures for required inspections and testing have been established; and
- The SPCC Plan is adequate for the facility.

SECTION 12: SPILL PREVENTION & EMERGENCY PLANNING

Spill Prevention, Control, and Countermeasure Plans

HOW DO I PREPARE AND IMPLEMENT MY SPCC PLAN?

Once you determine that you need an SPCC Plan, and you know how to certify it, then you need to know what to include in the Plan. You'll need to include the following information in your SPCC Plan:

- A list of the oil containers at the facility including the contents and location of each container;
- A brief description of the procedures that you will use to prevent oil spills. For example, steps you use to transfer fuel from a storage tank to a vehicle that reduce the possibility of a fuel spill;
- A brief description of the measures you installed to prevent oil from reaching water;
- A brief description of the measures you will use to contain and cleanup an oil spill; and
- A list of emergency contacts and first responders.

Include the following spill prevention measures in the SPCC Plan and implement them at your facility:

- Use containers suitable for the oil stored. For example, use a container designed for flammable liquids to store gasoline;
- Identify contractors or other local personnel who can help you clean up an oil spill;
- Provide overfill prevention for your oil storage containers. You could use a high-level alarm or audible vent;
- Provide effective-sized secondary containment for bulk storage containers, such as a dike or a remote impoundment. The containment must be able to hold the full capacity of the container plus possible rainfall. The dike may be constructed of earth or concrete. A double-walled tank may also suffice;
- Provide effective, general secondary containment to address the most likely discharge where you transfer oil to and from containers and for mobile re-fuelers, such as fuel nurse tanks mounted on trucks or trailers. For example, you may use sorbent materials, drip pans or curbing for these areas; and
- Periodically inspect and test pipes and containers. You should visually inspect aboveground pipes and inspect aboveground containers following industry standards. You must "leak test" buried pipes when they are installed or repaired. Keep a written record of your inspections.

IS THERE A PARTICULAR FORM OR FORMAT FOR THE SPCC PLAN?

The EPA does not expect any two plans to look alike. However, at a minimum, all plans must include:

- Facility diagram and drainage patterns;
- List of all oil storage tanks and areas;
- Quantities of oil that could be released, with predicted path of flow and flow rate;
- Procedures for receiving oil from the supplier, transfer of oil within the facility, end point uses of the oil, and waste oil disposal;
- Effects of a spill at the facility, fire hazards, employee evacuation, customer/neighbor considerations, press relations;
- Capacity of required secondary containment devices;
- Facility inspections;
- Clean-up procedures, including use of in-house staff versus contractors;
- Notification list – Name(s) and phone numbers of in-house management, remote management, fire and police, municipal, state and federal agencies requiring notification;
- Facility security for prevention of internal sabotage and external vandalism;
- Plan certification (by a Professional Engineer (PE) or in certain cases by the facility owner/operator);
- Employee training for spill prevention, oil handling, and spill clean-up; and
- OSHA considerations.

WHERE SHOULD THE SPCC PLAN BE LOCATED?

SPCC Plans should be maintained at any facility normally attended at least four hours per day or at the nearest field office if the facility is not so staffed. Submit your Plan to EPA only when requested. However, the SPCC plan must be available during normal business hours for review by an EPA inspector. The EPA requires that facilities submit a copy of the SPCC plan to EPA Region 10 if a single spill of greater than 1,000 gallons occurs or if two discharges of 42 gallons or more occurs within one year.

All employees must be made aware of the SPCC plan. It is highly recommended that you post copies of the plan in plain view at oil storage locations.

DOES A SPCC PLAN NEED TO BE REVIEWED AND/OR UPDATED?

Amend and update your SPCC Plan when changes are made to the facility, for example, if you add new storage containers (e.g. tanks) that are 55 gallons or larger. You must review your Plan every five years to include any changes in oil storage or spill prevention procedures or equipment at your facility.

WHO CARES IF MY FACILITY DOES NOT HAVE A PLAN?

- Company management. Having measures in place to prevent spills is cost effective, since spill cleanup can be costly. However, when a plan is in place, spill cleanup can be more efficient, more effective and less costly than if there is no course of action.
- The U.S. EPA. The penalty of failure to have a SPCC Plan can be up to \$37,500 per day of violation (with no maximum cap if a facility has a spill and no SPCC Plan). You may also run the risk of your insurance company not paying a claim if you are out of compliance. Failing to properly train all workers on the components of your facility's SPCC Plan can also result in liabilities from the EPA. The EPA performs random, unannounced inspections of facilities suspected of needing a SPCC Plan.

For more information about the federal SPCC program, visit: <http://www.epa.gov/oil-spills-prevention-and-preparedness-regulations>.

Information above adapted from EPA Guidance Document and relevant webpages: http://www.epa.gov/sites/production/files/2013-08/documents/qf_app_guidance_0.pdf

SECTION 12: SPILL PREVENTION & EMERGENCY PLANNING

What to do when you've had a spill

You are responsible for the immediate cleanup of your spill, regardless of the quantity involved. The responsibility lies with the person who spills the product, as well as the person owning or having authority over the oil or hazardous material. You may need to hire a qualified contractor or properly trained and equipped personnel to respond immediately to the spill. If you fail to clean up your spill, DEQ may clean it up for you and is allowed by law to fine you up to three times the cost of the cleanup, in addition to the actual cost of the cleanup (Oregon Administrative Rules 340-142).

Reportable spills include:

- Any amount of oil to waters of the state;
- Oil spills on land in excess of 42 gallons;
- Hazardous materials that are equal to, or greater than, the quantity listed in the Code of Federal Regulations, 40 CFR Part 302 (List of Hazardous Substances and Reportable Quantities), and amendments adopted before July 1, 2002.

Immediately report the spill or threatened spill to the Oregon Emergency Response System (OERS): 1-800-452-0311. When you report the spill to OERS you will need to provide basic spill information:

- Type of oil or hazardous material
- Estimated quantity
- Location of spill (land or water)
- Contact names and phone numbers

An oil or hazardous material spills also requires a separate notification to the National Response Center at 1-800-424-8802.

Actions to Take:

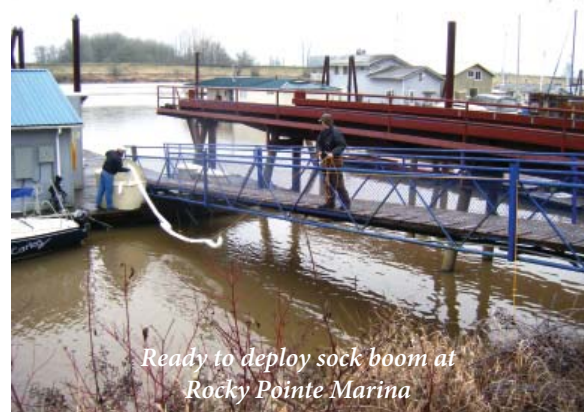
- Move away or upwind from the spill if you detect an odor and are unsure if it's safe.
- Avoid contact with liquids or fumes.
- Keep non-emergency people out of the area.
- Wear protective clothing.
- Control and contain the spill.
- Clean up what you can immediately.
- Contact DEQ to confirm the appropriate disposal site for contaminated materials.
- Remove the cleanup materials to an approved facility (such as a solid or hazardous waste landfill or recycling facility). Save your receipts for documentation.

- Continue with long-term cleanup measures.
- You will then be asked to file a report to the Department of Environmental Quality (DEQ). The form is available at: <http://www.deq.state.or.us/lq/pubs/forms/cu/SpillReleaseReportForm.pdf>.

The Department of Environmental Quality (DEQ) is responsible for ensuring that the cleanup is done in a way that protects human health and the environment. Oregon law also requires DEQ to recover its costs in carrying out this responsibility.

Depending on the type and quantity of material spilled, and the potential threat to people or the environment, DEQ may choose to oversee the cleanup. This oversight may take the form of DEQ staff at the scene, phone contact, document review or a combination of these. You are responsible for these oversight costs, including staff salaries, supplies, and equipment used will normally be billed within 45 days.

Find out more about DEQ's Emergency Response program by visiting their web site at: www.oregon.gov/DEQ/LQ.





SECTION 12: SPILL PREVENTION & EMERGENCY PLANNING

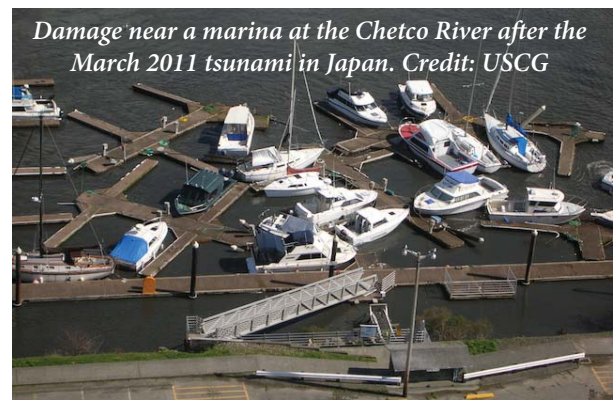
Earthquake & Tsunami Planning



Natural disasters are important to think about in your overall emergency planning. For any community west of the Cascades, that includes a large Cascadia subduction zone earthquake, and for those communities along the coast, that also includes post-earthquake tsunamis. The geologic record shows that the largest Cascadia Subduction Zone earthquakes and accompanying tsunamis occur about every 500 years, plus or minus 200 years. The last such earthquake occurred over 300 years ago. This means that we are in the time window where a destructive Cascadia earthquake and tsunami could occur and the probability of that occurrence will continue to increase over time.

A tsunami is a series of waves, usually caused by an earthquake beneath the sea floor. As tsunamis enter shallow water near land, they increase in height and can cause great loss of life and property damage. A tsunami can render marinas, ports, fueling stations, and other waterfront infrastructure inaccessible or completely demolished. For boaters, tsunami dangers also include:

- Sudden water-level fluctuations
- Grounding of vessels as water level suddenly drops
- Capsizing from incoming surges, complex coastal waves and surges hitting grounded boats
- Strong and unpredictable currents that can change direction quickly
- Eddies/whirlpools
- Drag on large-keeled boats
- Collision with other boats, docks, and debris



BEST MANAGEMENT PRACTICES:

PREPARE:

- Conduct a risk assessment of your facility and assets for vulnerability to an earthquake and/or tsunami. What facilities would be inundated?
- Create a disaster preparedness plan for you, your staff, and your customers. Practice this plan; make sure everyone knows what to do.
- Collect critical supplies, including food and water to have on hand after an event.
- Planning for earthquakes and tsunamis will also prepare you for other more frequent emergencies such as storms, fires, and flooding.
- Sign up to receive notifications from the National Tsunami Warning Center, which issues two types of warnings for Oregon boaters:
 - **Advisories:** Peak tsunami wave heights of 1 to 3 feet are expected, indicating strong and dangerous currents can be produced in harbors
 - **Warnings:** Tsunami wave heights could exceed 3 feet, indicating very strong, dangerous currents and inundation of dry land is anticipated

- These warnings are for distant tsunamis (caused by earthquakes far away from Oregon that will strike 4 or more hours after the earthquake).
- Provide inundation & evacuation maps, as well as emergency resources to your customers/tenants. Notify customers/tenants to any local alert or notification systems they could sign up for.

EVACUATE:

- In a local tsunami, the earthquake will be your only warning to get to high ground immediately. A tsunami could arrive in 10-20 minutes.
- For distant tsunamis:
 - Listen for warnings from sirens or announcements from airplanes and the media.
 - Heed natural warnings such as a loud ocean roar or rapid changes in sea level or currents.
- Do not return to the inundation zone until it is deemed safe by authorities. The first surge may not be the last or the largest.
- Local ports will sustain heavy damage from a local tsunami and may not be safe for days, weeks or months.

Boaters: What to do when a Tsunami Strikes

What to do depends on what type of tsunami occurred and where you are

Distant Tsunamis: You generally have at least 4 hours after the distant earthquake to take action.

If you are on the water

- Check with the US Coast Guard (USCG) before taking any action. If advised that offshore evacuation is an option and this option looks practical for your vessel, proceed to a staging area greater than 30 fathoms (180ft). If conditions do not permit, dock your boat and get out of the tsunami evacuation zone.

If you are on land or tied up at the dock

- Your choices are to a) evacuate out to sea beyond 30 fathoms, b) leave your vessel and evacuate out of the distant tsunami inundation zone, or c) go upriver.
- DO YOUR HOMEWORK before the event to understand how practical these options are for the largest distant tsunamis that might strike your area. Check with local authorities and oregontsunami.org for information.
- Check with local authorities before taking any action. Most distant tsunamis are small enough that it is safer to keep your boat docked. Congestion in the waterway or among those trying to pull boats out with trailers can create serious problems. Sea and weather conditions may be more dangerous than the tsunami! Get yourself out of the tsunami evacuation zone.

After the tsunami

- If in an offshore staging area, check with the USCG for guidance before leaving the staging area; conserve fuel by drifting until you know what actions you need to take.
- If in an onshore assembly area, check with local authorities for guidance before returning to the inundation zone.

Local Tsunamis: You have only ~10 minutes to take action, so have a plan ahead of time that includes a quick way to release commercial fishing gear so your boat is not dragged down by currents; have at least 3 days of food, fuel and water.

If you are on the water

- At less than 100 fathoms (600ft): (1) Stop commercial

fishing operations immediately, (2) free the vessel from any bottom attachment (cut lines if necessary), and (3) if you can beach or dock your boat and evacuate on foot within 10 minutes of a natural warning, then this is your best chance. If that is not possible, head to greater than 100 fathoms, keeping in mind the following:

- Proceed as perpendicular to shore as possible.
- Sail directly into wind waves, keeping in mind that wind waves opposed by tsunami currents will be greatly amplified.
- Maintain as much separation as possible from other vessels.
- Synchronize movements with other vessels to avoid collisions.
- At greater than 100 fathoms: If you are in deep water but not quite 100 fathoms, head to deeper water. If you are already at greater than 100 fathoms, then you are relatively safe from tsunamis, but deeper water is safer from tsunami currents and the amplification of wind waves by those currents.

If you are on land or tied up at dock

- Evacuate out of the tsunami evacuation zone. You don't have time to save your boat and could die if you try to do so.

After the tsunami

- If in an offshore staging area, check with the USCG for guidance before leaving the staging area; conserve fuel by drifting until you know what actions you need to take.
- If in an onshore assembly area, check with local authorities for guidance before returning to the inundation zone.
- Do not return to local ports until you have firm guidance from USCG and local authorities.
 - Local ports will sustain heavy damage from a local tsunami and may not be safe for days, weeks or months.
 - If at sea, check to see if you can reach an undamaged port with your current fuel supply and watch for floating debris or survivors that may have been washed out on debris.
 - If at sea, consider checking with USCG about your role in response and recovery.

SECTION 13: ELECTRIC SHOCK DROWNING

Electric Shock Drowning (ESD) is the result of the passage of a typically low level AC current through the body with sufficient force to cause skeletal muscular paralysis, which can leave a person unable to help themselves, while immersed in fresh water, eventually resulting in drowning. Higher levels of AC current in the water will also result in electrocution. Electric Shock Drowning has become the catch all phrase that encompasses all in-water shock casualties and fatalities.

Although ESD can occur virtually in any location where electricity is provided near water, the majority of ESD deaths have occurred in public and private marinas and docks. The typical victim of Electric Shock Drowning is a child swimming in or around a marina or dock where electricity is present. The electricity that enters the water and causes ESD originates from the wiring of the dock or marina, or from boats that are connected to the marina's or dock's power supply.

LEGAL REQUIREMENTS:

Follow current codes & standards:

- NFPA 70: National Electrical Code (NEC) is adopted in all 50 states and is the benchmark for safe electrical design, installation, and inspection to protect people and property from electrical hazards. NFPA 70-555 provides the electrical installation requirements for various types of marine installations.
- NFPA 303: Fire Protection Standard for Marinas and Boatyards provides requirements to protect lives and property from fire and electrical hazards at marinas and related facilities, including boatyards, yacht clubs, boat condominiums, and docking facilities.
- NFPA 303 requires ALL electrical connections and ground integrity in the marina to be inspected each year. This should be accomplished only by a licensed contractor familiar with marina/dock electrical installations.

For most electrical work, a contractor/installer must have an electrical contractor's license [ORS 479.620].

BEST MANAGEMENT PRACTICES:

RESPONSE:

- ESD victims are good candidates for successful Cardiopulmonary Resuscitation (CPR). Learn to perform CPR and maintain your training.
- To retrieve a person in the water, reach, throw, and row, but don't go.

PREVENTION:

- Tell others about ESD. Most people have never heard of it and are unaware of the danger.
- Do not allow swimming within any marina or boatyard. Post signs indicating no swimming. See Appendix G for a sample 'no swimming' sign.
- Have a certified marine electrician (ABYC certified) check boats within the marina for electrical leaks at least once per year.

SHORE POWER:

- If you need electricity on your dock or boat, make sure to hire a licensed electrician experienced in dock electrical installations and make sure the wiring meets the requirements in NFPA 303 and NFPA 70. Because

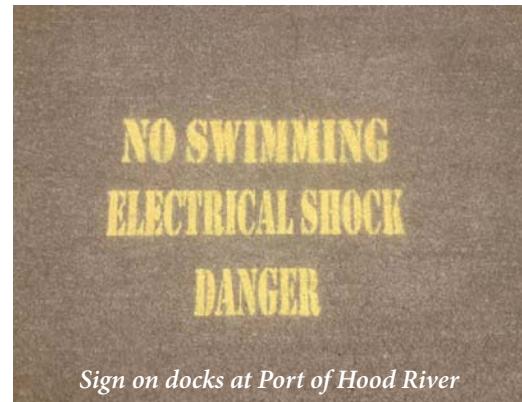
docks are exposed to the elements, their electrical systems should be inspected at least once a year.

