



# THE CHANGING TIDE

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## Paint Picking Pointers

Conference addresses issue of pollution from copper-leaching anti-fouling paints

Home to an estimated 9,000 recreational vessels, San Diego Bay has long been celebrated for its sunny skies and blue waters. A poster child for fun in the sun, it's certainly not a place that brings to mind the phrase "impaired water body." But in recent years, copper pollution from copper-leaching hull paints has led to just such a distinction for the bay's Shelter Island Yacht Basin. It is a label which locals are now working to lose.

As part of that work, members of the San Diego boating community came together in September to discuss possible anti-fouling alternatives and new approaches to the issue of copper-leaching paints at a conference sponsored by the UC SeaGrant Extension Program, the San Diego Port Tenants Association and the San Diego Unified Port District. The two-day *Alternative Antifouling Strategies Conference* brought together 100 participants, representing boaters, marinas, yacht clubs, boat yards, underwater hull cleaners, marine supply stores, antifouling product manufacturers, marine trade associations, environmental non-profits, academics, and regulatory agencies. Participants spent the first day of the conference at workshops devoted to sharing information,

discussing solutions, and making recommendations regarding copper pollution.

Recommendations included: (1) copper levels in marine boat basins should be reduced over the next 5-10 years (However, some attendees advocated a rapid phase-out of copper and other toxic materials in bottom paints, while others favored a switch to reduced-copper paints or paints with reduced-emission rates.); (2) a study comparing the full costs of traditional and non-toxic antifouling strategies, longevity of the products, environmental impacts, and disposal of boat basin sediments after dredging; and (3) a legislative hearing on copper pollution in California's marine waters to help determine the scope and current state of knowledge about the problem. During the second day of the conference, the recommendations were presented to California Senator Dede Alpert, Assemblyman Howard Wayne, Coastal Commission member Christine Kehoe and Regional Water Quality Control Board member Jack Minan.



Copper pollution is a problem in many marinas, both in California and nationally. For more information on this issue, please contact Leigh Taylor Johnson, Marine Advisor, UC Sea Grant Extension Program, at [ltjohnson@ucdavis.edu](mailto:ltjohnson@ucdavis.edu).



### Why is Copper a Problem?

*Shipworms, barnacles and algae—they can create drag, lower cruising speeds and damage wooden hulls. But not on your boat! You've bought the most effective and affordable anti-fouling product on the market. Problem solved, right? Unfortunately, if you're one of the thousands of boat owners using a copper-leaching bottom paint, in addition to killing fouling growth, you may be releasing a potentially toxic chemical into your marina.*

The copper-leaching bottom paints used by many boaters to prevent fouling growth rely on the toxic properties of cuprous oxide (Cu<sub>2</sub>O) to prevent spores and larvae from attaching to the hull of the boat. Unfortunately, these paints also introduce levels of dissolved copper into marina sediments, where they are taken in by bottom-dwelling (or benthic) organisms. The copper enters the food chain as the benthic organisms are eaten by other animals. These copper-contaminated animals are in turn consumed by even larger fish, birds, and mammals. Copper, in accumulated amounts, is toxic to these animals and can eventually pose human health risks.

In addition, the disposal of copper-contaminated mud dredged from boat basins can mean costly clean-ups for marinas, often leading to higher slip rental costs. Boat repair yards must also pass on to boat owners the cost of containing and disposing of copper (considered hazardous waste) removed from boat hulls.

While copper pollution comes from sources other than boats (e.g., copper dust from automobile brake linings washes into storm drains and out to sea), recreational boaters contribute significantly to the problem. Individually, boaters can help decrease the levels of copper pollution in their own marinas by choosing anti-fouling methods which do not use copper, like silicone coatings or slip covers.

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The SMBRF, CIWMB, and CDBW, together with California's recreational boating community, are working to improve the health and quality of our state's waterways. We believe that together, we can all make a difference.



## A Sign of the Times

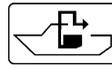
Message to recycle comes to local marina dumpsters.

**F**ound on a marina dumpster near you: **Boater Waste Recycling Signs!** Posted on marina trash cans and dumpsters, the signs give locations and contact information of local recycling facilities for batteries, hazardous waste, used motor oil and oil filters, oily bilge water, and sewage.

To date, this joint effort of the SMBRF, the City of Oxnard, Ventura County and the California Integrated Waste Management Board (CIWMB) has helped purchase and post six hundred recycling signs in seven Southern California coastal harbors and marinas. The

recycling signs can already be seen on dumpsters Ventura and Channel Island Harbors, the Deanza Bayside Village Marina (Newport Beach), Alamitos Bay and Downtown Marinas (Long Beach), and Redondo Beach Harbor. Signs will soon be posted in Marina del Rey, Lake Elsinore, and Big Bear Lake.

