

CITY OF SANTA BARBARA WATERFRONT DEPARTMENT

MEMORANDUM

Date: March 18, 2010
To: Harbor Commissioners
From: John N. Bridley, Waterfront Director
Subject: **Annual Review—Clean Marina Program**

RECOMMENDATION:

That Harbor Commission review and consider an annual report on the Department's Clean Marina Program

BACKGROUND:

City Council adopted a Clean Marina Program in 2002, the goal of which is to achieve and maintain, via feasible means and alternatives, best management practices and a clean harbor environment for people, aquatic life and seabirds. It includes six elements:

1. Facilities for Boaters
2. Water Quality
3. Best Management Practices
4. Pollution Prevention and Abatement Projects
5. Education
6. Compliance and Enforcement

To track its progress and effectiveness, the Harbor Commission annually reviews the Clean Marina Program.

DISCUSSION:

1. Facilities for Boaters

a. **Sewage Pump-Outs**

The harbor's five sewage pump-out stations accommodate boaters and reduce the likelihood of sewage spills. The average pump rate is 15 gallons per minute. Sewage pump-out use in FY '09 (6,382 minutes) was a bit below the seven-year average of 7,506 minutes but somewhat more consistent with this average when considering the 5,000 gallons (333 minutes) pumped by a mobile pump-out service begun last year by Mobius Rigging. In total, dock pump-outs and the mobile pump-out removed approximately 100,000 gallons of vessel sewage. **Note:** Use of the launch ramp pump-out remains minimal. Staff keeps this facility operational, but also uses it for emergency spare parts in high-use pump-outs.

Annual Summary: Sewage Pump-out Use (In Minutes)

<u>Fiscal Year</u>	<u>Marina 1 East*</u>	<u>Marina 1 West</u>	<u>Fuel Dock</u>	<u>Launch Ramp</u>	<u>Annual Total</u>
FY '03	5,165	1,253	1,421	73	7,912
FY '04	4,957	1,069	1,310	135	7,471
FY '05	4,758	758	2,183	3	7,764
FY '06	4,384	1,657	2,608	362	9,011
FY '07	3,796	1,269	1,666	27	6,785
FY '08	3,834	1,172	2,207	15	7,228
FY '09	3,690	976	1,464	252	6,382

* Two stations, P/Q finger and R/S finger

b. Bilge-Water Pump-Out

A bilge-water pump-out has operated at the Fuel Dock since 2003. It can accept straight bilge water, bilge water with diesel or bilge water with oil. It cannot accept gasoline, which must be disposed of at a Household Hazardous Waste Center, or “hot loads” with contaminants like soap. The facility separates oil from water, storing oil in a waste-oil container while sending residual water into the City’s sewer system.

Note: The pump-out operates at about five gallons per minute. Thus, 629 minutes of use in 2009 equals about 3,145 gallons of oily bilge water removed—far below what was actually pumped, considering in August 2009 a faulty hour-meter was replaced. It is therefore difficult to ascertain how many gallons were actually pumped in 2009. Staff expects it was on par with previous years and will have more accurate data for 2010.

Annual Summary: Bilge-Water Pump-Out Use (In Minutes)

<u>Year</u>	<u>Minutes</u>
2003	1,086
2004	1,602
2005	1,416
2006	1,353
2007	1,546
2008	N/A
2009	629

c. Debris Nets, Waste Oil Disposal Stations, Fishing Line Recycle Containers

Installed in 2005, 40+ debris scoop nets (available on each finger in all marinas), continue to serve boaters wishing to remove light debris from the harbor. Some nets disappear or rot out each year. In 2009, staff replaced 7 complete nets with poles at a cost of \$663.62, or \$94 each, compared to 15 nets replaced in 2008. A majority of nets replaced in 2009 simply disappeared.

d. Waste-Oil Disposal, Marine Battery Collection, Fishing Line Recycling

The Department operates Waste-Oil Disposal Stations at the Fuel Dock, Marina 2 and Marina 4. These free, key-card-operated facilities also collect oil filters, anti-freeze and oil-absorbent pads. In 2009, the stations received 3,315 gallons of waste oil, compared to 3,300 gallons in 2008. They also received nearly 500 gallons of anti-freeze.