- Do not allow boaters to use common household extension cords for providing shore power to their boat. Use shore power cords built to UL standards.
- Ground fault protection is now required for all marinas and boatyards (555.3 of NEC). Upgrade your system for safety.
- Do not allow divers to work on underwater fittings when a boat is plugged in to shore power, even in



saltwater. Remove the plug for boat being worked on. Also turn off shore power for adjacent boats when a diver is working underwater.

- Even if you adhere to all of these rules, nearby docks can still present a shock hazard. Educate your neighbors and work together with them to make the waterfront safe.
- Do not swim around a dock if any powered dock or other electrical appliance (like a lake pump) is within 150 feet. Relying on neighbors to turn off power and keep it off is not a good idea.



WHAT TO DO

What to do if you're in the water and you feel tingling or shocks:

- DO NOT follow your instinct to swim toward the dock!
- SHOUT! Drowning victims cannot speak, let alone shout. Let everyone know what's happening so they'll understand the danger and react appropriately.
- Try to stay upright and back out of the area the way you came, warn any other swimmers in the area of the danger, and then head for shore 100 yards or more from the dock.
- Alert the dock or marina owner and tell them to shut the power off to the dock until they locate the problem and correct it.
- Go to the hospital to make sure there are no lingering effects that could be dangerous.

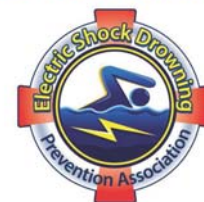
If you have to rescue an ESD victim:

- Know how to distinguish drowning from ESD (tingling, numbness, or pain all indicate ESD).
- Fight the instinct to enter the water — many rescuers have died trying to help ESD victims.
- Call for help. Use 911 or VHF Channel 16 as appropriate.
- Turn off the shore power connection at the meter base and/or unplug shore power cords.

- Get the victim out of the water. Remember to reach, throw, row, but don't go. Do not pull the victim toward the dock. It's likely the source of the electrical current. Rather push them away with a non-conductive pole.
- If the person is not breathing or you cannot get a pulse, perform CPR until the Fire Department, Coast Guard, or ambulance arrives.

For more information, visit www.electricshockdrowning.org.

No SWIMMING!



WARNING!
Potential Shock Hazard

Electrical currents may be present in the water. These electrical currents can be harmful or lethal.

www.electricshockdrowning.org

APPENDICES

Appendix A: Clean Boater Guide

Appendix B: Oregon Community Right To Know

Appendix C: Hazardous Waste Management

How to Determine if Your Waste is Hazardous

Preferred Disposal Options for Potential Hazardous Waste Streams

Appendix D: Boat Sewage Collection Devices

Marine Sewage and Wastewater Disposal

Determining the Type of Sewage Collection/Disposal Required for Vessels

Appendix E: Ballast Water Management

Appendix F: Sample Contract Language

Appendix G: Sample Signs for Marinas

Appendix H: Summary of Environmental Laws and Regulations

Federal and State Agencies that Regulate Environmental Issues at Marinas

Federal Laws and Regulations

Environmental Permits and Licenses

Additional State Laws and Regulations

Appendix I: Vessel Turn-In Information

Appendix J: Additional information

Contacts For More Information

Glossary of Terms

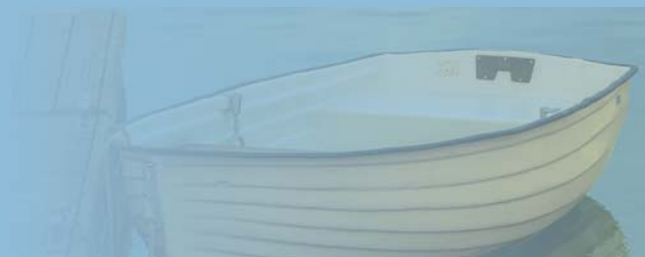
List of Acronyms

Appendix K: Clean Marina Checklists

Marinas

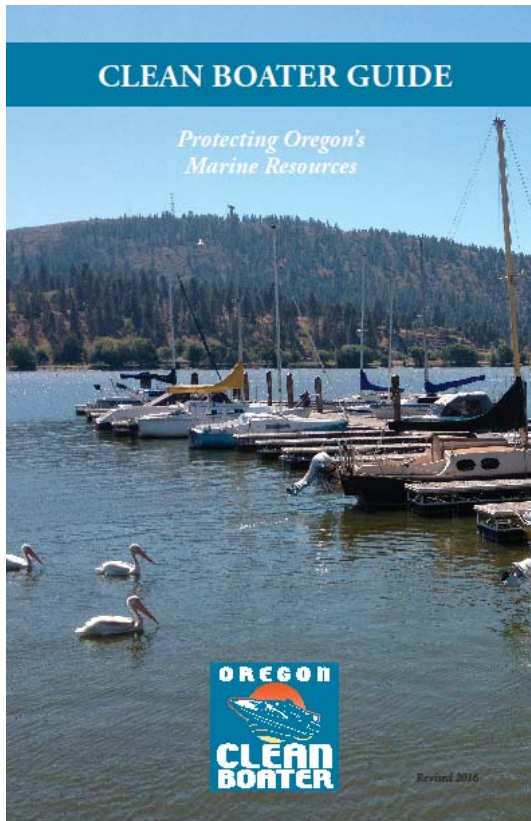
Floating Homes

Boatyards





APPENDIX A: CLEAN BOATER GUIDE



Two-stroke engine exhaust

Inefficient two-stroke engines release up to 30% of their gas/oil mixture unburned directly into the water. For every 10 gallons of gas used, more than two gallons of gas and oil go into the water in the form of a rainbow sheen seen when the motor is idling.

Reduce two-stroke engine use

- Consider replacing a carbureted two-stroke outboard (no longer manufactured) with a quieter, cleaner, and more efficient direct-injection two-stroke engine or a four stroke engine.
- If you have a large outboard you don't plan to replace, consider purchasing a small four-stroke "kicker" to use when trolling or moving short distances. You'll save money on fuel, save wear-and-tear on your larger motor and enjoy a cleaner environment.

Don't Use Detergents

When detergents, soaps, and solvents are put on fuel spills, fuel that might otherwise evaporate from the surface is scattered down into the water. This "rainfall effect" causes pollution in all levels of the water, rather than just the surface, and is very difficult to cleanup. Additionally, detergents can contain chemicals that are harmful to marine life.

Handle spills appropriately

- If you have a spill wipe it up with a rag – don't hose it off into the water.
- If fuel is spilled into the water:
 - Call 1-800-OILS-911 and the Coast Guard at 1-800-424-8802 for any spill, large or small, that causes a sheen.
 - Don't use soap or dish detergent - they worsen the problem and their use on spills in the water is against federal law.
- If a spill occurs in a marina, notify marina management immediately.



3



Every boater loves being on the water. A clean marine environment is a vital aspect of enjoying the boating experience. With 180,000 boats registered in Oregon today, the cumulative actions of boaters can have a significant impact on the health of the marine environment. This guide provides some tips on how to become a cleaner boater and do your part to keep our waterways clean and healthy.

Use a fuel collar or fuel bib



Install a fuel/air separator



2

GAS AND OIL

Small drips and spills of gasoline, diesel, and other petroleum products add up and can have a serious effect on the marine environment, such as: death of fish, mammals, and birds; cancer, mutations, and/or birth defects; destruction of plant life; and reduction of food supply for marine organisms.

Fuel cautiously

- Fuel your boat slowly and carefully – attend the fuel nozzle at all times.
- Make sure the fuel nozzle connects to the fuel tank to prevent static discharge.
- Only fill the tank to 90% since fuel expands as it warms up.
- Use your hand to check for air escaping from the vent. When the tank is nearly full, you'll feel an increase in airflow. Also listen for a gurgling sound indicating the tank is nearly full.
- Fill portable gas tanks on shore – where spills are less likely to occur and easier to clean up.
- Outboards: close tank fuel vent when boat is not in use to save fuel from vapor loss.
- Built-in fuel tanks: install fuel/air separator in the air vent line from tank to prevent air vent spills.

BILGES

Bilges are also a potential source of pollution since they tend to collect engine oil, fuel, antifreeze, and transmission fluid. When an automatic bilge pump is activated, these fluids are pumped overboard. Absorbent bilge pads absorb petroleum products but not water. When soaked with oil, they can be disposed of properly.

Control oil in the bilge

- Place oil absorbent pads or bilge socks in the bilge to catch oil.
- Place an oil absorbent pad under the engine.
- Replace oil absorbent materials when heavily soiled or saturated, or at least once a year.
- Keep the engine well tuned: no leaking seals, gaskets, or hoses.
- Change oil filters often. Slip a plastic bag over the filter before removal to catch drips.
- Secure fuel hoses to prevent chafing and leaks.
- Never discharge or pump any bilge water that appears oily or has a sheen into or near the water- it is against the law.
- Use oil absorbents or water/oil separators before pumping the bilge.



Oil absorbent materials

- Trailer your boat to an area that provides containment before removing bilge or boat plugs.
- Do not use bilge cleaners - they simply spread out the oil and do not remove it from the water.

4

SEWAGE

Untreated sewage contains microorganisms that can cause human diseases such as gastroenteritis, hepatitis, typhoid, cholera, and dysentery. Therefore, waste from holding tanks or portable toilet should NEVER be dumped into the water. Even treated waste contains nutrients that can cause algae blooms which use up oxygen that fish and other marine life need to breathe.



Floating restroom

Handle sewage appropriately

- Most boats in Oregon have marine heads with Type III marine sanitation devices (holding tanks with no treatment) or carry portable toilets on board. Use pumpout facilities for Type III marine sanitary devices (MSDs) and empty portable toilets at dump stations or at home.
- If your boat has a holding tank with a Y-valve and through-hull fitting, keep them locked closed when inside coastal waters or on lakes or reservoirs.
- Use restrooms on shore whenever possible.
- Establish a regular maintenance schedule for your MSD based on manufacturer's recommendations.
- Avoid using additives like quaternary ammonium compounds (QAC), formaldehyde, or zinc sulphate in your holding tank. Use safer enzyme-based products to control odor and reduce solids.
- Consider installing a filtered air holding tank.
- Keep diapers, sanitary napkins, oils, solvents, and other harmful chemicals out of toilets.
- Dispose of your pet's waste properly.
- See pages 14-15 for pumpout and dump station locations. These services are free of charge at all public facilities.



Look for the International Pumpout Sign

Don't Dump Overboard!

- It is illegal to discharge ANY sewage (from Type I, II, or III MSDs) into lakes, reservoirs, or impoundments.
- It is illegal to discharge untreated sewage from holding tanks or portable toilets in any inland waterbody or in the ocean within three miles of the coast.



Pumpout

BOAT BOTTOM PAINTS

Antifoulant coatings on boat hulls are another toxic threat to marine life. These coatings contain compounds such as copper to kill marine organisms so that they don't grow on the underside of a boat. However, these coatings, especially soft coatings (a.k.a. abrasive, self-polishing, or sloughing), release toxic compounds into the water. Hard coatings also have antifouling properties, but limit the amount of toxic metals leached into the water.



Vessel bottom work

Maintain your hull wisely

- Consider alternatives to toxic "soft" bottom paints. Some good alternatives are silicon, polyurethane, Teflon, and other hard antifouling coatings. These alternatives rely on a slick surface to discourage the growth of marine organisms rather than killing them with toxins.
- Consider storing your boat out of the water to prevent fouling.
- Do hull work inside or under cover where rain can't wash dust, oil, or solvents into the water. Use a dust-less or vacuum sander, or a drop cloth to collect all paint chips, dust, and residue. Dispose in regular trash.

BOAT CLEANING

Many products used to clean boats contain toxic chemicals such as chlorine, phosphates, and ammonia. These products can enter the water during boat cleaning and can poison marine life. Degreasers dry the natural oils fish need for their gills to take in oxygen. The best way to keep toxic chemicals out of the water is to not use them at all. In many cases, "elbow grease" will go a long way.

Clean gently

- When possible, wash the boat on land where the washwater can be contained or filtered.
- Wash your boat frequently with a sponge and plain water.
- Use detergents sparingly.

7



RECYCLE

- Oil
- Antifreeze
- Lead batteries
- Glass
- Plastic
- Aluminum
- Corrugated cardboard
- Mixed paper
- Newspaper
- Solvents
- Steel
- Scrap metal
- Tin
- Tires
- Metal fuel filter canisters

6

VESSEL MAINTENANCE

General upkeep of boats generates household hazardous wastes such as solvent paint waste, used antifreeze, used oil, old gasoline, used batteries, mercury containing bilge pump switches, and out-of-date flares. These wastes pose a threat to the environment if they are disposed of improperly.

Use less-toxic alternatives

- When possible, use paints that are water-based and not solvent based.
- Buy bilge pump switches that do not contain mercury. Check with your marina regarding disposal of mercury-containing bilge switches.
- Use less-toxic propylene glycol antifreeze (usually pink in color).
- Use premium or synthetic two-cycle engine oil.

Re-use and recycle whenever possible

- Share any leftover chemicals, paint, or varnish.
- Recycle used motor oil, antifreeze, and other engine fluids. Prior to recycling, store in separate closed containers to prevent escape, mixing, or fire hazard. Oil mixed with other substances is not recyclable.
- Encourage your marina to offer oil recycling.
- Trade in a used battery for a possible credit toward a replacement battery.

Manage and dispose of waste properly

- Do not dump oil, antifreeze, or other liquid wastes into the water or trash.
- Bring items to a local hazardous waste collection day - visit earth911.com for information.
- Keep out-of-date flares as "backups" on the boat along with the number of required in-date flares. If they have been damaged by water, bring them to a local fire department or a household hazardous waste collection program.



Excess nutrients (nitrogen and phosphorus) contribute to toxic algal blooms which can be harmful to people and deadly to wildlife and pets. While most nutrient pollution comes from agricultural runoff and domestic sewage, boaters can help by using phosphate-free soaps and detergents on the boat and at home.

- Avoid cleaners with bleach, ammonia, lye, or petroleum products.
- Use phosphate-free, biodegradable and non-toxic cleaners, such as those in the table. Though much less harmful, these cleaners can still harm marine life and should be used only on land.
- If your boat has a "hard" paint on it, wash over grass or soil with an environmentally friendly detergent.
- If your boat has a "soft" paint coat, do not clean the boat bottom while in the water – this creates a discharge of toxic paint into the water.
- Wait 90 days to clean a newly painted hull, as it will release more toxins when new.
- Wax your boat – a good coat of wax prevents surface dirt from becoming ingrained.
- Clean wood with a mild soap powder and a nylon brush – not harsh chemical cleaners.
- Ask your ship's store to stock common alternative products like those listed in the table and biodegradable spray-type cleaners that do not require rinsing.

GRAY WATER

On some boats, water from sinks, washers, and showers is discharged directly without treatment. This "gray water" is often rich in nutrients that pollute the water and encourage the growth of unwanted algae.



Fish can be killed by the toxins produced by *Microcystis* algae

- Use shore-side facilities for laundry, showers and dish washing whenever possible.
- Limit the amount of water you use in sinks and showers onboard your boat.
- Use phosphate-free, biodegradable soaps.
- Collect and properly dispose of gray water and refrain from discharging it overboard. It is prohibited to discharge gray water while moored.

8

ALTERNATIVES TO TOXIC PRODUCTS

TOXIC PRODUCT	ALTERNATIVE
Aluminum cleaner	2 Tablespoons cream of tartar in 1 quart hot water.
Bleach	Borax or hydrogen peroxide.
Brass cleaner	Worcestershire sauce. Or paste with equal parts of salt, vinegar, + water.
Chrome cleaner/polish	Apple cider vinegar to clean; baby oil to polish.
Copper cleaner	Lemon juice + water. Or paste of lemon juice, salt, + flour.
Fiberglass stain remover	Baking soda paste.
Floor cleaner	One cup white vinegar in 2 gallons water.
General cleaner	Baking soda + vinegar. Or lemon juice + borax paste.
Head cleaner	Put in baking soda and use a brush.
Mildew remover	Paste using equal parts of lemon juice + salt, or white vinegar + salt.
Scouring powders	Baking soda or salt. Or rub area with half of a lemon dipped in borax, then rinse.
Stainless steel cleaner	Baking soda or mineral oil for polishing, vinegar to remove spots.
Varnish cleaner	Wipe with ½ cup vinegar + ½ cup water solution.
Window cleaner	One cup vinegar in 1 quart warm water, rinse and squeeze.

CONFUSED ABOUT ECO-LABELS?

Many products put forth claims that they are “environmentally friendly,” or “safe for the environment.” Unfortunately, there are no consistent standards for many of these types of general claims, and many of them are not verified. The federal government is working on guidelines for manufacturers to ensure that their environmental marketing claims don’t mislead consumers, but in the meantime there are things you can look for so that you don’t waste your money.

- Look for specific, verifiable claims that state why a product is environmentally preferable, such as “made with 30% post-consumer recycled materials” or “made with biodegradable ingredients.”
- Look for claims that address the most important aspects of the product (e.g. don’t be fooled by a toxic cleaner packaged in a “100% recycled” box).
- Look for legitimate, third-party certification labels such as Green Seal™, EcoLogo™, or Safer Choice (EPA).

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Dispose of fish waste properly

- Do not throw fish waste, unwanted bait, or bait packaging into marina waters - it is unlawful to dispose of these items in Oregon waters other than where the fish was caught.
- If available, use fish cleaning stations.
- Recycle fish parts by composting with peat moss or burying in the garden as fertilizer. Or freeze fish waste and reuse as chum or bait.
- Discard fish waste over deep water or in the trash.

AQUATIC INVASIVE SPECIES

Exotic plants and animals can hitch a ride attached to your boat and trailer or be present in water taken in by your boat. Hitching from one waterbody to another, these aquatic invasive species (AIS) spread quickly and can become established in another waterbody. They can harm water quality and fish and wildlife habitat by displacing native species and by blocking light needed by underwater plants. Once introduced, control of aquatic invasive species is very expensive and extermination is extremely difficult.

Stop the Spread of AIS!

