Help us save tax dollars by protecting our environment and our Publicly Owned Treatment Works…

Surfboard Manufacturers

Whether your business is two blocks or 20 miles from the water, it has two connections to the Monterey Bay. Indoor drains such as sinks, toilets, and most floor drains convey wastewater through the sanitary sewer system to a treatment plant where the water is treated before it is discharged into the Bay. Outside your business, rainwater, wash water from buildings, road surfaces, vehicles, and equipment pick up oil, grease, cleaning compounds, pesticides, paint, garbage and other pollutants. Storm drains carry these pollutants through the storm drain system directly into local creeks and the Bay. They are not filtered or treated in any way.

Surfboard manufacturers have the potential to impact storm water and sewer wastewater with contaminants. These contaminants can damage sensitive creek habitats and eventually pollute our bay and ocean, yet surfboard manufacturers are important to Santa Cruz County. The good news is that implementing the best management practices detailed in this pamphlet can drastically reduce environmental impacts from surfboard manufacturing. This pamphlet has been prepared to familiarize surfboard manufacturers and their employees with the best management practices for dealing with typical wastes generated in the industry. It also details the County of Santa Cruz Environmental Compliance Division requirements specific to your facility. Use this pamphlet as a tool to ensure that your business is compliant; to save money on costly spill cleanups and waste disposal, and to train all shop employees. Leave it posted in a visible location.

Best Environmental Management Practices

Purchase reusable or recyclable products whenever you can. Reduce or eliminate the hazardous materials that you use. Recycling is not only good for the environment, it is good for business. Often times, it is cheaper to recycle and you may even be able to get a return on your recycled goods.
Following are some ways to save your business money:

1) Consider switching to water based cleaners instead of chlorinated solvents.
2) See the "Solvents" section of this pamphlet for ways to re-use solvents and reduce spent solvent, thereby saving money.
3) See the "UV curing resins" section for ways to reduce chemical use.

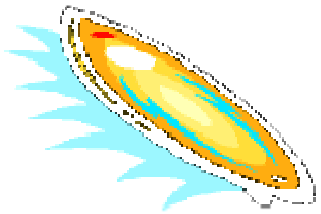
Reduce, Reuse, and Recycle

Pollution Prevention (P2) tips!

- Always keep sanding dust out of sewer and storm drains!

Be sure to obtain an air permit if you are using a dust collection /cyclone system for your sanding procedures. Contact the Monterey Bay Area Unified Air Pollution Control District at (831) 647-9411 www.mbuapcd.org

- Maintain dust collection equipment regularly to insure it is working efficiently.
- Change filters as needed or as recommended by manufacturer.
- Discard dust in the trash. Never dispose of sanding dust to the sanitary sewer or storm drain.
- If you are not using a dust collection system, sweep up all dust and dispose of to the trash. You do not need an air permit if you are using a shop vac to clean dust.



Shaping and Sanding

Discharge of any wastewater other than storm water directly or indirectly to a storm drain, a creek, an underground percolation sump, or other water body is strictly prohibited. All indoor floor drains and/or sumps that are connected to the storm drain system must be permanently plugged.

Floor drains in work areas are prohibited
Utilize dry clean-up methods wherever possible. Clean up spills by using a shop vacuum, sweeping, and/or by using rags or dry absorbents. Remove all unnecessary hoses to discourage employees from washing down floors and outdoor paved areas. Once the dry clean up is complete, floor and paved areas may be mopped.

Take the following steps while mopping floors:

- Clean up spills with dry absorbent mats.
- Sweep the floor. Collect all dust, and paint chips from shaving, and sanding and dispose of properly. Do not wet mop the floor in sanding areas until all visible dust and particles are removed
- Mop the floor using a bucket of non-corrosive cleaner and water diluted as specified on the label. If possible, only spot mop the area that requires cleaning.
- Discharge the mop water to the sanitary sewer via a sink or toilet.

Floor Drains and Floor Cleaning

No hazardous materials or waste may be discharged to the sanitary sewer or storm drain!
Keep a record of disposal of hazardous waste to their final resting place. You are liable for these wastes after they leave your facility!
Hazardous Materials typically used and/or generated by surfboard manufacturers:

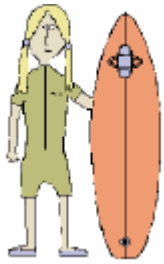
- Solvent
- Paint Wastes
- Resin
- Catalyst

All hazardous materials and waste must be secondarily contained, or placed in a bin that can contain up to 110% of the entire contents of the containers should there be a leak.
Keep these items stored indoors or in a covered area outdoors. Do not store these items near a sanitary sewer drain or near a storm drain. If these items are stored near a drain, a spill has the potential to travel off of your property, making cleanup more costly and exposing poor business practices to the public. If storage near storm drains is unavoidable, keep drain blockers (rubber mats that seal a drain) in close proximity to the drain at all times and place berms around the storage areas.