Note: In July 2008, the Department inherited preferential access to a \$23,000 (annual) Used Oil Block Grant administered by the City's Environmental Services Division. The state grant was previously utilized by the Community Environmental Council, which relinquished it when redirecting its mission to renewable energy. At the Waterfront, it helps pay for waste-oil disposal, absorbent bilge pads and hosting a hazmat turn-in event that receives petroleum-based products (scheduled for May 15, 2010). Full transition to Waterfront Department administration of the grant is underway.

The Department provides a marine battery collection bin on the City Pier near the fuel dock. For the first time, staff has begun estimating the number of used batteries deposited at the station, which Interstate Batteries hauls away for free. The estimate (300 batteries in 2009) derives from the assumption that for every battery sold by the fuel dock (150), a battery is placed at the recycle center that was not sold by the fuel dock. Staff believes this service discourages boaters from discarding batteries in the trash or, worse yet, in the ocean.

Two fishing-line (and fishing-hook) recycle containers remain in use at Stearns Wharf. Sea Landing commingles fishing line with other plastics. Keeping fishing line and hooks out of the ocean helps protect mammals and birds from injury or entanglement.

2. Water Quality

a. Monthly "Dry Season" Harbor Water Quality Monitoring

In FY 2009, seven stations tested for three bacterial indicators over five months (May through September) produced 105 water quality samples, two of which exceeded state standards for body contact (Attachment 1)—two more than the number of samples exceeding standards in FY 2008. Though seemingly anomalous, both "upsets" occurred in September at Station 12 in the federal channel. Since enterococcus is associated with mammals, two possible causes are marine mammal waste or an illegal vessel sewage discharge. Staff will continue monitoring test results to ensure no discernable trends develop. A map of harbor sampling sites is included as Attachment 2.

Also in 2009, the Department, working with the Regional Water Quality Control Board (RWQCB), added to its Marina Rules and Regulations and Business Activity Permits a prohibition against the use of non-biodegradable soaps and disinfectants in vessel wash-down water. The RWQCB-required, twice-yearly testing for nutrients resulted in no detections. Those results are also contained in Attachment 1.

b. East Beach Water Quality Monitoring

Coastal Commission permit conditions for the East Beach Mooring Program require water quality testing in the vicinity of the moorings twice a year for primary pollutants like heavy metals and three times a year for bacteria. Baseline samples were taken in 2006 to establish a pre-project water quality profile. Subsequent tests have been consistent with the baseline tests, indicating good water quality in the project area. Results of FY 2009 bacteria sampling for the East Beach Mooring Area are included as Attachment 3. A map of the sampling sites is included as Attachment 4.

c. Dissolved Oxygen Tests

The Department tests dissolved oxygen (D/O) levels in the harbor to predict and mitigate low-oxygen events that can cause fish and invertebrate die-offs. Ten D/O tests were conducted in FY 2009. Results (Attachment 5) indicate lower levels during summer (see 7/34/08) and during periods of algal blooms (see 10/23/08). Although levels at times fell below the optimal base for maintaining healthy marine life (five milligrams per liter), no fish die-offs were reported. Staff will continue testing D/O levels. If levels are dramatically or chronically low, notices are posted on marina gates so crab and lobster fishermen who store their catch in receivers in the harbor can move them outside the harbor to avoid “dead loss.” Fishermen are encouraged to alert the Department if they experience unusually high dead-loss rates, so staff can test D/O levels immediately.

d. Alternative Hull Paints

In response to studies indicating elevated copper levels in many Southern California harbors, statewide research and testing of alternative hull paints has increased in recent years. In Santa Barbara Harbor, three tests are underway:

- i. **Santa Barbara Harbor Patrol** applied a non-copper ceramic epoxy paint to the aluminum hull of Patrol Boat #3 in June 2008. Designed to allow marine growth to slough off a slick hull surface, the test proved unsuccessful at deterring marine growth, even with specified hull cleanings (every three weeks). In June 2009, the Department switched to a different non-copper hull coating, one that contains a zinc-based biocide that its manufacturer claims “dissipates in seconds without bioaccumulation into the environment.” Upon repeated inspections, this hull coating has proved very effective at repelling marine growth and no-reapplication is currently scheduled. A product information sheet for this hull coating is included as Attachment 6.
- ii. **California Sea Grant**, in partnership with UCSB, placed narrow, fiberglass panels (“tiles”) painted with various anti-fouling coatings at several harbor locations in 2008 to help determine which coatings best deter the spread of invasive aquatic species, and what hull-cleaning practices (frequency, level of abrasion, etc.) are appropriate. Those tests are ongoing.