Clean...

all aquatic plants, animals and mud from your boat, motor, and trailer and discard in the trash. Rinse, scrub, or pressure wash, as appropriate, away from storm drains, ditches, or waterways. Lawns, gravel pads, or self-serve car washes are best.

Drain...

all standing water from your livewell, bilge, and internal compartments.

Dry...

your boat between uses if possible. Leave compartments open and sponge out standing water. Find a place that will allow the anchor line to dry.



Pressure washing boat after use

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GARBAGE

Trash – plastic bags, foam containers, bottles, cans, discarded nets, fishing line, and other refuse – can injure or kill aquatic life and birds by trapping or suffocating them. Along with being unsightly, trash can also foul props, clog water intake fittings, and damage fishing nets.

Contain trash: nothing overboard!

- Bring a container aboard to collect your garbage and keep it from blowing overboard.
- Don’t toss any garbage or cigarettes overboard; cigarette filters are plastic and deadly to birds and fish.
- If trash blows overboard, retrieve it – consider it “crew-overboard” practice.
- Recycle cans, glass, plastic, and newspapers.
- Bring used fishing line to recycling bins at your marina or tackle shop.
- Encourage your marina to provide well marked trash cans and recycling bins.
- Adopt-a-River or participate in other SOLV riverside and beach cleanups. Visit www.SOLV.org for information.



Marine debris on beach



Crab entangled in derelict fishing gear



Boat propeller entangled in monofilament fishing line

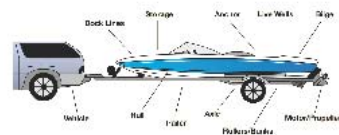
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FISH CLEANING

In small quantities, fish waste is scavenged by crabs and other marine animals. However, in an enclosed marina basin decomposition of excessive fish waste can produce foul odors and harm water quality through increased nutrient and bacteria levels and decreased dissolved oxygen. This can cause fish kills as well as an unsightly mess.



Fish cleaning station



Inspect these points and remove any plants or animals you find before leaving a waterbody.

Never launch a dirty boat

- It is illegal to launch a boat with aquatic species on the hull, motor, or trailer.
- Even if launching in the same water you came from, do your best to remove visible aquatic species and mud from your equipment prior to launching.
- Engine flushing in fresh water after being in salt water is highly discouraged because of the potential for transporting invasive species. Consider going to a car wash or using hose attachments to flush your engine.

Report sightings of AIS

- Zebra and Quagga mussels are extremely invasive in freshwater systems.
- These mussels are established in Lake Mead and southern California, but they have not yet been detected in Oregon.
- To report aquatic invasive species, call 1-866-INVADER immediately.



These species are easily transported by boats; that's why boaters need to take a few extra minutes to inspect, clean, drain and dry boats and related equipment.



Watermilfoil



Hydrilla



New Zealand mud snails



Zebra/Quagga mussels

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EMERGENCY NUMBERS

ALL EMERGENCIES 911
(Indicate if water related; know your location)

Boating problems (obstructions, accidents, etc.)

County Sheriff Offices

Baker	..... (541) 523-6415
Benton	..... (541) 766-6858
Clackamas	..... (503) 655-8650
Clatsop	..... (503) 325-8635
Columbia	..... (503) 366-4611
Cook	..... (541) 396-7827
Crook	..... (541) 447-6398
Curry	..... (541) 247-5200
Deschutes	..... (541) 388-6503
Douglas	..... (541) 440-4447
Hood River	..... (541) 386-2098
Jackson	..... (541) 864-8844
Jefferson	..... (541) 475-6520
Josephine	..... (541) 474-5215
Klamath	..... (541) 883-5130
Lane	..... (541) 682-6446
Lincoln	..... (541) 265-4277
Linn	..... (541) 867-3950
Malheur	..... (541) 473-5125
Martin	..... (503) 388-5032
Morrow	..... (541) 676-5317
Multnomah	..... (503) 988-6788
Polk	..... (503) 423-9251
Sherman	..... (541) 565-3622
Tillamook	..... (503) 815-3326
Umatilla	..... (541) 966-3651
Union	..... (541) 963-1017
Wallowa	..... (541) 426-3131
Wasco	..... (541) 506-2580
Washington	..... (503) 896-2700
Yamhill	..... (503) 494-7506

Boating safety

Coast Guard Safety Hotline 1-800-368-5647

U.S. COAST GUARD

Group Astoria	..... (503) 861-6240
Group North Bend	..... (541) 756-2920
Group Portland	..... (503) 240-9365

Station Cape Disappointment

Ilwaco (503) 642-2382

Station Clatsop - River/Labor (541) 469-3885

Station Coos Bay - Charleston (541) 888-3267

Station Siuslaw River - Florence (541) 897-3631

Station Tillamook Bay - Garibaldi (503) 322-3531

Station Umpqua River -
Winchester Bay (541) 271-2138
Station Yaquina Bay - Newport (541) 265-5381

OREGON STATE POLICE

Headquarters - Salem	..... (503) 378-3720
Dispatch	..... (503) 375-3555
NW Region HQ - Salem	..... (503) 378-3387
SW Region HQ - Central Point	..... (541) 776-6236
Dispatch	..... (541) 776-6111
East Region HQ - Baker City	..... (541) 523-5867

Service for Lake, Grant, Wheeler, and Gilliam Counties available through:

Bend Office (541) 388-6273

Service for Wasco County available through:

The Dalles Office (541) 296-9646

Emergency and pollution spill reporting

Oregon Emergency 1-800-OILS-911

Response System (OERS) or 1-800-452-4311

and

National Response Center 1-800-424-8802

Poaching

Turn In Poachers Program 1-800-452-7888

Stranded marine mammal

Marine Mammal Stranding Network (541) 270-6830

Suspicious activity

America's Waterway Watch 1-877-24-WATCH

CONTACTS:

Adopt-A-River

Oregon Adopt-A-River 1-800-333-SOLV

Aquatic Invasive Species Listing

1-866-INVADE or

Oregon Dept of Fish and Wildlife (503) 947-6308

Oregon Dept of Agriculture (503) 988-4621

Boating publications, registration, safety classes, and information

Oregon State Marine Board (503) 378-8587

or www.boatorregon.com

Environmental information

Dept of Environmental Quality (503) 229-5696

Fish and wildlife

Oregon Dept of Fish and Wildlife 1-800-729-ODFW

Underwater land ownership information

Dept of State Lands

Salem (503) 986-5200

Bend (541) 388-6112

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BOAT WASTE COLLECTION FACILITIES



There are several brands of pumpout and dump stations used in Oregon. The equipment ranges from single pumpout and/or dump station to combination units. Instructions are printed on each pumpout at each facility. They are fast, clean and easy to use. If the units are not operational, in disrepair or not functioning properly, please contact the facility operator immediately.

PUMP-OUT AND DUMP STATIONS

Waterbody	River Mile	Facility	Phone Number
Coastal Region			
Chasco River	0.3	Brookings Sport Basin	541-469-2218
Chasco River	0.3	Brookings Commercial Basin	541-469-2218
Coquille River	0.8	Bandon Sport Basin	541-347-3206
Coos Bay	---	City Dock	541-369-8918
South Slough	---	Charleston Marina Outer Basin	541-888-2548
South Slough	---	Charleston Marina Inner Basin	541-888-2548
Depoe Bay	---	Depoe Bay Fuel Dock	541-265-1718
Yaquina Bay	---	Embarcadero Marina	541-265-8521
Tillamook Bay	---	Port of Garibaldi	503-322-3292
Rogue River	0.3	Port of Gold Beach	503-247-6269
Yaquina Bay	---	Port of Newport Marina & RV Park	541-265-7758
Winchester Bay	---	Salmon Harbor Marina Fuel Dock	541-271-3407
Stuzlaw River	5	Port of Stuzlaw Public Boat Launches	541-997-3426

Columbia River System

Skippanon River	1.7	Warrenton Marina	503-861-2233
Columbia River	13.5	West Mooring Basin	503-325-8279
Columbia River	13.5	East Mooring Basin	503-325-8279
Columbia River	16.1	Pier 39	503-325-2502
Columbia River	67.7	Rainier City Marina	503-556-7301
Columbia River	86	Courthouse Docks Tie-up	503-397-5520
Columbia River	106.5	Jantzen Bay Marina East	503-283-4942
Columbia River	106.5	Jantzen Bay Marina West	503-283-4942
Columbia River	107	Hayden Bay Moorage "F" Dock	503-283-2444
Columbia River	107	Hayden Bay Moorage West Dock	503-283-2444
Columbia River	107.7	Tomahawk Bay Marina East Dock	503-283-2444
Columbia River	107.7	Tomahawk Bay Marina West Dock	503-283-2444
Columbia River	108.3	Babcock's Marina	503-288-6381
Columbia River	108.5	Mccaddy's Marina Drive Marina	503-288-7879
Columbia River	108.7	Donnaday's Marina	503-288-6169
Columbia River	109.4	M. James Gleason Ramp	503-797-1844
Columbia River	118.5	Chinook Landing	503-797-1700
Columbia River	149.2	Cascade Locks Marina	541-374-8620
Columbia River	169.2	Hood River Port Marina	541-386-1645
Columbia River	189.8	Port Of The Dalles Marina	541-298-4148
Columbia River	241.5	Arlington Marina	541-454-2559
Columbia River	269.5	Boardman Marina	541-481-7217
Columbia River	282	Irving Marina	541-922-3211

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Waterbody	River Mile	Facility	Phone Number
Columbia River	290.2	Umatilla Marina	541-922-3226
Columbia River	298.5	Mcnary Yacht Club	541-922-2268
Scappoose Bay	---	Scappoose Bay Marina	503-397-2888

Willamette River / Multnomah Channel

Willamette River	13.3	Riverplace Moorage	503-241-8283
Multnomah Channel	13.5	McCuddy's Landing (Browns Landing)	503-289-7879
Multnomah Channel	14.5	Rocky Pointe Marina #1	503-543-7003
Multnomah Channel	14.5	Rocky Pointe Marina #2	503-543-7003
Willamette River	25.9	Jon Storm Park	503-657-0819
Willamette River	39	Boones Ferry Boat Ramp	503-557-6349
Upland of Willamette River	---	Eugene/Springfield Treatment Center	541-736-3695

Interior Region

Detroit Lake	---	Kane's Hidesaway Marina	503-854-3362
Detroit Lake	---	Detroit Lake Marina	503-854-3432
Fern Ridge Lake	---	Richardson Park Marina	541-682-2000
Green Peltor Reservoir	---	Thistle Creek Public Boat Launch	541-967-3917
Green Peltor Reservoir	---	Whitcomb-Creek Public Boat Launch	541-967-3917
Henry Hagg Lake	---	Henry Hagg Lake "M" Launch Ramp	503-648-8715
Henry Hagg Lake	---	Henry Hagg Lake "C" Launch Ramp	503-648-8715
Lake Billy Chinook	---	Cove Palisades Marina (Crooked River Arm)	800-551-6949
Klamath Lake	---	Pelican Marina	541-883-9834
Prineville Reservoir	---	Jasper Point State Park	800-551-6949
Rogue River	---	Foster Bar	541-247-3600
Deschutes River	---	Heritage Landing State Park	800-551-6949

FLOATING RESTROOMS

Detroit Lake	---	Detroit Lake	503-854-3366
Detroit Lake	---	Detroit Lake (Pelly Island)	503-854-3366
Detroit Lake	---	Detroit Lake (Browns Arm)	503-854-3366
Howard Prairie Reservoir	---	Howard Prairie Reservoir	541-776-7001
Silvacoos Lake	---	Silvacoos Lake	541-682-2000
N. Tormille Lake	---	N. Tormille Lake (Road's End)	541-396-3121
Tormille Lake	---	Tormille Lake (Willow Point)	541-396-3121
Tillamook Bay	---	Tillamook Bay (Cub Harbor)	503-322-3292
Tillamook Bay	---	Tillamook Bay (Ghost Hole)	503-322-3292
Klamath Lake	---	Klamath Lake (Bare Island)	541-883-4698
Lost Creek Reservoir	---	Lost Creek Reservoir	800-551-6949
Fern Ridge Reservoir	---	Fern Ridge Reservoir	541-682-2000
Green Peltor Reservoir	---	Green Peltor Reservoir (Quartzville)	541-967-3917
Green Peltor Reservoir	---	Green Peltor Reservoir (Bumbaugh)	541-967-3918
Lake Billy Chinook	---	Lake Billy Chinook (Cove Palisades)	800-551-6949
Lake Billy Chinook	---	Lake Billy Chinook (Crooked River Arm)	800-551-6949
Lake Billy Chinook	---	Lake Billy Chinook (Deschutes River Arm)	800-551-6950
Lake Billy Chinook	---	Lake Billy Chinook (Melotkus River Arm)	800-551-6951
Prineville Reservoir	---	Prineville Reservoir	800-551-6949
Owyhee Reservoir	---	Owyhee Reservoir	800-551-6949
Brownlee Reservoir	---	Brownlee Reservoir	541-893-6147
Columbia River	117	Government Island	800-551-6949
Ochoco Reservoir	---	Ochoco Reservoir	541-447-1209

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Look for the Clean Marina Flag



Support Oregon
Clean Marinas

The Oregon Clean Marina program provides the opportunity for marinas, boatyards, and floating home moorages to receive recognition for helping to establish and promote a cleaner marine environment in Oregon. If a marina facility is in compliance with environmental regulations and uses a high percentage of environmentally sensitive practices, it can be designated as an Oregon Clean Marina. Such certified marinas are authorized to fly the Clean Marina flag and use the logo in their advertising. The flag is a signal to boaters that a marina cares about the cleanliness of our waterways.

www.boatorregon.com/OSMB/Clean/index.shtml



APPENDIX B: OREGON COMMUNITY RIGHT TO KNOW

Program Overview

In 1985, the Oregon Legislature passed the Oregon Community Right to Know (CR2K) and Protection Act. The purpose of this law is to provide first responders and the public with information about hazardous substances in their response areas and neighborhoods. The law directs the Office of State Fire Marshal (OSFM) to survey business and government facilities for information about the presence of hazardous substances and to collect information about incidents involving hazardous substances. The law further directs the OSFM to provide planning and training assistance to local jurisdictions on hazardous substance emergency response and preparedness.

In 1986, Congress passed the Superfund Amendment and Reauthorization Act (SARA). Title III of this legislation is the Emergency Planning and Community Right to Know Act (EPCRA) which is overseen by the Environmental Protection Agency (EPA). Facilities that provide all information required by Oregon CR2K reporting requirements are considered by EPA as complying with several sections of EPCRA, including notification to the State Emergency Response Commission (SERC), Local Emergency Planning Committee (LEPC), and local fire departments.

Once collected, this information is provided to emergency responders and emergency planners to assist them with hazardous materials pre-emergency planning and response. The information is also available to the general public in order to aid in familiarity with the hazardous materials in their communities. This information can be accessed via the Oregon Office of State Fire Marshal website (search for community Right to Know).

Applicable Statutes and Rules

- Oregon Revised Statutes (ORS) 453.307 to 453.505 (Revised 2014)
- Oregon Administrative Rules (OAR) Chapter 837, Division 85 (Revised 5/15/2014)
- OAR Chapter 837, Division 90 (Revised 5/15/2014)

Hazardous Substance Information Survey

The Hazardous Substance Information Survey (HSIS) is the form used by businesses and government entities in Oregon to comply with state and federal Community Right to Know requirements for the reporting of hazardous substances. Reportable quantities of hazardous substances that are used, stored, manufactured or disposed of at business and government sites in Oregon are required to be reported annually.

Facilities that possess a reportable quantity of a hazardous substance and have not received a survey are required to contact the Oregon Office of State Fire Marshal (OSFM) and request a survey. If you are not receiving a survey and believe that you should be, call the Hazardous Substance Information Hotline at 503.378.6835 (local), or 800.454.6125 (toll free). You can also download an “HSIS Request Form For Unreported Sites” via the website and email the completed form to the OSFM at oregon.hazmatsurvey@state.or.us.

The OSFM mails an annual Hazardous Substance Information Survey to facilities that have previously reported when it is time for them to update their information. The survey comes partially pre-printed with the most recent information reported to the OSFM. Facility operators review, update, and complete the survey. To comply with Oregon reporting requirements, facilities must submit their chemical inventory information using the HSIS form supplied by the OSFM.

For more detail on the Hazardous Substance Information Survey, please see the complete Survey Instruction Booklet on the website: www.oregon.gov/osp/SFM/docs/CR2K/SurveyInstrBook.pdf. If you need additional assistance, please call the Hazardous Substance Information Hotline at 503.378.6835 (local) or 800.454.6125 (toll free).

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Extremely Hazardous Substances (EHS)

These substances are regulated by the Environmental Protection Agency (EPA) under the Federal Emergency Planning and Community Right to Know Act (EPCRA) Section 302. Facilities that possess a Threshold Planning Quantity (TPQ) of an EHS are subject to federal emergency planning requirements. TPQ's are calculated based on the aggregate amount of an EHS substance at the facility at one time. Facilities in Oregon are required to identify whether or not they are subject to these requirements on the Oregon Hazardous Substance Information Survey (HSIS).

For more information about EHS's:

- EPA RCRA/Superfund/EPCRA Hotline: 800.424.9346 (M – F, 10 a.m. – 3 p.m. ET)
- EPA's EPCRA website: www.epa.gov/aboutepa
- EHS Chemical List: www.epa.gov/emergencies/tools.htm#lol

For information about reporting EHS substances in Oregon:

- Survey Instruction Book (pg 18): www.oregon.gov/osp/SFM/docs/CR2K/SurveyInstrBook.pdf

Clean Air Act (CAA) Section 112r

Section 112r of the Clean Air Act requires facilities that produce, handle, process, distribute, or store certain chemicals to develop a Risk Management Program, prepare a Risk Management Plan (RMP), and submit the RMP to the EPA. Facilities are subject to this requirement if they possess a Threshold Quantity (TQ) of a substance found on the 112r list. Facilities in Oregon are required to identify whether or not they are subject to these requirements on the Oregon Hazardous Substance Information Survey (HSIS).