Check all containers on a regular basis for potential holes and leaks. Leaks on steel drums can appear as rusted out spots or indentations initially. If a leak is discovered, place drip pans or absorbent material under the leak and then attempt to repair the leak immediately. Keep lids, bungs, and tops secured on waste barrels and containers at all times, except when adding waste to containers or dispensing product.

In areas where hazardous materials are stored, make sure there are adequate spill cleanup materials (see the section on Spill Prevention, Control, and Response). Hazardous waste containers must be labeled and stored according to hazardous waste regulations. For more information on Best Management Practices for Hazardous Materials Storage, contact the County of Santa Cruz Environmental Health Services Department at 831.454.2022.

Hazardous Materials Storage and Management



P2 Tips!

- Acetone recycling systems reduce acetone use and can save you money.
- Aqueous cleaners reduce acetone use even more than recycling systems, and can save you money.

Never discharge solvents to a storm drain or down the sanitary sewer. Used solvent is a hazardous waste and must be disposed of properly.

- Spent organic solvents, such as acetone, should be recycled or disposed of as a hazardous waste. If possible, contract with a recycling service that will provide fresh solution.
- Solvent recycling systems allow you to capture and extend the life of your solvent thereby reducing costs. There are several types of acetone recycling systems available.
- If you do not have an acetone recycling system, waste acetone should be stored in closed containers and picked up by a licensed hazardous waste hauler for disposal. Evaporating acetone in open containers is hazardous and may cause health problems.
- Store acetone in a closed container in a cool place.
- Clean solvent spills immediately. Refer to spill prevention control and response page for instructions on spill response information and procedures.
- Consider switching to solvents that do not evaporate as readily and are less volatile. There are several on the market, be sure and research which ones will work for you.
- Consider using aqueous cleaners that rely on mechanical actions to clean resin from tools. You may still need to use small amount of solvent as a final step however, solvent use will be greatly reduced.

Before switching to any type of alternative product be sure to investigate whether or not these techniques are right for your shop. Pay attention to the Material Safety Data Sheets (MSDS) for all products.

Solvents

Make sure that all employees understand and follow Best Management Practices. Mistakes and misunderstandings can lead to violations and costly cleanups!

The following page can be used as a training log. Ensure that all employees are trained on Best Management Practices upon hiring and annually thereafter. Use the following as training and education tools:

- This Best Environmental Management Practices pamphlet.
- Your written Spill Response Plan.
- Drills on emergency spill cleanup.

Post and/or label the following:

- Post multiple copies of this pamphlet throughout your facility.
- Emergency telephone numbers to your local Fire Department and Wastewater Treatment Facility (831.420.6050).
- Post signs above all sinks prohibiting the discharge of vehicle fluids and wastes.
- Label all drains within your facility indicating whether they flow to a treatment system, directly to the sanitary sewer, or to the storm drain.
- Stencil or post signs near all storm drains on your property with a message- "No Dumping-Flows to Ocean."

How do you know you're complying? Use the Green Surfboard checklist at the end of this pamphlet. Enlist a different employee to perform this inspection every month so that they familiarize themselves with the Best Management Practices and solidify their training.

Training

Training Record

Date: _____

Training Topic _____

Trainer Name _____

Trainer Signature _____

Printed Name of Attendee	Attendee Signature

Date: _____

Training Topic _____

Trainer Name _____

Trainer Signature _____

Printed Name of Attendee	Attendee Signature

The best spill control is prevention! Spills are cheaper to clean up when quickly contained! Write a Spill Response Plan. Train employees on the plan annually. During the required annual training, perform drills to ensure that employees can put the Plan into action safely. Adequate spill prevention and clean-up materials must be kept on-site and readily available for use. Examples of such materials are the following:

• Vermiculite (kitty litter) • Absorbent mats - When obtaining mats, ensure that the material you have chosen will absorb solvent. • Portable berms and dikes • Drain blockers - These are rubber mats that are generally stored on the walls and can be quickly thrown down to cover a drain to prevent a spill from going into the drain.	• Absorbent "socks" - These can be used as a temporary berm. • Waste containers – Drums or other UN-rated, DOT approved containers for any wastes generated during cleanup. • Personal protective equipment such as gloves, bunny suits, safety goggles, face shields, etc. • Dry sweep brush and scoop.