*For more information, please contact Miwa Tamanaha at (213) 576-6648 or [mtamanah@rb4.swrcb.ca.gov](mailto:mtamanah@rb4.swrcb.ca.gov).*



## Poop Pollutes!

*But you knew that, right? Here's the latest scoop on the SMBRF's sewage pollution prevention program, straight from the (sea) horse's mouth--program manager Carrie Katsumata.*

**T**hrough funding from the California Department of Boating and Waterways, the Santa Monica Bay Restoration Foundation (SMBRF) will continue its recreational boater outreach program into the 2001 boating season.

We will continue to talk with boaters at boating events in southern California, but we have a few new items on the agenda. First, the SMBRF will make presentations to yacht clubs and marinas to discuss the sewage problem and

also to encourage boaters to use pumpout stations. Second, we will continue to assess the number of available pumpout and dump stations and work with marinas to increase the

number of facilities where needed. Lastly, the SMBRF will partner with the USCG Auxiliary to implement a potty training program to show boaters how easy it is to use the sewage pumpout stations.

The SMBRF believes these actions will be beneficial to the ongoing education program established in the past four years. For more information contact Carrie Katsumata at 213/576-6645 or via email at [ckatsuma@rb4.swrcb.ca.gov](mailto:ckatsuma@rb4.swrcb.ca.gov).

**!** **To our lake boaters:** Don't forget! Federal law prohibits the discharge of untreated sewage into all inland waterways!

**Poop quiz...** How many boaters does it take to create a sewage pollution problem? **Just one!** A single week-end boater flushing untreated sewage into our waters produces the same amount of bacterial pollution as 10,000 people whose sewage passes through a treatment plant. Now that's gross!

## Now On Video...

**New Clean Boating Video promises "titanic" drama with half the hype... and a guaranteed happier ending!**

**I**t doesn't star Leonardo DeCaprio, and it won't be hitting the silver screen (at least not any time soon). It's the Clean Boating Video, and it will soon be making its own brand of waves -- cleaner ones! A documentary-style compilation of interviews and on-location reenactments, the 20 minute video covers topics ranging from alternative hull anti-fouling strategies to how to properly dispose of used oil. The video project -- a joint effort of the Santa Monica Bay Restoration Foundation, the California Integrated Waste Management Board, the California Department of Boating and

Waterways and the UC SeaGrant College Program -- is scheduled for release in November. Over the course of 2001, the video will be shown at yacht clubs and marinas in a series of clean boating mini-seminars and distributed to various organizations and agencies for their use, bringing its environmentally friendly message to thousands of recreational boaters and PWC owners.

*For more information, please contact Miwa Tamanaha at (213) 576-6648 or [mtamanah@rb4.swrcb.ca.gov](mailto:mtamanah@rb4.swrcb.ca.gov).*



**Lights, Camera...** Steve Kim, of the Orange County Health Care Agency, is interviewed by our clean boating video "crew," cameraman Mike Bauch and SMBRF's Carrie Katsumata.

# Wanted:

## Your Used Oil!

**Wondering what to do** with all that used motor oil? If you're a boater in Ventura County, you have several new options for disposing of this hazardous waste, thanks to a grant received from the State of California Resources Agency and the efforts of the Ventura County Solid Waste Division. Through the grant, Ventura County has established new used-oil and oil filter collection sites, launched a county-wide bilge pad exchange program, and has plans to install a bilge water pumpout station in Channel Islands Harbor. To encourage the use of these new disposal opportunities, Ventura County is also coordinating education and outreach on the importance of proper disposal of hazardous waste.



**T**erri Thomas, Waste Management Analyst of the Ventura County Solid Waste Department, took some time to tell us about these new developments.

### **BUILD IT AND THEY WILL COME**

The first step was to establish collection locations. There are now public facilities in Ventura and Channel Islands Harbors and at Lake Casitas where all boaters can take their used motor oil and filters (*see sidebar for location information*). Equipment and supplies were provided to these locations to assist with proper management of abandoned waste.

In addition, an oily bilge water pumpout station is being installed at Channel Islands Harbor's Harbor Patrol Administration Dock. As you probably know, most boats are equipped with a pump that removes water from the bilge. It's a good thing, really -- it protects your boat's engine and keeps it from sinking. Unfortunately, this water can often be contaminated with oil, diesel fuel and

other hazardous materials. When the boat's bilge pump is activated (often automatically), these contaminants are pumped overboard into the ocean along with the water. Boaters in Channel Islands Harbor will soon be able to pull up to the bilge water pumpout station and remove the contaminated water, rather than discharging it into the ocean. The result is less wear and tear on the boat's bilge pump and a cleaner ocean for everyone. The bilge pumpout station should be full operational by the end of this year, so be on the lookout!