For More Information about 112r substances:

- EPA RCRA/Superfund/EPCRA Hotline: 800.424.9346 (M – F, 10 a.m. – 3 p.m. ET)
- EPA's EPCRA website: www.epa.gov/emergencies/content/rmp/index.htm
- CAA 112r Chemical List: www.epa.gov/emergencies/tools.htm#lol

For more information about reporting 112r substances in Oregon:

- Survey Instruction Book (pg 18): www.oregon.gov/osp/SFM/docs/CR2K/SurveyInstrBook.pdf.

Hazardous Substance Release Reporting



Fact Sheet

How to Determine if Your Waste is Hazardous

Background

Federal and state of Oregon hazardous waste regulations ensure that the generation, transport, treatment, storage and disposal of hazardous wastes are conducted in a way that protects human health and the environment.

This fact sheet will help you properly identify all wastes that you generate, treat or send off site for recycling, energy recovery or disposal as hazardous waste. For a complete description of waste determination requirements, consult [Oregon Administrative Rule 340-101](#) and the [Code of Federal Regulations Title 40, Part 261](#).

As a waste generator, you must:

- Determine if your waste is hazardous, then
- Ensure your waste is managed properly

Waste management companies may perform or offer to help you, the generator, with your hazardous waste determination, but generators are ultimately responsible for any mismanagement of their hazardous waste. Failure to do an adequate hazardous waste determination is the top violation cited by DEQ hazardous waste inspectors and can lead to mismanagement of your waste, often leading to environmental and human health damage.

Three steps in performing a hazardous waste determination

You need to know:

- Is your material a solid waste?
- If it is a solid waste, is it exempted or excluded from management as a hazardous waste?
- Is the waste a listed, characteristic or state-only hazardous waste?

Step 1: Determine if the material is solid waste

The term “solid waste” is somewhat misleading. The word “solid” does not refer to the physical state of the waste. Solid waste can be a solid, liquid, or contained gas. Under the federal Resource Conservation and Recovery Act, a solid waste is any material that you’ll no longer use for its originally intended purpose and will be discarded, or a material that must be

reclaimed or processed before reuse. For any material to be a hazardous waste, it must first be a solid waste.

Step 2: Determine if the solid waste is exempted or excluded from hazardous waste regulation

Not all solid wastes are hazardous wastes. Certain wastes, such as household wastes or used oil destined for recycling, are exempted or excluded from the hazardous waste definition and regulation.

Don’t proceed to Step 3, which is evaluating the actual chemical or physical hazard a waste poses, until you’ve determined the waste is not somehow excluded from hazardous waste regulation. Wastes excluded or exempted are listed in CFR Title 40, Part 261.4 and 261.6-9, and OAR 340-101-0004.

Note: Even if you’ve determined your waste is excluded from hazardous waste regulation, you should re-evaluate your status periodically to verify that conditions affecting the composition of your waste haven’t changed. You also need to document that exemption or exclusion in your files. (See CFR Title 40, Part 268.7 (a)(7) for these requirements.)

Step 3: Determine if the waste is hazardous

This step involves evaluating the waste against the regulatory definition of hazardous waste.

There are three ways your waste can be considered hazardous:

1. If you find your waste isn’t exempted or excluded from hazardous waste regulation, you must determine if the waste meets one or more of the hazardous waste listing descriptions in the Code of Federal Regulations (CFR Title 40, Part 261, Subpart D):

F-listed wastes: 40 CFR 261.31 lists hazardous wastes from non-specific sources (termed “F-listed wastes” after the F prefix in the hazardous waste code). An example is F002 wastes (spent halogenated solvents, such as perchloroethylene, trichloroethylene, methylene chloride).



State of Oregon
Department of
Environmental
Quality

Land Quality Division Hazardous Waste Program

811 SW 6th Avenue
Portland, OR 97204
Phone: (503) 229-5696
(800) 452-4011
Fax: (503) 229-6977
www.oregon.gov/DEQ

Last Updated: 5/2012
By Dave Lebrun
DEQ 12-LQ-027

K-listed wastes: 40 CFR 261.32 lists hazardous wastes from specific sources, such as K062 waste spent pickle liquor generated by steel finishing operations in the iron and steel industries.

P- and U-listed wastes: 40 CFR 261.33 lists discarded or unused commercial chemical products, off-specification products, container residues and spill residues of such products. Examples of these wastes include the unused commercial chemical products of mercury, potassium cyanide, creosote and phenol.

2. If you determine the waste is not listed hazardous waste, you must conduct waste sampling and analysis. Or, you can apply generator knowledge of the process used to produce the waste to determine if it exhibits any of the four characteristics of a hazardous waste:

Ignitability: A waste is ignitable if it:

- Is a liquid and its flash point is less than 140 degrees F (60 degrees C), or
- Is an oxidizer or ignitable compressed gas as defined by U.S. Department of Transportation regulations in 49 CFR Part 173, or
- Has the potential to ignite under standard temperature and pressure, and burn persistently and vigorously once ignited

Wastes exhibiting ignitability are classified as U.S. Environmental Protection Agency Hazardous Waste Code D001. Examples include spent solvents, such as mineral spirits.

Corrosiveness: A waste is corrosive if it is:

- Aqueous and its pH is less than or equal to 2.0 or greater or equal to 12.5, or
- A liquid that corrodes steel at a rate of more than a quarter-inch per year

Wastes exhibiting corrosiveness are classified as EPA Hazardous Waste Code D002. Examples include spent sulfuric acid and concentrated waste sodium hydroxide solutions.

Reactivity: A waste exhibits reactivity if it:

- Is normally unstable and readily undergoes a violent change without detonating
- Reacts violently with water
- Forms potentially explosive mixtures with water

- Produces toxic fumes, gases or vapors when mixed with water in a quantity sufficient to present a danger to the environment
- Is a cyanide- or sulfide-bearing waste that when exposed to a pH between 2.0 and 12.5 produces toxic fumes sufficient to present a danger to the environment
- Is capable of detonation or explosive reaction if it's subjected to a strong initiating source or heated under confinement
- Is readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure, or
- Is a forbidden explosive or a Class A or Class B explosive as defined in 49 CFR, Part 173

Wastes exhibiting reactivity are classified as EPA Hazardous Waste Code D003. Examples of reactive wastes include pressurized aerosol cans and certain cyanide- or sulfide-bearing wastes.

Toxicity: The toxicity of a characteristic waste is determined by having a laboratory analyze an extract of the waste using the Toxicity Characteristic Leaching Procedure. Results of the analysis are compared to the regulatory limits of 40 constituents, primarily heavy metals, organic compounds and pesticides/herbicides. If the extract from the leaching procedure contains levels of any of the 40 constituents at or above regulatory limits, the waste is considered hazardous.

Wastes exhibiting toxicity are classified as EPA Hazardous Waste Codes D004 through 043. Examples of toxic wastes include contaminated soils and sludge, waste solvents, paint residues, wastes from chemical manufacturing and pesticide/herbicide wastes.

State-only hazardous wastes

If a solid waste is not excluded/exempted and is not a federal hazardous waste as listed above, it may be a state of Oregon-only hazardous waste. Oregon Administrative Rule 340-101-0033 lists these wastes, which include pesticide residues and mixtures of wastes containing constituents of federal P (3 percent) and U (10 percent) listed wastes. For details, see Code of Federal Regulations Title 40, Parts 261.31 and 261.32.

Waste sampling and analysis

Sampling and analysis of the waste may be necessary to complete the determination when:

- You begin a new process or change an existing one

- You've not provided appropriate laboratory information to an off-site treatment, storage and disposal facility
- You're not able to determine with available information the chemical makeup of your waste stream
- An off-site hazardous waste facility has reason to believe the wastes you shipped were not identified accurately
- EPA amends RCRA waste identification/classification rules, or
- A facility receives your waste for the first time

Waste sampling and analysis is more accurate and defensible than other options such as using knowledge of process (explained below).

Procedures and equipment for obtaining and analyzing samples are in the EPA document "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (SW-846, third edition).

DEQ recommends you prepare a sampling and analysis plan before sample collection and testing. See chapters 1 and 9 of the above-listed EPA document for this information.

Note: In making your determination, be sure to include all applicable waste codes, whether it's a listed hazardous waste, characteristic hazardous waste or a combination of both.

Obtain a representative sample

A representative sample is a sample of a universe or whole that can be expected to exhibit the average properties of the universe or whole.

When conducting a sample analysis, you're required to take a representative sample from each waste stream to properly characterize a waste. See EPA document SW-846 (Chapter 9) for methods for statistical determination of a valid number of samples, recommended sampling methods, sampling strategies and applicable sampling equipment.

Generator knowledge of the process or material producing the waste

Another method you may use to determine your waste is *generator knowledge* of the waste. Generator knowledge can be used to meet all or part of the waste analysis requirements and can be broadly defined to include "process knowledge." Process knowledge may be information on the wastes obtained from existing published or documented waste analysis data or studies conducted on hazardous wastes generated

by processes similar to that which generated your waste.

For example, comparing the specific process that generated your waste to those processes described in the listings rather than conducting a chemical/physical analysis of the waste identifies listed wastes. Therefore, with many listed wastes, generator knowledge is appropriate because the chemical/physical makeup of the waste is generally well known and consistent from facility to facility.

Note: From a cost-saving standpoint, use of existing or historical records of analysis may seem preferable compared to conducting sampling and analysis. However, you must ensure that your information reflects current processes and materials being used and that no differences exist between the process in the documented data and your own.

If you use generator knowledge alone or in conjunction with sampling and analysis, you must maintain detailed documentation that clearly demonstrates the information is sufficient to identify the waste.

Documentation to support generator knowledge may include but is not limited to:

- Material safety data sheets or similar documents
- A thorough process description, including data on all raw materials used in the process
- Other forms of detailed documentation

Documenting both the generator knowledge and any analytical data is essential. You must keep information used to make the waste determination for at least three years after the waste is generated.

Note on material safety data sheets:

Manufacturers and suppliers are only required to list constituents that comprise 1 percent or more of the material addressed. This level of information may be inadequate to determine constituent levels on the wastes to be characterized. Therefore, a material safety data sheet should be viewed as a supporting document and not as the sole means of documenting generator knowledge.

Assessing your method/follow-up steps

Conducting sampling and analysis may not be as economical and convenient as using generator knowledge in making a waste determination, but it can have advantages. Because accurate waste determination is such a critical factor for

demonstrating compliance with hazardous waste regulations, misidentification can render your facility liable for enforcement actions regarding land disposal restrictions, annual reporting and other requirements. In addition, accurate waste analysis is critical for meeting requirements of other regulatory programs, such as effluent discharges under the federal Clean Water Act and transportation requirements administered by the U.S. Department of Transportation.

As follow-up steps, be sure you:

- Keep current with the latest changes in hazardous waste regulations that may affect your waste's classification
- Re-evaluate your wastes frequently using current analytical methods and/or process knowledge, particularly any time a new or revised federal or state rule affecting hazardous waste identifications comes into effect.

DEQ technical assistance

DEQ technical assistance is available through free on-site visits, free phone consultations and periodic hazardous waste trainings.

DEQ technical assistance can help you:

- Understand how hazardous waste regulations apply to your business
- Determine which wastes are hazardous
- Complete reporting forms
- Manage wastes more effectively and safely
- Reduce disposal costs
- Minimize the waste you produce
- Determine what areas need improvements

Visit DEQ's hazardous waste program website at: www.deq.state.or.us/lq/hw/ or contact the DEQ field office nearest you:

Bend office: 2146 NE Fourth, Suite 104, Bend, OR 97701, 541-388-6146

Eugene office: 1102 Lincoln St., Suite 210, Eugene OR 97401, 541-686-7838

Medford office: 221 Stewart Ave., Suite 201, Medford OR 97501, 541-776-6010

Pendleton office: 700 SE Emigrant, Suite 330, Pendleton OR 97801, 541-276-4063

Northwest Region Office: 2020 SW Fourth Ave., Suite 400, Portland, OR 97201, 503-229-5263

Salem office: 750 Front St. NE, Suite 120, Salem, OR 97310, 503-378-8240, ext. 253

How to Determine if Your Waste is Hazardous

Alternative formats

Alternative formats of this document (such as Braille or large type) can be made available. Contact DEQ's Office of Communications and Outreach, Portland, for more information at 503-229-5696, or call toll-free in Oregon at 1-800-452-4011, ext. 5696. Hearing-impaired persons may call 711.

Preferred Disposal Options for Potential Hazardous Waste Streams

WASTE	PREFERRED DISPOSAL OPTIONS If multiple options are listed, the first option (boldfaced) is the preferred method.
Aerosol Cans	<ul style="list-style-type: none"> • Aerosol cans should be punctured in a safety device: <ul style="list-style-type: none"> – Collect the residue; manage as potentially hazardous waste. – Punctured empty cans may be recycled under the scrap metal exemption (if your scrap recycler takes them). • Un-punctured cans are considered reactive waste and therefore should be disposed of as hazardous waste.
Antifreeze: Propylene glycol (usually pink) Ethylene glycol (usually green) <i>Contact your waste hauler to confirm that they will accept mixed antifreeze.</i>	<ul style="list-style-type: none"> • Recycle • Purchase an on-site recovery unit, such as a distillation, ion exchange, or filtration system. • Hire a waste hauler to collect and dispose.
Batteries - Lead <i>(encourage the use of maintenance free batteries)</i>	<ul style="list-style-type: none"> • Recycle. Store on an impervious surface, under cover. Protect from the rain. Check frequently for leakage. <ul style="list-style-type: none"> – Battery retailers and wholesalers are required to accept used batteries for recycling. • Automotive batteries are exempt if recycled. • Other batteries should be labeled as universal waste. • If not recycled, batteries containing acid and heavy metals are hazardous waste.
Containers: Paint cans Buckets Spent caulking tubes	<ul style="list-style-type: none"> • Cans may be put in trash can as long as: <ul style="list-style-type: none"> – All material that can be removed has been. (For example, in a 55-gallon drum, no more than 1 inch of residue remains on the bottom or inner liner.) – Containers that held compressed gas are at atmospheric pressure. – Containers that held acute hazardous waste have been triple rinsed with the appropriate (as listed on the container) solvent. Properly dispose of the solvent.
Flares – Expired Distress Signals	<ul style="list-style-type: none"> • Encourage boaters to keep onboard as extras. • Store in a well-marked, fire safe container. Use expired flares to demonstrate to boaters how they are used. Be sure to notify the Coast Guard and fire department ahead of time. • Encourage boaters to bring flares to a local fire department or household hazardous waste collection program. <p>If disposed of, the flares are hazardous waste.</p>

Gasoline - Stale	<ul style="list-style-type: none"> • Add stabilizer in the winter to prevent gasoline from becoming stale, or add octane booster in the spring to rejuvenate it. Use the fuel. • Mix with fresh fuel and use. • Transport as non-hazardous waste if picked by a fuel blender to be used as fuel. • Hire a hazardous waste hauler to collect and dispose of it.
Glue and Liquid Adhesives	<ul style="list-style-type: none"> • Catalyze and dispose of as solid waste.
Kerosene	<ul style="list-style-type: none"> • Filter and reuse for as long as possible, then recycle.
Light Bulbs: Fluorescent bulbs Mercury vapor lamps High-pressure sodium vapor lamps Low-pressure sodium vapor lamps Metal halide lamps	<ul style="list-style-type: none"> • Recycle if you have more than a few. • These are considered universal waste if recycled. Label as universal waste and insure that light tubes do not break. <p>If not recycled, these materials may be hazardous waste.</p>
Mineral Spirits	<ul style="list-style-type: none"> • Filter and reuse. (DO NOT add to used oil to be burned in space heaters.) • If reuse is not possible, then dispose of as hazardous waste
Oil – Non-terne Plated Filters <i>(used in heavy equipment and heavy-duty trucks)</i>	<ul style="list-style-type: none"> • Puncture and completely hot drain for at least 24 hours. Recycle the oil and the metal canister. • If you do not recycle the canister, double-bag it in plastic and place it in your regular trash.
Oil – Used Absorbent Material	<ul style="list-style-type: none"> • If oil and diesel is adequately absorbed, discard in trash. • If it is saturated with gasoline, allow it to air dry and reuse.
Used Bioremediating Bilge Booms	<ul style="list-style-type: none"> • Discard in regular trash as long as no liquid is dripping. Because the microbes need oxygen to function, do not seal in plastic.
Oil - Waste Oil: Engine oil Transmission fluid Hydraulic oil Gear oil #2 diesel Kerosene	<ul style="list-style-type: none"> • Recycle with a registered used oil transporter. • Use waste oil for space heating in approved used oil burner • Take small quantities to household hazardous waste/CEG collection events. • Contact your waste hauler to confirm that they will accept mixed oil.
Paint Brushes	<ul style="list-style-type: none"> • Allow to dry completely. Dispose in regular trash. • If paint contains heavy metals above regulatory levels, treat as hazardous waste.
Paints and Varnishes: Latex Water-based Oil-based	<p>Water-based:</p> <ul style="list-style-type: none"> • Allow to dry completely. Dispose of in regular trash. <p>Oil/Solvent Based:</p> <ul style="list-style-type: none"> • Dispose of as hazardous waste <p>Water Based and Oil Based:</p> <ul style="list-style-type: none"> • Use leftover material for other projects (i.e. as an undercoat for next boat) • Encourage tenants to swap unused material.