Spill kits are available that contain a combination of the above-mentioned materials and are put together based on the quantity of liquid your facility has the potential to release in a worst-case scenario. Plan on getting enough material to clean up the largest quantity of material your shop has onsite Some of the larger suppliers are Lab Safety Supply (www.labsafety.com) and New Pig (www.pigalog.com 1.800.hot.hogs).

Minimize the distance between waste collection points and storage areas and, when transferring wastes, keep lids and containers secured. Attempt to use secondary containment "carboys" when transferring wastes so that if there is a spill, it will hopefully be contained in the carboy. Always use both hands when carrying wastes.

Spill Prevention Control and Response

Posted Example
Spill Control Plan

Spill Response Procedures:

1. **Protect yourself first. Be sure and put on the appropriate personal protective equipment: gloves, goggles, and an apron.**
2. **Contain the spill with trays, or absorbent materials. Do not allow the material to reach storm or sewer drains.**
3. **Check the MSDS for the spilled substance for safe handling and disposition.**
4. **Clean up the spill as directed on the MSDS.**
5. **Use dry clean-up methods first, then wet clean-up methods. Do not send any wash water to the storm drain!**
6. **Package and label all contaminated materials (absorbents, PPE, liquids) for off-site disposal.**
7. **Notify the manager/owner that a spill has occurred (see below).**
8. **Notify the appropriate government agency (see below)**

Spill Response Personnel

Manager Name:	**Pager/Phone:**
Owner Name:	**Pager/Phone:**
Government Entities	***Phone***
Santa Cruz County Sanitation District	**831.477.3907**
Fire Department	
Environmental Health Services	**831.454.2022**
City of Santa Cruz Wastewater Treatment Plant	**420-6050**
After-hours number for wastewater emergencies.	**420-6035**

Posted Spill Control Plans do not need to be elaborate. They should be short and to the point so that they are just enough information to quickly and efficiently prevent a spill from spreading. However, if your facility has an Industrial Wastewater Discharge permit, a written Spill Control Plan is required. Call the County of Santa Cruz Industrial Wastewater Pretreatment Program (831) 477.3907 if you would like an example template.

P2 Tips!

- Carefully calculate the amount of paint needed for each job so that you avoid creating unnecessary waste.
- Use a self-contained recirculating cleaner for spray guns and other paint equipment.

- Carefully calculate the amount of paint and paint thinner (if using) needed to reduce the amount of waste paint. More paint can be obtained if needed whereas having a surplus could result in hazardous material hauling and treatment costs. Be sure to use the appropriate sprayer cup size.
- Wastewater emanating from painting operations that use solvent-based paints including paint gun cleaning wastes is prohibited from being discharged to the sewer or storm drain. Clean spray guns in a self-contained cleaner. Recycle the cleaning solution until it is unusable. Do not use water to control over-spray or dust in the paint booth unless you collect this wastewater. The water should then be treated prior to discharge into the sanitary sewer, and may only be done with a permit from the Santa Cruz County Sanitation District.
- If using latex or water based paint, you may dispose the wastewater to the sewer. It is recommended that the wash water be left to settle for a while, then decant off the water into a drain that goes to the sanitary sewer. Dispose of the ***dried*** paint (latex or acrylic) solids in the trash. Extra paint should be disposed of at Household Hazardous Waste. See fact sheet on environmentally responsible painting.
- Wash water contaminated with ***any*** type of paint should never be disposed of on the ground, to a septic system, or a storm drain.
- Sweep shop floors instead of mopping.
- Keep paint and solvent containers tightly closed in order to reduce evaporation, emissions, and spills.
- Do not overstock on paint, most have an expiration date. Always use paint on a first in/first out basis.

Airbrushing

P2 Tips!

- Switch to low styrene resins or resins that do not contain styrene.

Discharge of *any* type of resin to the sanitary sewer or storm drain is prohibited. Discharge of resin to a sewer or storm drain may cause death to aquatic animals.

- Resin that is not yet catalyzed and hardened is a hazardous substance. Uncatalyzed resin waste must be managed as a hazardous waste and hauled offsite by a licensed waste hauler.
- Once a resin is catalyzed and hardened into a solid, it is a nonhazardous solid and can be thrown in the trash.
- Wherever possible, identify and implement changes that will reduce the generation of resin wastes.
- Store resin in tightly closed containers in a cool well ventilated area.

Polyester

Polyester resin is typically dissolved in styrene monomer. Styrene monomer is both a hazardous air pollutant (HAP) and a Volatile Organic Compound (VOCs).