Another component of the project, a bilge pad exchange program, was launched last March. Supplies of oil absorbent bilge pads were distributed to Ventura County marinas to give to their tenants. Non-tenant boaters can get the pads from the Channel Islands Harbor Patrol, the Ventura Harbor Port District, or Dave's Fuel Dock in the Ventura Harbor (*see sidebar for location information*). The absorbent pads are placed in the bilge to soak up oil, diesel and other products that may leak into the area. The pads actually repel water, but can absorb up to one gallon of oil or fuel. When saturated, boaters place the pad in a leakproof bag and take it to the location the pad was distributed, or to the nearest oil collection center for proper disposal. Because the oil contained in these pads is hazardous waste, the pads should not be thrown in the trash.

### **GETTING THE WORD OUT**

In August of 2001, postcards will be mailed to 23,000 registered boaters in Ventura County, notifying them of the availability of these new disposal opportunities. Many boaters will also receive an "educational kit," informing them about the new collection services and proper disposal of hazardous waste and bilge water. This kit contains a map of the Santa Barbara Channel, a Guide to Clean and Green Boating (published by the California Department of Fish and Game), a list of disposal locations, and an absorbent bilge pad. Local Boy Scouts assembled 3,500 kits that will be distrib-



## **WHERE TO GO...**

### **Collection Facilities Open to the Public**

#### **Channel Islands Fuel Dock**

(805) 382-3007

Oil, filter and battery disposal;  
absorbent pads and disposal.  
Bilgewater pumpout coming soon!

#### **Ventura Port District**

(805) 477-0474

Oil, filter and battery disposal;  
absorbent pads and disposal.

#### **Dave's Marine Ventura**

(805) 644-6776

Oil and filter disposal; absorbent  
pads and disposal.

#### **Lake Casitas Boat Rentals**

(805) 649-2043

Oil, filter and battery disposal;  
absorbent pads and disposal.

### **For more information on the HHW disposal program in Ventura County,**

you can contact Terri Thomas,  
Waste Management Analyst with  
Ventura County Solid Waste at  
805/648-9211 or  
[terri.thomas@mail.co.ventura.ca.us](mailto:terri.thomas@mail.co.ventura.ca.us).

uted by the US Coast Guard (USCG) Auxiliary through their boater safety classes and dock checks.

### **GIVING THANKS**

This has been an exciting grant to implement and a beneficial experience for all of the organizations and agencies involved, including the Community Environmental Council, the Santa Monica Bay Restoration Foundation, and the cities of Ventura and Oxnard. Ventura County would especially like to thank the volunteer efforts of the Ventura County Boy Scouts of America and the USCG Auxiliary for the major roles they have played in this pollution prevention program.

## SANTA BARBARA, VENTURA, LOS ANGELES & ORANGE COUNTIES

### tidebits

*Did you know?*

*Hull paint toxicants are released over time, especially during underwater hull cleaning. They may be absorbed by mussels, worms, etc. and passed up the food chain to fish, birds and humans, posing health risks. These toxicants also accumulate in marina sediments. Contaminated sediments are expensive to dispose after dredging, and can raise costs for marinas and their tenants.*

#### What you can do...

- Don't clean soft-sloughing or ablative paints underwater.
- Give your boat a freshwater bath to remove saltwater critters.
- Remove growth while it's soft; wipe gently and often.
- If possible, change to dry boat storage, or choose a non-toxic paint.
- Consider using a slip cover.

### On the Lookout...

Officials are asking all coastal water enthusiasts to keep an eye out this winter for *Caulerpa taxifolia*, an extremely invasive species of saltwater alga, discovered on June 12, 2000 in Aqua Hedionda Lagoon in Carlsbad, California. Though widely-used in saltwater aquariums worldwide, when introduced into natural marine ecosystems, the alga can form a dense smothering blanket on any submerged surface, including rock, sand, or mud, wiping out other present plants. In nonnative areas, *Caulerpa* displaces the natural vegetation, and becomes the dominant plant life.



An aggressive clone of this species has been highly invasive in the Mediterranean Sea, where the governments of France, Spain, Monaco, and Italy have been unable to control its spread. Because of its potential for damage to the environment, its import into the U.S. has been banned under federal law.



Any sightings of *Caulerpa taxifolia* should be immediately reported to the San Diego Regional Water Quality Control Board at (858) 467-2952. For more information,



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