Pesticide Containers	<ul style="list-style-type: none"> Must be rinsed - use rinsate as makeup for next batch of pesticide if possible or spray out through sprayer. <p>Unrinsed containers are either hazardous waste or universal waste.</p>
Pesticides	<ul style="list-style-type: none"> Use as product. <p>If disposed at a collection event or at hazardous waste facility, unused pesticides may be a universal waste.</p>
Pressure Washing Residue	<ul style="list-style-type: none"> Dispose of as solid waste
Rags Soaked with Hazardous Substances	<ul style="list-style-type: none"> Use rag service and do not dispose of rags. Wring rags out over a waste solvent collection container and keep in covered container until ready for pickup by an industrial laundry. Dispose of the solvent that collects in the bottom of the container as hazardous waste. If rag service is not used, perform hazardous waste determination and dispose of as hazardous waste if appropriate.
Residue from Sanding, Scraping, and Blasting	<ul style="list-style-type: none"> Evaluate this waste and document whether the residue is hazardous (e.g. does not contain metals or toxins). If it is not hazardous, dispose of as solid waste. If it contains metals, it is a hazardous waste or special waste and must be disposed of properly. If it contains tributyl tin it is a pesticide and considered an Oregon State Hazardous Waste.
Resins – Epoxy and Polyester	<ul style="list-style-type: none"> Catalyze and dispose of as solid waste as long as it dries hard and has no free liquids and facility is a conditionally exempt generator (CEG) of hazardous waste.
Scrap Metal	<ul style="list-style-type: none"> Recycle
Sludge recovered from a Hazardous Solvent	<ul style="list-style-type: none"> Dispose of as hazardous waste
Sludge recovered from a Non-Hazardous Solvent	<ul style="list-style-type: none"> Let sludge dry in a well-ventilated area, wrap in newspaper, and dispose of in garbage.
Solvents: Paint and engine cleaners such as acetone and methylene chloride	<ul style="list-style-type: none"> Reuse as long as possible and then recycle. Consider a distillation unit for recycling solvents. Use less toxic alternatives to avoid disposal issues. Dispose of as hazardous waste. <p>DO NOT add to used oil to be burned in space heaters.</p>



Marine Sewage and Wastewater Disposal

DEQ regulates "Waters of the State"

If you own or operate a marine vessel on Oregon's waterways you are subject to regulation for disposal of sewage and/or other types of wastewater.

"Waters of the State" includes lakes, bays, ponds, impounding reservoirs, springs, rivers, streams, creeks, estuaries, marshes, inlets, canals, and the Pacific Ocean within the territorial limits of the State of Oregon.

The discharge of any sewage (treated or untreated) from marine toilets is prohibited on *all* freshwater lakes, impoundments and reservoirs that are not accessible by boat *from the ocean*. In Oregon, "sewage" means human excreta *as well as* kitchen, bath and laundry wastes (often considered *gray water*).

Boats Under Way

It is *never* legal to dump untreated sewage in Waters of the State. A *Marine Sanitation Device* (MSD) is a unit designed and authorized by the U.S. Coast Guard to receive toilet (head) waste from a boat under way. If your boat has a head and/or internal plumbing you must use a MSD to treat sewage.

A "port-a-potty" or other type of self-contained system that can be carried on and off the boat and does not discharge to the water may be used in lieu of a head with a MSD, but at no time can any amount of sewage be diverted to the water.

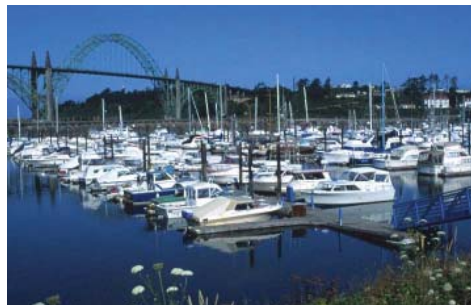
There are three types of MSDs:

- Type I and II MSDs treat sewage and can only discharge back to the water *while the vessel is underway* unless otherwise posted.
- A Type III MSD is a sewage collection unit, and its stored contents *cannot* be lawfully discharged to Waters of the State *at any time*.

MSDs are not allowed to discharge treated wastes from boat houses, floating homes or any boat when docked or tied up.

Boat Houses

A *boat house* is a floating structure used to shelter a boat. A boat house may have a fresh water connection, and may or may not have plumbing fixtures. If it has any plumbing fixtures, including but not limited to toilet,



To preserve Oregon's waterways, DEQ encourages the collection and proper disposal of all wastewater.

showers or sinks, it must be continuously connected to a DEQ approved sewage system that treats both sewage and *gray water*.

Floating Homes

A *floating home* is a structure used as a residence for extended periods. Floating homes are not capable of self-propulsion and must be towed to a location. A floating home has permanent plumbing fixtures and while moored must be continuously connected to a DEQ approved sewage system that treats both sewage and *gray water*.

Houseboats

A *houseboat* is a floating structure used as a stationary residence, or "cruising vessel" (mobile residence), or a combination. A houseboat has means of self-propulsion, and usually contains plumbing fixtures.

If the houseboat is in use as a stationary residence at a marina or moorage, it must be connected to a sewage disposal system that treats sewage including gray water.

"Liveaboards"

A "liveaboard" is a floating, self propelled boat or structure, generally manufactured or intended for use as a vessel. It has a fresh water inlet, internal plumbing, and some type of toilet facility.

When it is in use as a stationary residence at a new or expanded marina or moorage, its slip must have a permanent sewage connection hookup provided by the marina or moorage.



State of Oregon
Department of
Environmental
Quality

Water Quality Surface Water Management

811 SW 6th Avenue
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Phone: (503) 229-5657
(800) 452-4011
Fax: (503) 229-5408
Contact: Ranei Nomura
www.deq.state.or.us

Last Updated: 06/21/01
By: A.Cox

However, DEQ does not require a continuous connection to the hookup point.

Any discharge to Waters of the State from a liveaboard's Type III MSD is a violation of both state and federal law and the same discharge rules for Type I and II MSDs apply.

DEQ encourages liveaboard owners to collect and properly dispose of *gray water*.

Vessels

Recreational boats and commercial vessels that contain internal plumbing must adhere to State and Federal guidelines for proper disposal of sewage and other wastewaters.

Recreational Boat

A recreational boat is a floating, self-propelled boat or structure, with or without internal plumbing, used principally or entirely for transportation or recreation on the water. Boaters are also prohibited from discharging sewage wastes from a Type III MSD to Waters of the State and the same rules for Type I and II MSDs apply.

DEQ encourages recreational boat owners to collect and properly dispose of *gray water*.

Commercial Vessel

DEQ does not regulate Type I and II MSD discharges from commercial vessels such as tour vessels, restaurant ships, cruise ships, commercial ships, tug boats, etc., while they are operating or underway.

However, DEQ can and has regulated (prohibited) *gray water* discharges that have been deemed to be significant in volume or concentration. Oregon Revised Statute (ORS) 468B.050 requires a DEQ permit for discharge

of any waste to Waters of the State, but Type I and IIMSD discharges while underway are exempt from this law by the Clean Water Act. All other commercial vessel waste discharges including *gray water*, *bilge water*, *ballast water*, etc., are subject to Oregon law.

Placing a waste into Waters of the State is a violation of ORS 164.785 and is a Class A misdemeanor. Vessel *bilge water* cannot be lawfully discharged to Waters of the State, even if preceded by an oil-water separator. *Bilge water* contains many other pollutants and possible organisms other than petroleum products. These contaminants would not be affected by an oil-water separator.

For additional information

For more information about wastewater from floating structures and residences, contact your nearest DEQ office or visit our website:

www.deq.state.or.us

For questions about Marine Sanitation Devices, contact the United States Coast Guard:

www.uscg.mil

For questions about vessel wastewater discharges other than from MSDs contact DEQ or the Oregon State Marine Board:

www.boatoregon.com

Alternative Formats

Alternative formats of this document can be made available. Contact DEQ's Office of Communications & Outreach for more information (503) 229-5696.

Determining the Type of Sewage Collection/Disposal Required for Vessels

	Recreational Boats, Houseboats	Liveaboards (stationary)	Floating Homes, Boathouses, Combos	Commercial Vessels
Operating in federal navigable waters	MSD Type I, II, or III. Type I or II discharge allowed.	N/A	N/A	MSD Type I, II, or III. Type I or II discharge allowed.
Operating in sole state waters	MSD Type III. No overboard discharge allowed.	N/A	N/A	MSD Type III. No overboard discharge allowed.
Moored in state waters	MSD Type III. No overboard discharge allowed.	MDS Type III, upland restrooms, or dockside connection. No overboard discharge allowed.	Dockside sewage connection. No overboard discharge allowed.	MSD Type III or dockside sewage connection. No overboard discharge allowed.

NOTE: The overboard discharge of sewage from a Type III MSD to Federal Navigable Waters or to Waters of the State is ALWAYS PROHIBITED. Federal Navigable Waters are within 3 miles of the shore.



Oregon Ballast Water Management

Background

The discharge of ballast water, an incidental operation often necessary for vessel stability and safety, can be a pathway for transporting aquatic species into habitats outside their native range. This can result in the introduction and subsequent proliferation of invasive species, a form of biological pollution that poses significant economic and environmental risks.

In response to these threats posed by the shipping transport of aquatic non-indigenous species, the 2001 Oregon Legislature established the Oregon Ballast Water Program (Oregon Revised Statute 783.620-992). The Legislature subsequently modified the program several times since 2003 and DEQ oversees the program under Oregon Administrative Rule 340-143.

Program overview

- DEQ strives for coordination and consistency among international, federal and state ballast water regulations along the West Coast, so that regulations satisfactorily protect Oregon natural resources.
- Oregon's ballast water management legislation prohibits discharge of ballast water into state waters, *except under specified conditions* (see below). These regulations apply to all commercial vessels greater than 300 gross tons that are equipped with ballast water tanks.
- Oregon requires that vessels submit ballast water management reporting forms to DEQ at least 24 hours before entering state waters (see below).
- Ship owners must develop a vessel-specific Ballast Water Management Plan and maintain a shipboard ballast water handling log that may be reviewed as part of compliance verification inspections.
- Violations of the state ballast management regulations or failure to meet the reporting or recordkeeping requirements may be subject to fines up to \$25,000 per day of violation and/or civil penalties.
- A \$70 per-arrival fee assessed on regulated commercial vessels passing through Oregon waters, along with state General Fund support, contribute to a 50/50 cost share partnership in support of invasive species prevention efforts at DEQ.

Permitted management for ballast water discharge in Oregon

Under Oregon law, a vessel may discharge ballast waters into waters of the state if:

- The vessel conducts an *open ocean exchange* (at least 200 nautical miles from shore and in waters at least 2,000 meters deep); or
- The discharged ballast was solely sourced within '*common waters*' of the state, identified as the West Coast region of North America between 40° N and 50°N; or
- A *coastal exchange* of ballast water takes place (at least 50 nautical miles from shore and in waters at least 200 meters deep) for coastwise voyages with ballast water solely sourced from the Pacific Coast region south of 40° N or north of 50°N; or
- The discharged ballast underwent *treatment* in a manner authorized by Oregon Administrative Rule 340-143-0050; or
- Conditions are such that conducting an exchange would be unsafe or infeasible due to adverse weather, vessel design limitations or equipment failure. In these instances, the vessel must clearly declare a *safety exemption* on its ballast water reporting form and may be subject to operational delays and/or alternative management requirements following DEQ review.

Ballast water management reporting

In addition to federal requirements for submitting forms to the National Ballast Information Clearinghouse, vessels must also submit a copy of OMB Form Control No. 1625-0069 to DEQ at least 24 hours before arriving in state waters. Reports may be submitted as email attachments (.doc, .pdf, .xpdf, .xls, .tiff, or .jpg formats only) to ballast.water@deq.state.or.us or via fax (503-229-6954). In the event a vessel's actual ballast practices differ from those projected on the report, an amended report must be submitted to DEQ before the vessel's departure.

Program contacts:

Rian Hooff, project manager: 503-229-6865
hooff.rian@deq.state.or.us; or
Brian DeRoche, inspector: 503-229-6819
deroche.brian@deq.state.or.us



State of Oregon
Department of
Environmental
Quality

Land Quality Division
811 SW Sixth Ave.,
Portland, OR 97204

Program Webpage:
www.deq.state.or.us/lq/cw/emergency/ballast.htm

Alternative formats of this document can be made available. Contact DEQ's Office of Communications and Outreach, Portland, at (503) 229-5696 or toll-free in Oregon at 1-800-452-4011, ext. 5696.

Last updated: 1/12/15
By: Brian DeRoche
09-LQ-101



APPENDIX F: SAMPLE CONTRACT LANGUAGE

The following text is based on the Marine Trades Association of New Jersey's Best Management Pledge. The language may be incorporated into lease agreements. Contact the Oregon Clean Marina Program at (503) 378-2625 for an electronic copy.

FOR TENANTS:

I, _____, understand that _____
(name) (marina/boatyard)

subscribes to and enforces pollution prevention procedures. I further understand and agree that in return for the privilege of performing work on a boat at this facility such as hull cleaning, washing, sanding, polishing and/or painting; bottom cleaning, sanding, scraping, and/or painting; opening the hull for any reason, e.g., installation of equipment or engine work; engine and/or stern drive maintenance, repair, painting; etc., it is my responsibility to comply with, at a minimum, the following pollution prevention practices. I understand that this list may not be complete and pledge that I will exercise common sense and judgment in my actions to insure that my activities will not deposit pollution residues in surface waters or elsewhere where they may be conveyed by stormwater runoff into the surface waters. I understand that failure to adopt pollution prevention procedures may result in expulsion from the marina/boatyard (insert name of facility) and forfeiture of rental fees. I understand that I may elect to employ the facility to perform potential pollution producing activities on my behalf in which case the responsibility for compliance with the best management practices is entirely theirs.

Signed _____ Date _____

FOR SUB-CONTRACTORS ONLY:

I understand and agree to have my proposed work first authorized by this facility and that I will adhere, at a minimum, to the contents of this document. I further understand that because of the nature of my proposed work, the facility may require that I be supervised by an employee of said facility for which I will pay the normal existing labor rate.

Signed _____ Date _____

POLLUTION PREVENTION PRACTICES:

REPAIRS AND SERVICE (to hull and engine: painting, cleaning, washing, sanding, scraping, etc.)

1. Work on hulls and engines only in designated areas or use portable containment enclosures with approval of marina management.
2. Use tarps and vacuums to collect solid wastes produced by cleaning and repair operations, especially boat bottom cleaning, sanding, scraping, and painting.
3. Conduct all spray painting within an enclosed booth or under tarps.
4. Use non-toxic, biodegradable solvents.
5. Capture debris from boat washing and use only minimal amounts of phosphate-free, non-toxic, and biodegradable cleaners.
6. Use drip pans for any oil transfers, grease operations, and when servicing I/Os and outboard motors.
7. Obtain management approval before commencing any repair which will open the hull. Clean and pump bilges free of contaminated materials before and after repairs which open the hull.
8. Use spill proof oil change equipment.

VESSEL MAINTENANCE WASTE

1. Non-toxic residue of sanding, scraping, and grinding: bag and dispose of in regular trash.
2. Toxic and non-environmentally safe solvents and cleaning liquids: seek specific directions from marina management or dispose of with licensed agency.

FUEL OPERATIONS

1. Install fuel/air separator on fuel tank vent line(s) to prevent overflow of fuel through vent.
2. Keep oil absorbent pad(s) readily available to catch or contain minor spills and drips during fueling.

WASTE OIL AND FUEL

1. Recycle used oil and antifreeze.
2. Add a stabilizer to fuel tank in the fall or an octane booster to stale fuel in the spring. Use the fuel or bring it to a household hazardous waste collection site.
3. Absorbent materials soaked with oil or diesel: drain liquid and dispose of in used oil recycling container; double bag absorbent material in plastic and dispose in regular trash receptacle.
4. Absorbent materials soaked with gasoline (flammable): air dry and reuse.
5. Bioremediating absorbent products: dispose in regular trash as long as no liquid is dripping. Because the microbes need oxygen to function, do not seal in plastic.
6. Oil filters: drain and recycle the oil; recycle the filter or double bag and put in regular trash.

ONBOARD PRACTICES

1. Maintain oil absorbent pads in bilge. Inspect no less than annually.
2. Do not discharge bilge water if there is a sheen to it.
3. Use only low-toxic antifreeze (propylene glycol). Recycle used antifreeze (even low-toxic antifreeze will contain heavy metals once it has been used).

SEWAGE HANDLING

1. Never discharge raw sewage within Oregon waters.
2. If you have an installed toilet, you must have an approved Marine Sanitation Device (MSD).
3. Do not discharge Type I or Type II marine sanitation devices within the marina basin.
4. Use marina restroom facilities when at slip.
5. Do not empty port-a-pots overboard; use a marina dump facility. Do not empty port-a-pots in the restrooms.
6. Do not discharge holding tanks overboard; use a pumpout facility.
7. If you must use a holding tank additive, use an enzyme-based product. Avoid products that contain quaternary ammonium compounds (QACs), formaldehyde, formalin, phenal derivatives, alcohol bases, or chlorine bleach.
8. Liveaboards: place a dye tablet in holding tank after each pumpout out. The dye will make any illegal discharges clearly visible.

ORGANIC WASTE

1. Clean fish only in designated areas.
2. Grind, compost, or double bag fish scraps (depending on the services offered by your marina).
3. Walk pets in specified areas and dispose of their wastes, double-bagged, in the dumpster.

SOLID WASTE

1. Recycle plastic, glass, aluminum, newspaper, and used lead batteries (tailor this section to fit your facility's practices).
2. Place trash in covered trash receptacles; replace covers.



APPENDIX G: SAMPLE SIGNS FOR MARINAS

The following list provides example language for signs that could be put around the marina to help inform your customers about protecting the marine environment. This information is provided to give you ideas about what signs might be appropriate at your marina depending on your services, your clients, and your goals. Selecting the appropriate number and types of signs for your facility will help your customers keep your business a Clean Marina.