- As polyester resin hardens, it releases VOCs, which are a source of air pollution. Take precaution to comply with all air quality regulations specific to the fiberglass industry.
- Consider switching to low styrene resins.
- All surfboard manufacturers are required to obtain an air permit through the Monterey Bay Unified Air Pollution Control District. (831) 647-9411 www.mbuapcd.org.

Epoxy

Epoxy resin does not contain styrene monomer and produces less VOCs than polyester resin however, you still must obtain an air permit from the Monterey Bay Unified Air Pollution Control District.

- Never discharge epoxy resin down the drain since epoxy can impair sanitary sewer pipes.

Catalyst

- Methyl Ethyl Ketone Peroxide(MEKP), the chemical used as a catalyst or hardener, is a hazardous air pollutant and is an extremely flammable liquid and vapor. **Never discharge catalyst to a sanitary sewer or storm drain.**
- MEKP must be disposed of as a hazardous waste.

Resins

P2 Tip!

- Switch to UV curing resins! Use the light instead of MEKP.

UV Curing resins are an alternative to traditional resins, and often results in a faster process with more desirable results. Switching to UV resin can reduce problematic environmental and health impacts during the glassing process.

Some of the benefits of UV resins include:

- Reduction of Volatile Organic Compound (VOC) emissions resulting in decreased air pollution.
- Reduction in worker exposure to hazardous emissions.
- Does not require MEKP.
- UV resin is not temperature dependent for curing.
- Speeds up the curing processes and reduces production time.
- Reduces resin waste. Some manufacturers have gone from 80 boards per drum of resin to 120 boards per drum of resin using UV curing resins.
- Resin can be captured and reused at another time.
- Reduces damages from hardened resin in work areas most noticeably work floors.
- Resin will not cure on tools, thereby reducing cleaning costs.

If you are using UV resins you may not need to have an air permit. Check with the Monterey Bay Unified Air Pollution Control District. (831) 647-9411 www.mbuacd.org. They can exempt you from permitting requirements upon inspection.

UV Curing Resins

GREEN SURFBOARD INSPECTION CHECKLIST

All items marked "NO" will require corrective action. Items marked "N/A" do not apply to this area.

YES NO	INSPECTION ITEM	CORRECTIVE ACTIONS/COMMENTS/DATES OF COMPLETION
☐ ☐	1. Ask an employee if they know what Best Management Practices are. Can they list an example Best Management Practice? Have they been trained on BMPs in the last year?	
☐ ☐	2. Are employees carefully calculating paint and chemical needs to reduce the amount of excess waste? Are expired or surplus chemicals returned to vendors?	
☐ ☐	3. Is spent acetone being kept in closed containers and hauled offsite for disposal as a hazardous waste?	
☐ ☐	4. Wastewater emanating from painting operations is being properly managed. Only wastewater from water-based paints can be discharged to the sanitary sewer. No wastewater is entering storm drains.	
☐ ☐	4. All waste containers are properly labeled.	
☐ ☐	5. Only appropriate containers are used for hazardous wastes and all containers are labeled and in good condition.	
☐ ☐	6. All employees are trained on proper equipment operation and maintenance. A routine maintenance schedule is followed.	
☐ ☐	7. Equipment is not leaking any fluids? If so, are leaks adequately contained with absorbents or drip pans until they can be repaired?	
☐ ☐	8. There are no indoor floor drains and/or sumps that are connected to the sewer and/or storm drain system.	
☐ ☐	9. Are all chemical, and hazardous waste containers (in storage or in use) in secondary containment?	
☐ ☐	10.Lids, bungs, and tops are secured on containers at all times, except when adding waste to containers or dispensing product.	
☐ ☐	11. There is a posted version of the Spill Response Plan in areas where hazardous materials are used and stored.	
☐ ☐	12. Dry clean up methods are being used in preference or always before wet clean up methods (those using water).	
☐ ☐	13.All sanding wastes are disposed of in the trash. All dust collection equipment is properly maintained.	
☐ ☐	14. Waste removal manifests and product use logs have been properly maintained for the past three years.	
Pollution Prevention Measures for a Green Business (not required but recommended)		
☐	15. Your facility is using UV curing resin.	
☐	16. Your facility is using an aqueous parts cleaner to clean resin from tools.	
☐	17. Your facility is not using styrene resins.	
☐	18. Your facility is using a self-contained recirculating acetone cleaning system for your equipment.	
☐	19. All plastics, cardboard and any other material that is readily recyclable, are being separated and disposed in designated recycling bins.	