General Signs

- MARINA SANCTUARY — No Dumping!
- Recycle and Dispose of Waste Properly. Thank You!
- Do Your Part to Keep Our Waters Clean!
- Enjoyable Boating = Clean Water!
- A Clean Boating Environment Is Worth the Effort!
- YOU Can Do a Lot to Prevent WATER POLLUTION
- Prevent Pollution — Please Follow Required Practices
- Boating Is Good Clean Fun! Let's Keep It That Way
- This Marina Protects Water Quality and Marine Life

Oil Spill

- It is illegal to discharge oil or oily waste into water.
- Detergents worsen oil spills – don't use them; it's against the law!
- In the event of a spill, contact marina staff immediately
- Report all oil spills immediately: Call 1-800-OILS-911. (Ask OSMB for a "Spills Aren't Slick Sign.")
- Oil Spill Response Kit – name & number to contact at the marina in case of a spill.

Hull & Engine Maintenance

- Designated Boat Work Area
- Dustless Sanders Available for Rent
- Sanding and Painting in Designated Areas ONLY
- Dustless sanders are the ONLY way to go!
- Use tarps & pans to catch drips and chips
- Dripless Oil Change Services Available

Boat Cleaning

- Hull Cleaning Not Permitted at Marina Slips
- Please Use Environmentally-Friendly Soaps

Bilge Water

- Please Use Oil Absorbent Pads in Boat Bilges
- Oil contaminated bilge water removal services provided
- Prevent Oil Pollution — Keep Your Bilge Clean

Fueling

- No Self-Service Gas
- When Filling Up, Always Use the Spill Protection Tools Provided
- Never Leave the Pump When Filling Up
- Do Not Top Off Tank

Boat Sewage

- Pumpout Station (list hours open, instructions, fee, contact person)
- NO DISCHARGE ZONE! Pump-out Services Free!
- Use our restrooms while you are in port. Nutrients and pathogens in sewage impair water quality.

Shoreside Facilities and Pets

- Pet Walking Area
- Dog Owners — Please Use PET WALK AREA
- Pick Up After Your Pet

Solid Waste Management

- Waste Disposal Area
- Help Prevent Littering
- Smokers, please keep cigarette butts onboard!
- What must go out, MUST come back. Please be responsible about your garbage!

Hazardous Waste Management

- Recycling Center available for your use!
- Recycling Area — This marina recycles the following materials: *(list materials)*
- Recycle Antifreeze – *include detailed information about hauler requirements*
- Recycle Oil – *include detailed information about hauler requirements*
- *List items that may not be placed in dumpster (paint, oil, flares, antifreeze, solvents, etc.)*

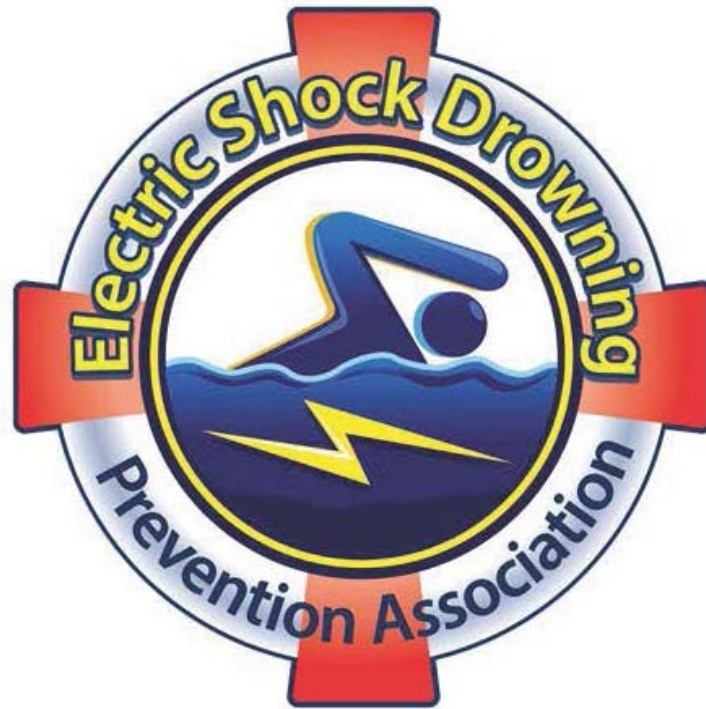
Fish Waste

- Fish Cleaning Station
- No Fish Scraps.
- Do not discard fish scraps in marina basin. Use our fish cleaning station; bag the scraps and dispose in dumpster or at home; freeze and reuse as chum or bait

Stormwater Management

- Don't Dump Down the Drain!

No SWIMMING!



WARNING!

Potential Shock Hazard

Electrical currents may be present in the water. These electrical currents can be harmful or lethal.

www.electricshockdrowning.org

APPENDIX H: SUMMARY OF ENVIRONMENTAL LAWS & REGULATIONS

This section presents an overview of some relevant laws and regulations that apply to marinas and boaters. The information presented in this section is not comprehensive. Some of these laws and regulations are discussed in greater detail throughout this guidebook. In addition to the environmental laws and regulations discussed below there may be additional local codes or requirements. When storing hazardous substances, please check with your local fire department and building department for storage and handling requirements.

Federal and State Agencies that Regulate Environmental Issues at Marinas

- **Environmental Protection Agency (EPA)** is responsible for ensuring environmental and human health protection federally and delegates certain environmental compliance programs to the state.
- **United States Army Corps of Engineers (ACOE)** builds structures for flood control, manages hydropower structures, maintains navigation channels, is responsible for dredging oversight, and is concerned with providing protection to wetlands and fish and wildlife habitat.
- **United States Coast Guard (USCG)** is within the U.S. Department of Homeland Security and serves to protect the public, the environment, and U.S. economic interests. They are responsible for responding to spills and navigation hazards on the water, for enforcing safety and fisheries regulations, conducting safety and compliance inspections on commercial vessels and waterfront facilities, and protecting the nation's critical infrastructure.
- **Oregon Department of Environmental Quality (DEQ)** is dedicated to protecting human health and the environment in the State of Oregon. DEQ is responsible for administering delegated federal environmental laws and regulations regarding solid waste disposal, water quality, and hazardous waste management discussed in the subsection below entitled Federal Laws and Regulations. In addition, they administer the laws and regulations unique to Oregon that are discussed in the subsection below entitled Additional State Laws and Regulations.
- **The Oregon State Marine Board (OSMB)** registers and titles recreational boats and provides boating

safety education and funding for recreational facilities associated with recreational boating (such as launch ramps, sewage pump-out stations, restrooms, and parking lots). The Marine Board also leads several environmental programs related to boating, such as Aquatic Invasive Species Prevention, Clean Boater, Abandoned and Derelict Vessel Removal, and the Clean Marina Program.

- **Oregon Department of Fish and Wildlife (ODFW)** is responsible for protecting Oregon's fish and wildlife and their habitat.
- **Oregon Division of State Police (OSP)** is responsible for enforcing fish and wildlife laws and responding to emergencies including fires and spill response.

Federal Laws and Regulations

LITTER LAWS ON THE WATER:

THE REFUSE ACT OF 1899

The Refuse Act of 1899 prohibits throwing, discharging, or depositing any refuse matter of any kind (including trash, garbage, oil and other liquid pollutants) into the waters of the United States.

ANNEX V OF MARPOL (MARINE POLLUTION) 1973, 1978, 2013

This international law prohibits the dumping of any plastic refuse, as well as most other types of substances into any waters. Under prescribed conditions, there are exceptions for food wastes, cargo residues, cleaning agents or additives contained in cargo hold, deck, and external surface wash waters, and animal carcasses. These guidelines were updated and went in to effect on January 1, 2013.

All vessels greater than 39 feet must display a MARPOL placard outlining the garbage dumping restrictions of the Annex. All vessels 100 gross tons or more, or certified to carry 15 persons or more, must also have a written garbage management plan on board.

THE FEDERAL WATER POLLUTION CONTROL ACT (THE CLEAN WATER ACT)

The Clean Water Act (CWA) is the primary federal law in the United States governing water pollution. Its objective is to restore and maintain the chemical, physical, and biological integrity of the nation's waters by preventing

point and nonpoint pollution sources, providing assistance to publicly owned treatment works for the improvement of wastewater treatment, and maintaining the integrity of wetlands.

The use of soaps or other harmful dispersing agents to dissipate oil is prohibited [40 CFR 110.4].

Ports and terminals, including recreational marinas, must have adequate and convenient reception facilities for their regular customers. That is, marinas must be capable of receiving garbage from vessels that normally do business with them (including transients).

The Clean Water Act also prohibits the discharge of oil or oily waste into or upon the navigable waters of the United States or the waters of the contiguous zone if such discharge causes a film or sheen upon, or discoloration of, the surface of the water. Discharges that cause a sheen on the water must be reported immediately to the Coast Guard's National Response Center (1-800-424-8802) and to the Oregon Emergency Response System (1-800-OILS-911 or 1-800-452-0311). Violators are subject to a penalty.

SEWAGE LAWS ON THE WATER

SECTION 312 OF THE CLEAN WATER ACT

All vessels with an installed toilet must have a certified Marine Sanitation Device (MSD) attached. The direct discharge of sewage from a vessel is not permitted in virtually any inland bodies of water. Most recreational boats equipped with an MSD will have a Type III MSD – which is a holding tank. The holding tank cannot be emptied in waters of the United States. Sewage pumpouts or dump stations are available at Ports and large marinas. Larger vessels have Type I or II MSDs, which can discharge their treated sewage under certain circumstances (e.g. 3 miles from shore). No vessel can discharge their sewage (treated or untreated) while in a marina basin.

CLEAN BOATING ACT OF 2008

Congress passed the Clean Boating Act (CBA) in 2008 as an amendment to the Clean Water Act. The CBA requires EPA to identify discharges incidental to the normal operation of recreational vessels for which management practices are reasonable and practicable to develop. These management practices can help to limit the amount of pollution discharged into our nation's waters. As of this publication, the EPA has not yet identified incidental discharge normal to boating or what management practices should be implemented.

NONPOINT SOURCE DISCHARGE

The Coastal Zone Act Reauthorization Amendments of 1990 (CZARA) Chapter 5 sets out pollution prevention guidelines for marinas and recreational boaters. CZARA provided the impetus for the DEQ “Best Management Practices for Oregon Marinas” manual. The Amendments require that nonpoint source pollution from marinas be contained.

SPILL PLANS

Under 40 CFR 112, any boating facility that stores gas or oil in any size above-ground tank(s) with a total aggregate volume over 1,320 gallons (containers of less than 55 gallons and/or permanently closed storage tanks are exempt from the total); or in underground storage tanks with total capacity greater than 42,000 gallons (unless the tanks are compliant with the state requirement for USTs) must have a Spill Prevention, Control and Countermeasure (SPCC) Plan. The plan should address that there is adequate containment, training, and emergency response equipment to prevent spills and releases of oil.

HAZARDOUS WASTE REGULATIONS

The Resource Conservation and Recovery Act requires businesses that generate waste to determine if their waste is hazardous. This is referred to as making a hazardous waste determination. Wastes that are ignitable, corrosive, reactive, toxic, or listed are considered hazardous and face additional restrictions on disposal and management. Additional requirements are in place for facilities that generate greater than 220 pounds of hazardous waste or 2.2 pounds of acutely hazardous waste per month.

USED OIL

Under 40 CFR 279, used oil that is recycled (and NOT contaminated with any other wastes) is subject to less stringent regulations than hazardous waste. Containers of used oil must be labeled “used oil.” Spills of used oil must be cleaned up immediately and wastes properly characterized and disposed. Used oil may be hauled off site for recycling by registered used oil transporters.

HABITAT PROTECTION

The 1973 Endangered Species Act provides for the conservation of ecosystems upon which threatened and endangered species of fish, wildlife, and plants depend, both through Federal action and by encouraging the establishment of State programs.

ENVIRONMENTAL PERMITS AND LICENSES**NPDES Permits**

EPA's National Pollutant Discharge Elimination System (NPDES) permit program controls discharges. Point sources are discrete conveyances such as pipes or man-made ditches. Individual homes that are connected to a municipal system, use a septic system, or do not have a surface discharge do not need an NPDES permit; however, industrial, municipal, and other facilities must obtain permits if their discharges go directly to surface waters. Contact your local DEQ office for additional information or to apply for a permit.

Stormwater

In 1990, the EPA implemented regulations requiring permits for stormwater discharges from certain activities. The stormwater permit program requires that certain marinas classified with Standard Industrial Classification (SIC) system number 4493 be covered by a National Pollution Discharge Elimination System (NPDES) permit. Any marina or boat yard that performs boat construction or rebuilding and has a defined stormwater outfall needs a stormwater permit. Under the permit, marina operators must develop a stormwater pollution prevention plan and implement best management practices to ensure that stormwater leaving the marina property will not harm the quality of the surrounding waters. For additional information to apply for a permit, contact your local DEQ office.

Total Maximum Daily Loads (TMDLs)

The EPA requires state agencies such as the DEQ to calculate pollution load limits, known as TMDLs, for each pollutant entering a body of water. TMDLs describe the amount of each pollutant a waterway can receive and still not violate water quality standards. TMDLs take into account the pollution from all sources, including marinas.

Section 404

Section 404 of the Clean Water Act requires that any applicant for a permit to conduct any activity which may result in a discharge to waters of Oregon to obtain certification from DEQ that the activity complies with water quality requirements and standards. Section 404 permits are issued by the Army Corps of Engineers. In Oregon, projects in which the applicant will dredge, fill, or otherwise alter a waterway will require a permit from the Oregon Department of State Lands, in addition to the Army Corps of Engineers.

ADDITIONAL STATE LAWS AND REGULATIONS**Waste and Hazardous Waste**

Abrasive Blast Waste Containing Pesticides that are not federally regulated as hazardous waste are considered special waste under OAR 340-101-0040. The abrasive blast waste associated with hull cleaning is subject to this regulation and may be disposed of at a solid waste landfill if the site meets the design criteria of 40 CFR 258.40 for new municipal solid wastes landfill units [OAR 340-093-0190 (f)].

Water Quality

ORS 468B.025 Prohibited activities. No person shall: cause pollution of any waters of the state or place or cause to be placed any wastes in a location where such wastes are likely to escape or be carried into the waters of the state by any means.

ORS 468B.050 Water quality permit. Except as provided in ORS 468B.053 or 468B.215, no person shall discharge any wastes into the waters of the state from any industrial or commercial establishment or activity or any disposal system, without first obtaining a permit.

OAR 340-071-0130 requires persons who plan to build an on-site sewage disposal system to obtain a construction-installation permit or a Water Pollution Control Facility Permit (WPCF) before construction. On-site systems must obtain a WPCF permit if the system:

- Has a projected daily sewage flow greater than 2,500 gallons, or
- Handles sewage with a greater strength than residential wastewater, or
- Uses a technology identified by DEQ as warranting regulation.

General Permits

The Oregon Department of Environmental Quality issues general permits for certain activities such as washwater discharges (such as for building, equipment, or pavement washing). Permit number 1700A is a NPDES permit for washwater discharges to surface water and permit number 1700B is a WPCF permit for washwater discharges to land.

Solid Waste

Under OAR 340-093-0040 no person can dispose of or authorize the disposal of solid waste except at a solid waste disposal site permitted or authorized by DEQ to receive that waste.

Spills

OAR Chapter 340 Division 142 requires reporting spills of reportable quantities to the Oregon Emergency Response; this includes any oil spill that causes a sheen to the water or 42 gallons of oil on land. There are specified spill reporting quantities for oil and hazardous materials that facilities should be aware of. Reporting may be required to both state and federal agencies. The OERS number is 1-800-452-0311. This rule also requires a person to clean up spills of oil and hazardous material immediately, regardless of the quantity spilled.

ORS 466.635 requires any person owning or having control over oil or hazardous material who has knowledge of a spill or release to immediately notify Oregon Emergency Management as soon as that person knows the spill or release is a reportable quantity.

Air Quality

OAR Chapter 340 Division 264 regulates open burning. This division discusses general prohibitions for burning petroleum products and hazardous materials and discusses restrictions on demolition waste and commercial burning.

OAR 340-208-0210 sets out the rules for fugitive emissions.

OAR 340-208-0300 prohibits emissions causing a nuisance or resulting in particulate fall out on neighboring properties or into state waters.

State and Federal air permitting and reporting requirements are discussed in OAR chapter 340 Division 210 thru 220.

APPENDIX I: VESSEL TURN-IN INFORMATION

A vessel turn-in program is a proactive alternative to seizing abandoned or derelict vessels where owners voluntarily surrender their at-risk vessels for disposal by a public agency. The incentive for the owner is the avoidance of possible criminal citations for abandoning a vessel and the financial responsibility for the vessel's removal. The benefits to the public agency and the state are reduced removal costs and reduced environmental impacts since the vessels are removed before they sink, pollute our waterways, and become a hazard to navigation.

Public agencies may apply for a grant from the Oregon State Marine Board to fund their own vessel turn-in program. Public agencies are encouraged to create a turn-in program that works for them, whether it is a one-time event, an on-going turn-in drop off site, or a case-by-case acceptance of at-risk vessels; however there are some basic requirements. Use of the grant funds are limited to removing recreational vessels (not commercial vessels), and the turn-in program must target vessels at-risk of becoming abandoned or derelict. Furthermore, the owners of the vessels must surrender the vessels by signing a release of interest and by providing the vessel title to the public agency. If the title is lost, the owners may sign an alternative release of interest document as approved by the Marine Board.

To apply for a grant, a public agency must submit a written proposal by mail, email, or fax that includes a description of:

1. How the turn-in program will be advertised or how boats will be identified for surrender;
2. The dates and times for any turn-in events;
3. The location of any turn-in events;
4. The criteria used by the public agency to determine if a vessel is in danger of being an abandoned vessel or a derelict vessel and is likely to cause damage to the environment or become a hazard to navigation;
5. A description of how surrendered boats will be removed and disposed of;
6. An estimate of the number of boats that will be surrendered;
7. An itemized list of expenses associated with the turn-in program;
8. The total amount of funds requested; and
9. Any cash or in-kind match to be provided by the public agency.

There is no deadline for grant proposals and the Marine Board will review the proposals as they are received. The decision to approve or deny funding will be based on the criteria outlined above and the amount of funds available in the Salvaged Vessel Subaccount. Each biennium, \$150,000 is set aside in the Salvaged Vessel Subaccount; however, only a portion of the subaccount will be allocated to vessel turn-in program grants. If the Board approves the vessel turn-in program grant proposal, the Board will prepare an Intergovernmental Project Agreement for signature by the parties prior to the grant award.

For more information or to submit a grant proposal, please contact the Oregon State Marine Board at 503-378-8587 or at marine.board@state.or.us.

Rules for the Vessel Turn-in Program: OAR 250-026-0055.



APPENDIX J: ADDITIONAL INFORMATION

Contacts for More Information

Topics	Agency	Contact Info
Air Quality Solid Waste (trash & recycling) Stormwater Discharge Permits Total Maximum Daily Loads Underground Storage Tanks	Oregon Dept of Environmental Quality (DEQ)	(503) 229-5359 DEQINFO@deq.state.or.us (800) 452-4011 or (503) 229-5696 www.deq.state.or.us
Clean Marina Program Clean Vessel Act Facility Grants Recreational Boating Information Abandoned/Derelict Vessels	Oregon State Marine Board (OSMB)	(503) 378-8587 marine.board@state.or.us www.boatoregon.com
Dredge, Fill, & Underwater Construction	Oregon Dept of State Lands (DSL) US Army Corps of Engineers	(503) 986-5200 dsl@dsl.state.or.us www.oregonstatelands.us (503) 808-4373 PortlandRegulatory@usace.army.mil www.nwp.usace.army.mil
Fish and Wildlife & Endangered Species Act	Oregon Dept of Fish and Wildlife (ODFW)	(800) 720-ODFW Odfw.info@state.or.us www.dfw.state.or.us
Hazardous Waste	DEQ Technical Assistance Spill Prevention, Control, and Countermeasure (SPCC) Plans Oregon Community Right-to-Know Act (CR2K)	(800) 452-4011 www.deq.state.or.us/lw/hw/ www.epa.gov/ www.oregon.gov/OSP
Land Use Planning & Coastal Resource Management	Oregon Dept of Land Conservation and Development (DLCD)	(503) 373-0050 www.lcd.state.or.us
Spill Reporting	Oregon Emergency Response System (OERS) National Response Center	(800) 452-0311 or (800) OILS-911 (800) 424-8802
Voluntary Programs & Cleanups	SOLVE / Adopt-A-River	(503) 844-9571 info@solveoregon.org www.solveoregon.org

Glossary of Terms

Ballast Water - Water placed in the hold of a boat or ship to maintain stability.

Black Water - Water-carried human wastes, including feces, urine, and other extraneous substances of bodily origin (including toilet paper).

Boathouse - A covered floating structure primarily used for wet or dry storage of a boat.

Boat Waste Collection Device - All types of stationary, portable, or mobile equipment that collects and transfers black water from boats. Includes boat pumpout and dump stations.

Combo - A boathouse/floating home combination structure with plumbing fixtures.

Dump Station - A device that receives sewage from a portable toilet.

Dwelling - A structure, boat, or vessel that has sleeping, cooking, and plumbing fixtures used for human occupancy or is used for residential purposes.

Fugitive Emissions - Dust, fumes, gases, mist, odorous matter, vapors, or any combination thereof not easily given to measurement, collection, and treatment by conventional pollution control methods.

Floating Home - A floating structure designed or used as a dwelling, with no means of self propulsion, usually moored in one location.

Gray Water - Any water carried waste other than black water, including bath, kitchen and laundry wastes.

Hydroblasting - Use of pressurized water to remove paint or oxidized metal.

Houseboat - A self-propelled boat designed for use as a temporary dwelling. Any houseboat moored in one location and used as a dwelling for more than ten of any 30-day period is classified as a "liveaboard."

Liveaboard - A boat moored in one location and used as a dwelling for more than ten of any 30-day period.

Marine Sanitation Device (MSD) - A U.S. Coast Guard approved type I, II or III device used to treat or retain in a holding tank all boat toilet fixture waste generated from a boat or vessel.

Moored - Secured or tied-up to a dock, pile, float, buoy, or at anchor.

Operating - Underway; not moored.

Owners - Includes but not limited to individuals, corporations, entities, operators, renters, or other responsible person in control or having control of real or personal property.

Plumbing Fixture - Includes but not limited to toilets, showers, lavatories, and laundry fixtures.

Pressure Washing - Use of a water pressure washer to remove dirt or biological growth from a vessel's hull. Pressure washing includes the practice of hand scrubbing and rinsing with low pressure water from a hose. Pressure washing that removes paint is hydroblasting.

Portable Toilet - Includes all types of portable toilets and hand-carried potties used to collect black water.

Pumpout - A stationary or portable pumping or suction device that removes waste from a boat holding tank and transfers it to an approved municipal, septic, on-site sewage treatment system, or land side holding tank for disposal.

Sewage - Black water and/or gray water waste.

Solid Waste - All useless or discarded putrescible and non-putrescible materials, including but not limited to garbage, refuse, rubbish, ashes, paper, and cardboard, sewage sludge, septic tank and cesspool pumpings or other sludge, useless or discarded commercial, industrial, demolition and construction materials, discarded or abandoned vehicles or part thereof, discarded home and industrial appliances, manure, vegetable or animal solid and semisolid materials, dead animals, and infectious waste.

Stormwater - generated from rain and snowmelt events that flow over land or impervious surfaces, such as paved streets, parking lots, and building rooftops, and does not soak into the ground. The runoff picks up pollutants like trash, chemicals, oils, and dirt/sediment that can harm rivers, streams, lakes, and coastal waters.

Structure - Includes but not limited to boathouses, combos, and floating homes used as dwellings.

Waters of the State - all waters within the territorial limits of this state, the marginal sea adjacent to this state and the high seas when navigated as part of a journey or ride to or from the shore of this state.

List of Acronyms

ACOE	Army Corps of Engineers	MSW	Municipal Solid Waste
AST	Aboveground Storage Tank	NFPA	National Fire Protection Association
BMP	Best Management Practice	NOAA	National Oceanic and Atmospheric Administration
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	NPDES	National Pollutant Discharge Elimination System
CESQG	Conditionally Exempt Small Quantity Generator of Hazardous Waste	OAR	Oregon Administrative Rules
CFR	Code of Federal Regulations	ORS	Oregon Revised Statutes
CVA	Clean Vessel Act	OSMB	Oregon State Marine Board
CWA	Clean Water Act	RCRA	Resource Conservation & Recovery Act
CZARA	Coastal Zone Act Reauthorization Amendments of 1990	SPCC	Spill Prevention, Control, and Countermeasure
DEQ	OR Dept of Environmental Quality	SQG	Small Quantity Generator of Hazardous Waste
EPA	United States Environmental Protection Agency	SWGP	Stormwater General Permit
CR2K	Oregon Community Right To Know Act	USCG	United States Coast Guard
HAP	Hazardous Air Pollutant	UST	Underground Storage Tank
LID	Low Impact Development	VOC	Volatile Organic Compound
LQG	Large Quantity Generator of Hazardous Waste		
MSD	Marine Sanitation Device		
MSDS	Material Safety Data Sheet		



APPENDIX K: CLEAN MARINA CHECKLISTS



Oregon Clean Marina Program Marina Checklist



Directions

Use this form to conduct a self-assessment of your facility and to guide you through the process of becoming certified as an Oregon Clean Marina. This checklist should be used in conjunction with the Oregon Clean Marina Guidebook and the page numbers correspond to the guidebook. The guidebook and checklist are available from the Oregon State Marine Board at www.boatoregon.com or from the Clean Marina Program Coordinator at (503) 378-2625.

Place a checkmark in the appropriate box (yes, no, or not applicable [N/A]) next to each question and tally your score on the last page. The questions are divided into the following types:

- ✧ L means required by laws or regulations
- ✧ P means required by the Clean Marina Program for certification
- ✧ O means optional

To become certified as an Oregon Clean Marina, you must answer “yes” to:

- ✧ All of the required goals (marked with an **L** or **P**) that apply to your facility AND
- ✧ At least 85% of the all the goals that apply to your facility.

In the column on the right, place a checkmark if this is a new practice you put into place in order to receive Oregon Clean Marina certification or as a result of learning about the practice from the Clean Marina program. This will help us determine the impact the program is having on the usage of best management practices.

If you have achieved the necessary percentages or would like free technical assistance to achieve more goals, contact the Clean Marina Program Coordinator at 503-378-2625.

Contact Information

Marine Facility Name:		
Owner/Manager:		
Physical Address:		
City:	State:	Zip:
Mailing Address:		
City:	State:	Zip:
Phone:		
Email:		

Date:

Preliminary

Certification

Re-certification (three year)

Marine Facility Type:

Marina, no boatyard

Marina with boatyard

Yacht Club

Floating Home Moorage Other:

Number of boat slips:

Number of floating home slips:

Rules. A copy of the moorage rules must be provided. Rules need to address the following.

DO YOU:	Type	Yes	No	N/A	New?
1. Incorporate best management practices into marina rules and moorage contracts? (p. 8)	P				
2. Have “yard rules” for performing debris-producing boat maintenance written into marina slip contracts? (p. 14, 50)	P				
3. Have a written policy that prohibits the discharge from all MSD’s within the marina basin? (p. 16)	P				
4. Have a written policy for any liveaboard boaters that their “Y” valve shall be secured in the dockside pumpout only position? Require a pumpout log and/ or conduct spot checks to confirm no discharge occurs while moored? (p. 16)	P				
5. Prohibit disposal of fish waste in the marina basin, and/or provide for proper disposal of fish waste? Post signs displaying rules at cleaning stations. (p.9)	P				
6. Encourage customers to clean up after their pets by posting signs and/or providing bags to scoop up wastes? (p. 11,13)	O				
7. Disallow in-water hull scraping or any process that occurs underwater which removes paint from the boat hull? (p. 49)	P				
<i>Comment:</i>					

Boater Education (educational materials and signs)

DO YOU:	Type	Yes	No	N/A	New?
8. Provide clear signage regarding waste facility locations? (p. 8)	P				

9. Pass on information about pollution prevention boating practices and aquatic invasive species to customers, contractors, and employees? (p. 8, 10)	P				
10. Post signs with aquatic invasive species and Clean, Drain, Dry information? Require boats to be clean of any aquatic species before entering waterways. (p. 10)	P				
11. Have spill response numbers posted? (p. 22, 28, 56)	O				
<i>Comment:</i>					

Solid Waste Management

DO YOU:	Type	Yes	No	N/A	New?
12. Control litter and have a regular schedule for picking up stray trash? (p. 12)	P				
13. Keep trash containers, bins, or dumpsters covered and in convenient locations away from the water? If containers are on docks are they secured to prevent tipping over? (p. 12)	P				
14. Provide clearly marked recycling containers for customers and staff to use, particularly for plastic, paper/cardboard, and metal/aluminum food/beverage containers? (p. 12)	P				
15. Provide recycling containers for fishing line and have a schedule for collecting line when full? (p. 13)	O				
<i>Comment:</i>					

Stormwater Management

DO YOU:	Type	Yes	No	N/A	New?
16. Have any necessary DEQ stormwater discharge permits? (p. 14) – primarily for boatyards	L				
17. Maintain and clean stormwater catch basins regularly? (p. 15)	P				
18. Have mechanical or other treatment devices that treat stormwater, such as oil/water separators, storm drain filters, sediment traps or oil absorbents? (p. 15)	O				
19. Maintain stormwater treatment devices per appropriate maintenance schedule? (p. 15)	P				

20. Have a vegetated buffer between impervious surface (like pavement) and the marina basin, where practical? (p. 14)	O				
21. Minimize impervious areas and/or direct roof runoff to drywells or vegetated areas? (p. 15)	O				
<i>Comment:</i>					

Sewage Management

DO YOU:	Type	Yes	No	N/A	New?
22. Comply with the legal requirements for sewage disposal? (p. 16)	L				
23. Offer affordable, convenient pumpout and/or dump station facilities to customers and/or the general public? (p. 16-17)	O				
24. Keep your pumpout and/or dump station in good working order? (p. 17)	P				
25. Provide clean bathrooms for marina customers/ members? (p. 17)	P				
<i>Comment:</i>					

Universal Waste Management

DO YOU:	Type	Yes	No	N/A	New?
26. Have the facility's hazardous waste generator status determined and comply with corresponding regulations? (p. 18)	L				
27. Conduct hazardous waste determinations? (p. 18)	L				
28. Send used oil to an approved recycling facility or reuse on site? (p. 22)	L				
29. Label all used oil stored in tanks or containers "used oil"? (p. 22)	L				
30. Store used oil in a manner that does not allow releases to the environment? (p. 23)	L				
31. Thoroughly drain oil filters prior to disposal? (p. 23)	P				
32. Recycle used batteries and follow applicable legal requirements? (p. 25)	L				
33. Store spent lead acid batteries in a covered area, layered with wood, if stacked? (p. 25)	O				

34. Promote the use of less toxic propylene glycol antifreeze? (p. 26)	O				
35. Store used antifreeze in separate, labeled and coverable containers that provide secondary containment? (p. 26)	P				
36. Recycle used antifreeze? (p. 27)	O				
<i>Comment:</i>					

Fueling

DO YOU:	Type	Yes	No	N/A	New?
37. Comply with the Oregon fire code for marine motor fuel dispensing facilities? (p. 28)	L				
38. Have oil absorbent material available for fuel dock staff and customers to clean up drips and small spills? (p. 29)	P				
39. Carry vent line whistles, fuel/air separators, absorbent fuel collars or other fuel spill preventative devices in your store? (p. 29)	O				
40. Regularly inspect and repair fuel transfer and storage equipment? (p. 29)	P				
41. Train fuel dock staff to prevent drips and spills at the fuel dock? (p. 29)	P				
42. Comply with the requirements for your Underground Petroleum Storage tanks? (p. 30-31)	L				
43. Comply with the requirements for your Aboveground Petroleum Storage tanks? (p. 31)	L				
<i>Comment:</i> Make sure there are no nozzle latch-open devices on fuel dispensing handles.					

Uplands/ Building Maintenance

DO YOU:	Type	Yes	No	N/A	New?
44. Reduce the use of toxic cleaners for cleaning your facility by changing practices or products? (p. 38)	O				
45. Use native plants and avoid invasive plants in landscaping? (p. 40)	O				
46. Minimize use of fertilizers and pesticides and/or use compost on landscaping? (p. 40)	O				
47. Comply with the whitebead foam encapsulation regulation? (p. 42)	L				

48. Ensure you are in compliance with all laws and permits concerning construction (both upland and floating projects), and fill/removal regulations? Are active construction sites maintained to prevent adverse impacts to the environment? (p. 42)	L				
49. Keep all docks, floats and bulkheads in good working order by conducting routine maintenance (p. 42)	P				
50. Ensure you are in compliance with all laws and permits concerning dredging activity? (p. 44)	L				
<i>Comment:</i>					

Emergency Planning

DO YOU:	Type	Yes	No	N/A	New?
51. Comply with the Emergency Planning and Community Right-to-Know Act? (p. 30, 54)	L				
52. Report petroleum spills as required? (p. 31)	L				
53. Keep oil spill response equipment maintained, accessible, and near potential sources of accidents? (p. 55)	O				
54. Have a Spill Prevention, Control, and Countermeasure (SPCC) Plan, if it is required? (p. 58-61)	L				
55. Have an emergency response plan for potential accidents or emergencies? (p. 55)	P				
56. Train employees on emergency response every year? (p. 55)	O				
57. Have a spill contingency plan even if you are not required to have a SPCC Plan? (p. 31, 55)	P				
<i>Comment:</i>					

Leadership Activities

DO YOU:	Type	Yes	No	N/A	New?
58. Work to restore/ enhance upland areas by removing invasive plants, planting native species, and creating habitat for native wildlife?	O				
59. Mentor a facility that has pledged to become a Clean Marina?	O				
60. Participate in Adopt-a-River?	O				



Oregon Clean Marina Program Floating Homes Checklist



Directions

Use this form to conduct a self-assessment of your facility and to guide you through the process of becoming certified as an Oregon Clean Marina. This checklist should be used in conjunction with the Oregon Clean Marina Guidebook and the page numbers correspond to the guidebook. The guidebook and checklist are available from the Oregon State Marine Board at www.boatoregon.com or from the Clean Marina Program Coordinator at (503) 378-2625.

Place a checkmark in the appropriate box (yes, no, or not applicable [N/A]) next to each question and tally your score on the last page. The questions are divided into the following types:

- ✧ L means required by laws or regulations
- ✧ P means required by the Clean Marina Program for certification
- ✧ O means optional

To become certified as an Oregon Clean Marina, you must answer “yes” to:

- ✧ All of the required goals (marked with an **L** or **P**) that apply to your facility AND
- ✧ At least 85% of the all the goals that apply to your facility.

In the column on the right, place a checkmark if this is a new practice you put into place in order to receive Oregon Clean Marina certification or as a result of learning about the practice from the Clean Marina program. This will help us determine the impact the program is having on the usage of best management practices.

If you have achieved the necessary percentages or would like free technical assistance to achieve more goals, contact the Clean Marina Program Coordinator at 503-378-2625.

Contact Information

Marine Facility Name:		
Owner/Manager:	Clean Marina Contact	
Physical Address:		
City:	State:	Zip:
Mailing Address:		
City:	State:	Zip:
Phone:		
Email:		

Date:

Preliminary

Certification

Re-certification (three year)

Marine Facility Type:

Marina, no boatyard

Marina with boatyard

Yacht Club

Floating Home Moorage Other:

Number of boat slips:

Number of floating home slips:

Rules. A copy of the moorage rules must be provided. At a minimum, rules need to address:

DO YOU:	Type	Yes	No	N/A	New?
1. Incorporate best management practices into marina rules and moorage contracts? (p. 8)	P				
2. Have maintenance rules for performing debris-producing or exterior maintenance work on homes written into slip contracts/home owners rules? (p.)	P				
3. Have a written policy that prohibits the discharge from all MSD's within the moorage basin? (p. 16)	P				
4. Prohibit disposal of fish waste in the marina basin, and/or provide for proper disposal of fish waste? Post signs displaying rules at cleaning stations. (p. 9)	P				
5. Encourage customers to clean up after their pets by posting signs and/or providing bags to scoop up wastes? (p. 11, 13)	O				
<i>Comment:</i>					

Resident/ Boater Education (educational materials and signs)

DO YOU:	Type	Yes	No	N/A	New?
6. Provide clear signage regarding waste facility locations? (p. 8)	P				
7. Pass on information about pollution prevention boating practices and aquatic invasive species to customers, contractors, and employees? (p. 8, 10)	P				
8. Post signs with aquatic invasive species and Clean, Drain, Dry information? Require boats to be clean of any aquatic species before entering waterways. (p. 10)	P				
9. Have spill response numbers posted? (p. 22, 28, 56)	O				
<i>Comment:</i>					

Solid Waste Management

10. Control litter and have a regular schedule for picking up stray trash? (p. 12)	P				
11. Keep trash containers, bins, or dumpsters covered and in convenient locations away from the water? If containers are on docks are they secured to prevent tipping over? (p. 12)	P				
12. Provide clearly marked recycling containers for customers and staff to use, particularly for plastic, paper/cardboard, and metal/aluminum food/beverage containers? (p. 12)	P				
13. Provide recycling containers for fishing line and have a schedule for collecting line when full? (p. 13)	O				

Comment:

Stormwater Management

DO YOU:	Type	Yes	No	N/A	New?
14. Have any necessary DEQ stormwater discharge permits? (p. 14) – primarily for boatyards	L				
15. Maintain and clean stormwater catch basins regularly? (p. 15)	P				
16. Have mechanical or other treatment devices that treat stormwater, such as oil/water separators, storm drain filters, sediment traps or oil absorbents? (p. 15)	O				
17. Maintain stormwater treatment devices per appropriate maintenance schedule? (p. 15)	P				
18. Have a vegetated buffer between impervious surface (like pavement) and the marina basin, where practical? (p. 14)	O				
19. Minimize impervious areas and/or direct roof runoff to drywells or vegetated areas? (p. 15)	O				

Comment:

Sewage Management

DO YOU:	Type	Yes	No	N/A	New?
20. Comply with the legal requirements for sewage disposal? (p. 16)	L				
21. Offer affordable, convenient pumpout and/or dump station facilities to customers and/or the general public? (p. 16, 17)	O				

22. Keep your pumpout and/or dump station in good working order? (p. 17)	P				
23. Provide clean bathrooms for marina customers/ members? (p. 17)	P				
<i>Comment:</i>					

Household Hazardous Waste Management

DO YOU:	Type	Yes	No	N/A	New?
24. Have the facility's hazardous waste generator status determined and comply with corresponding regulations? (p. 18)	L				
25. Conduct hazardous waste determinations? (p. 18)	L				
26. Keep liquid wastes separate and not dispose of them into the trash, down drains, onto the ground, or into the water? (p. 18)	L				
27. Label the contents of hazardous waste container(s), including the accumulation start dates, and manage hazardous waste per regulations? (p.18)	L				
28. Have procedures to reduce or eliminate the use of toxic solvents and other chemicals put in place? (p.19)	O				
29. Store hazardous waste on an impervious surface with containment able to retain 110% of the volume of the largest container? (p.19)	O				
30. Follow recommended disposal methods for potential hazardous waste streams? (p.19)	O				
31. Ensure floor drains are sealed or connected to a sanitary sewer? (p.41)	O				
<i>Comment:</i>					

Uplands/ Building Maintenance

DO YOU:	Type	Yes	No	N/A	New?
32. Reduce the use of toxic cleaners for cleaning your facility by changing practices or products? (p. 38)	O				
33. Use native plants and avoid invasive plants in landscaping? (p. 40)	O				
34. Minimize use of fertilizers and pesticides and/or use compost on landscaping? (p. 40)	O				

35. Comply with the whitebead foam encapsulation regulation? (p. 42)	L				
36. Ensure you are in compliance with all laws and permits concerning construction (both upland and floating projects), and fill/removal regulations? Are active construction sites maintained to prevent adverse impacts to the environment? (p. 42)	L				
37. Keep all docks, floats and bulkheads in good working order by conducting routine maintenance (p. 42)	P				
38. Ensure you are in compliance with all laws and permits concerning dredging activity? (p. 44)	L				
<i>Comment:</i>					

Emergency Planning

DO YOU:	Type	Yes	No	N/A	New?
39. Comply with the Emergency Planning and Community Right-to-Know Act? (p. 30, 54)	L				
40. Report petroleum spills as required? (p. 31)	L				
41. Keep oil spill response equipment maintained, accessible, and near potential sources of accidents? (p. 55)	O				
42. Have a Spill Prevention, Control, and Countermeasure (SPCC) Plan, if it is required? (p. 58-61)	L				
43. Have an emergency response plan for potential accidents or emergencies? (p. 55)	P				
44. Train employees on emergency response every year? (p. 55)	O				
45. Have a spill contingency plan even if you are not required to have a SPCC Plan? (p. 31, 55)	P				
<i>Comment:</i>					

Leadership Activities

DO YOU:	Type	Yes	No	N/A	New?
46. Work to restore/ enhance upland areas by removing invasive plants, planting native species, and creating habitat for native wildlife.	O				
47. Mentor a facility that has pledged to become a Clean Marina	O				



Oregon Clean Marina Program Boatyard Checklist



Directions

Use this form to conduct a self-assessment of your facility and to guide you through the process of becoming certified as an Oregon Clean Marina. This checklist should be used in conjunction with the Oregon Clean Marina Guidebook and the page numbers correspond to the guidebook. The guidebook and checklist are available from the Oregon State Marine Board at www.boatoregon.com or from the Clean Marina Program Coordinator at (503) 378-2625.

Place a checkmark in the appropriate box (yes, no, or not applicable [N/A]) next to each question and tally your score on the last page. The questions are divided into the following types:

- ✧ L means required by laws or regulations
- ✧ P means required by the Clean Marina Program for certification
- ✧ O means optional

To become certified as an Oregon Clean Marina, you must answer “yes” to:

- ✧ All of the required goals (marked with an **L** or **P**) that apply to your facility AND
- ✧ At least 85% of the all the goals that apply to your facility.

In the column on the right, place a checkmark if this is a new practice you put into place in order to receive Oregon Clean Marina certification or as a result of learning about the practice from the Clean Marina program. This will help us determine the impact the program is having on the usage of best management practices.

If you have achieved the necessary percentages or would like free technical assistance to achieve more goals, contact the Clean Marina Program Coordinator at 503-378-2625.

Contact Information

Marine Facility Name:		
Owner/Manager:		
Physical Address:		
City:	State:	Zip:
Mailing Address:		
City:	State:	Zip:
Phone:		
Email:		

Date:

Preliminary

Certification

Re-certification (three year)

Marine Facility Type:

Marina, no boatyard

Marina with boatyard

Boatyard only

Other:

Number of boat slips:

Number of floating home slips:

Rules. A copy of the moorage rules must be provided. Rules need to address the following.

DO YOU:	Type	Yes	No		New?
1. Incorporate best management practices into marina rules and moorage contracts? (p. 8)	P				
2. Have “yard rules” for performing debris-producing boat maintenance written into marina slip contracts? (p. 14, 50)	P				
3. Have a written policy that prohibits the discharge from all MSD’s within the marina basin? (p. 16)	P				
4. Prohibit disposal of fish waste in the marina basin, and/or provide for proper disposal of fish waste? Post signs displaying rules at cleaning stations. (p.9)	P				
5. Encourage customers to clean up after their pets by posting signs and/or providing bags to scoop up wastes? (p. 11, 13)	O				
6. Disallow in-water hull scraping or any process that occurs underwater which removes paint from the boat hull? (p. 49)	P				
<i>Comment:</i>					

Boater Education (educational materials and signs)

DO YOU:	Type	Yes	No		New?
7. Provide clear signage regarding waste facility locations? (p. 8)	P				
8. Pass on information about pollution prevention boating practices and aquatic nuisance species to customers, contractors, and employees? (p. 8, 10)	P				
9. Post signs with aquatic invasive species and Clean, Drain, Dry information? Require boats to be clean of any aquatic species before entering waterways. (p. 10)	P				

10. Have spill response numbers posted? (p. 22, 28, 56)	O				
<i>Comment:</i>					

Solid Waste

DO YOU:	Type	Yes	No		New?
11. Control litter and have a regular schedule for picking up stray trash? (p. 12)	P				
12. Keep trash containers, bins, or dumpsters covered and in convenient locations away from the water? If containers are on docks are they secured to prevent tipping over? (p. 12)	P				
13. Provide clearly marked recycling containers for customers and staff to use, particularly for plastic, paper/cardboard, and metal/aluminum food/beverage containers? (p. 12)	P				
14. Provide recycling containers for fishing line and have a schedule for collecting line when full? (p. 13)	O				
<i>Comment:</i>					

Stormwater Management

DO YOU:	Type	Yes	No		New?
15. Have any necessary DEQ stormwater discharge permits? (p. 14) – primarily for boatyards	L				
16. Maintain and clean stormwater catch basins regularly? (p. 15)	P				
17. Have mechanical or other treatment devices that treat stormwater, such as oil/water separators, storm drain filters, sediment traps or oil absorbents? (p. 15)	O				
18. Maintain stormwater treatment devices per appropriate maintenance schedule? (p. 15)	P				
19. Have a vegetated buffer between impervious surface (like pavement) and the marina basin, where practical? (p. 14)	O				
20. Minimize impervious areas and/or direct roof runoff to drywells or vegetated areas? (p. 15)	O				
<i>Comment:</i>					

Sewage Management

DO YOU:	Type	Yes	No		New?
21. Comply with the legal requirements for sewage disposal? (p. 16)	L				
22. Offer affordable, convenient pumpout and/or dump station facilities to customers and/or the general public? (p. 16-17)	O				
23. Keep your pumpout and/or dump station in good working order? (p. 17)	P				
24. Provide clean bathrooms for marina customers/members? (p. 17)	P				
<i>Comment:</i>					

Universal Waste Management

DO YOU:	Type	Yes	No		New?
25. Send used oil to an approved recycling facility or reuse on site? (p. 22)	L				
26. Label all used oil stored in tanks or containers "used oil"? (p. 22)	L				
27. Store used oil in a manner that does not allow releases to the environment? (p. 23)	L				
28. Thoroughly drain oil filters prior to disposal? (p. 23)	P				
29. Offer spill proof oil changes with non-spill vacuum-type systems? (p. 23)	O				
30. Have oil absorbent materials available when doing boat maintenance? (p.23)	P				
31. Recycle used batteries and follow applicable legal requirements? (p. 25)	L				
32. Store spent lead acid batteries in a covered area, layered with wood, if stacked? (p. 25)	O				
33. Promote the use of less toxic propylene glycol antifreeze? (p. 26)	O				
34. Store used antifreeze in separate, labeled and coverable containers, and provide secondary containment? (p. 26)	P				
35. Recycle used antifreeze? (p. 27)	O				
<i>Comment:</i>					

Hazardous Waste Management

DO YOU:	Type	Yes	No		New?
36. Have the facility's hazardous waste generator status determined and comply with corresponding regulations? (p. 18)	L				
37. Conduct hazardous waste determinations? (p. 18)	L				
38. Keep liquid wastes separate and not dispose of them into the trash, down drains, onto the ground, or into the water? (p. 18)	L				
39. Label the contents of hazardous waste container(s), including the accumulation start dates, and manage hazardous waste per regulations? (p. 18)	L				
40. Have procedures to reduce or eliminate the use of toxic solvents and other chemicals put in place? (p. 19)	O				
41. Store hazardous waste on an impervious surface with containment able to retain 110% of the volume of the largest container? (p. 19)	O				
42. Follow recommended disposal methods for potential hazardous waste streams? (p. 19)	O				
43. Ensure floor drains are sealed or connected to a sanitary sewer? (p. 41)	O				
44. Minimize contamination of rags and manage used rags appropriately? (p. 20)	P				
45. Use water-based, non-VOC cleaners instead of solvent-based degreasers and part washers? (p. 21)	O				
<i>Comment:</i>					

Fueling

DO YOU:	Type	Yes	No		New?
46. Comply with the Oregon fire code for marine motor fuel dispensing facilities? (p. 28)	L				
47. Have oil absorbent material available for fuel dock staff and customers to clean up drips and small spills? (p. 29)	P				
48. Carry vent line whistles, fuel/air separators, absorbent fuel collars or other fuel spill preventative devices in your store? (p. 29)	O				

49. Regularly inspect and repair fuel transfer and storage equipment? (p. 29)	P				
50. Train fuel dock staff to prevent drips and spills at the fuel dock? (p. 29)	P				
51. Comply with the requirements for your Underground Petroleum Storage tanks? (p. 30-31)	L				
52. Comply with the requirements for your Aboveground Petroleum Storage tanks? (p. 31)	L				
<i>Comment:</i> Make sure there are no nozzle latch-open devices on fuel dispensing handles.					

Hauling and Storing Boats

DO YOU:	Type	Yes	No	N/A	New?
53. Provide an oil/water separation service to remove oil from bilge water? (p. 34)	O				
54. Place oil absorbent materials in boat bilges as a standard maintenance practice? (p. 34)	O				
55. Provide staff training and/or customer education on bilge cleaning? (p. 34)	O				
56. Collect and treat pressure washwater, as described in the Pressure Washing section? (p. 35-36)	P				
<i>Comment:</i>					

Uplands/ Building Maintenance

DO YOU:	Type	Yes	No		New?
57. Reduce the use of toxic cleaners for cleaning your facility by changing practices or products? (p. 38)	O				
58. Use native plants and avoid invasive plants in landscaping? (p. 40)	O				
59. Minimize use of fertilizers and pesticides and/or use compost on landscaping? (p. 40)	O				
60. Comply with the whitebead foam encapsulation regulation? (p. 42)	L				
61. Ensure you are in compliance with all laws and permits concerning construction (both upland and floating projects), and fill/removal regulations? Are active construction sites maintained to prevent adverse impacts to the environment? (p. 42)	L				
62. Keep all docks, floats and bulkheads in good working order by conducting routine maintenance (p. 42)	P				

63. Ensure you are in compliance with all laws and permits concerning dredging activity? (p. 44)	L				
<i>Comment:</i>					

Painting and Fiberglass Repair

DO YOU:	Type	Yes	No	N/A	New?
64. Conduct boat scraping, sanding, and other debris-producing maintenance in a designated upland maintenance area, where feasible? (p. 46)	P				
65. Put tarps or drop cloths under boats to catch chips and drips while scraping, sanding, and painting boats on the upland? (p. 46)	P				
66. Reduce use of solvent-based paint strippers by changing practices or product? (p. 47)	O				
67. Recommend less environmentally damaging bottom coatings? (p. 48)	O				
68. Mix paint within a covered area and use secondary containment? (p. 48)	O				
69. Use alternatives to abrasive blasting onsite, such as vacuum sanders or contracting work offsite? (p. 49)	O				
70. Conduct all paint spraying in a protective enclosure, where practical? (p. 51)	O				
71. Use spray equipment with high transfer efficiency such as HVLP or HELP spray guns? (p. 51)	O				
72. Use alternative varnishes and teak cleaners that are less harmful? (p. 47)	O				
<i>Comment:</i>					

Emergency Planning

DO YOU:	Type	Yes	No	N/A	New?
73. Comply with the Emergency Planning and Community Right-to-Know Act? (p. 30, 54)	L				
74. Report petroleum spills as required? (p. 31)	L				
75. Keep oil spill response equipment maintained, accessible, and near potential sources of accidents? (p. 55)	O				
76. Have a Spill Prevention, Control, and Countermeasure (SPCC) Plan, if it is required? (p. 58-61)	L				

77. Have an emergency response plan for potential accidents or emergencies? (p. 55)	P				
78. Train employees on emergency response every year? (p. 55)	O				
79. Have a spill contingency plan even if you are not required to have a SPCC Plan? (p. 31, 55)	P				
<i>Comment:</i>					

Leadership Activities

DO YOU:	Type	Yes	No	N/A	New?
80. Work to restore/ enhance upland areas by removing invasive plants, planting native species, and creating habitat for native wildlife?	O				
81. Mentor a facility that has pledged to become a Clean Marina?	O				
82. Participate in Adopt-a-River?	O				
83. Track an environmental aspect (electricity usage, water usage, solid waste generation) and set goals for improvement?	O				
<i>Comment:</i> This section does not count towards your total score at this point but may in the future.					

Extra Credit Section

List any additional operating practices that your facility uses that have reduced waste or otherwise reduced pollution. (Note: Each practice is worth the same as one question.)

	Total Achieved #	Total Applicable #	Actual % (= Total Achieved # divided by Total Applicable # multiplied by 100)
Your Score			
If you answered "yes" to all the required items (marked with an L or P) that apply to your facility and received a score of 85% or higher, then you are eligible to be certified as an Oregon Clean Marina.			

Program Agreement:

By signing this evaluation checklist, you, as the facility owner and/or manager, agree to implement the management practices marked “yes” in the list above. You will ensure, to the extent practicable, that your staff and the marina users know of and follow any rules, regulations, or policies that result from your enrollment in the Oregon Clean Marina program. You are also confirming that you have not withheld any relevant information regarding any recent environmental compliance issues or other regulatory actions. Any actions that would knowingly violate this agreement and cause pollution to the environment will result in your certification status being re-evaluated and possibly terminated.

Signature of facility owner or manager

Date

Printed Name

Verified by Oregon Clean Marina Program Representatives:

_____ Name	_____ Affiliation	_____ Date
_____ Name	_____ Affiliation	_____ Date