- iii. **Santa Barbara Channelkeeper** (SBCK) coated the hull of its boat with four bands of test paints and one copper-based paint in late 2007. The four bands contained Ecomea 028, a non-metallic anti-fouling biocide that reportedly degrades in less than an hour in seawater. Its use is permitted only under a research program of the state's Department of Pesticide Regulation (DPR).

The SBCK boat was hauled for a one-year inspection in December 2008. Large differences were evident between formulations on the un-scrubbed hull. Some paint surfaces were merely slimed. Others were covered with tube worms. In three cases, hull paints were doing much better than the traditional copper-based paint.

In March 2009, the SBCK boat hull was painted with two new alternative formulations and one copper-based control. It was inspected in November 2009. One of the new alternative formulations was performing well. The other was blistered in small areas and had tube worm growth. Channelkeeper was asked to continue the study, with another inspection scheduled for April 2010. In summary, SBCK's preliminary test results indicate that several of the non-metallic biocides perform as well as traditional copper-based paints.

e. **Coastal Marina Permit**

Also in response to studies indicating elevated copper levels in Southern California harbors, staff for the State Water Resources Board in early 2009 proposed that ports and harbors obtain a newly created Coastal Marina Permit (CMP). As drafted, the CMP would have added considerable regulatory requirements including extensive, frequent water and sediment sampling at an estimated annual cost of \$200,000 for Santa Barbara Harbor. Because most of the proposed requirements would have needlessly duplicated ongoing efforts, many boating groups, including the state Harbor Masters and Port Captains Association, objected. Last August, the Waterfront Director sent a letter to the state, articulating problems with the proposed program (Attachment 7). As a result of these combined efforts, plans for a CMP are currently on hold. A new, collaborative partnership involving the state plus private and public marinas will meet in April 2010 to discuss meshing some requirements of the proposed CMP into an existing statewide Clean Marina Program.

Note: The Clean Marina Program is an industry-sponsored certification program designed to reflect compliance with strict environmental and best-management practices in marinas to prevent ocean pollution. Administered by the Marina Recreation Association, a coast-wide organization of marina owners and operators, the Program has certified 85 marinas since its inception in 2004. Santa Barbara Harbor was certified in July 2006, the 42nd marina certified. A five-year recertification is scheduled for 2011.

3. Best Management Practices (BMPs)

a. Storm Water Pollution Prevention Plan

The Department complies with federal Clean Water Act standards through its Stormwater Pollution Prevention Plan (SWPPP), whose goal is to prevent discharge of pollutants into the harbor. The SWPPP includes a description of the entire Waterfront and potential sources of stormwater discharge as well as BMPs to maintain the area such that stormwater does not become contaminated as it flows off Waterfront property. Scientific consultants working for the Department take runoff-water samples (mostly from parking lots) during storm events, reporting results annually to the RWQCB. They reported no illicit discharges in FY 2009, so no mitigation measures were recommended.

b. Storm Water Management Plan

Last year, the City completed a state-mandated Stormwater Management Plan (SWMP), which includes several Minimum Control Measures (e.g. public outreach, illicit discharge detection and BMPs) to help maintain good water quality in our harbor. As noted in 2 (a) above, the state required a prohibition on biodegradable soaps for vessel wash down as a condition of SWMP approval. Biodegradable soaps are readily available at chandleries, boating outlets, auto shops and grocery stores.

c. Staff and Contractor BMPs

City staff and City contractors observe BMPs during maintenance, repair and construction work at the Waterfront:

- Vacuuming debris on decks or roadways during work
- Power-washing and/or scrubbing roadways and parking lots for oil and stain removal (recycled or deposited into sewer system)
- Monthly trash-enclosure cleaning at Waterfront Center Building
- Placing booms around projects sites near the water
- Placing crew in skiffs in the water to scoop debris
- Monitoring beaches to ensure all debris is retrieved
- Removing any leaking equipment from service

Also, Stearns Wharf maintenance staff has developed an Operation Plan/Checklist to monitor and document activities that prevent ocean pollution.

d. Oil Absorbent Pad Distribution

Funded via the Used-Oil Block Grant noted earlier, the Department continues distributing recyclable absorbent bilge pads, which boaters use to soak up oily bilges and prevent leaks while fueling. The program remains popular and successful. The number of pads distributed in FY 2009 is consistent with previous years:

<u>Year</u>	<u>Pads Distributed</u>
FY '03	15,000
FY '04	18,000
FY '05	20,000
FY '06	17,000
FY '07	14,400
FY '08	14,000
FY '09	17,500

e. Bird Protection

Due to chronic fisherman/bird interactions on Stearns Wharf, staff has:

- Placed bird-protection information signs at the breakwater, rock groin and on Stearns Wharf. These were replaced in FY 2009;
- Inlaid permanent signs on piling “camels,” asking anglers to not feed birds;
- Inlaid permanent signs on picnic tables, asking patrons to not feed the birds
- Inlaid permanent restaurant signs on tables asking patrons to not feed birds; and
- Increased patrols on Stearns Wharf
- Added “Bird Rescues” as a P3 tracking measure for FY 2011
- Worked with owner of Stearns Wharf Bait and Tackle on educating fishermen

4. Pollution Prevention and Abatement Projects

a. “Salad Boat”

A contractor working from the dock and a 13' skiff extracts litter and debris from the harbor on Saturdays and during storm or event-related cleanups. The debris-cleanup effort, augmented by maintenance staff efforts, improves the harbor's appearance, encourages a clean ocean environment and helps maintain access to and from boat slips. Most west-facing docks continued to be primary collecting spots for debris. Others include Area A (see map, Attachment 8) in the northwest corner of the harbor, where a natural eddy and storm drain outlet create a problem area, plus Area B, where storm drains line the north side of the breakwater and Area C, another natural debris-collection point near the small-boat launch ramp. Debris typically includes aluminum cans, plastic bags, tennis balls, cigarettes, snack wrappers and Styrofoam cups.

b. Department of Boating and Waterways (DBW) Abandoned Watercraft Grant

The Waterfront Department continues to obtain annual grants from DBW's Abandoned Watercraft Abatement Fund, which pays 90% of the cost to remove sunken, abandoned or beached boats that the City has been unable to collect from the vessels' owners. The fund helped the City pay to remove a total of 12 abandoned boats in FY 2009.

The current AWAFF grant expires in July 2010. The Department will apply for additional funds this spring. Also, a new law will allow the City to participate in a state-funded Vessel Turn-In Program by which persons may voluntarily surrender ownership of

vessels that would otherwise be abandoned. This will help remove derelict boats from the water, typically from the East Beach anchorage, before they wind up sunk or grounded.

c. East Beach Mooring Permit Program

In an effort to reduce vessel groundings on East Beach, City Council in 2006 approved a plan to establish 46 permitted moorings east of Stearns Wharf. Interest, reflected by the number of permits issued varies. Available mooring sites are filled via public lottery when the number of existing permittees declines to 30 or fewer. There were no mooring failures in FY 2009, other than those caused by chaffed pendants, the maintenance of which is the sole responsibility of mooring permittees. Staff believes the mooring program continues to provide value to the boating public, though periodic reviews of the program are necessary.

d. “Operation Clean Sweep”

After removing a total six tons of seafloor junk from Marinas Two, Three and Four over three consecutive years, the 2009 Operation Clean Sweep targeting Fish-Float docks and the City Pier, was cancelled due to complications related to the Jesusita Fire. It has been rescheduled for May 8, 2010. Staff expects 45 volunteer divers and dock workers to participate. In the past, typical debris removed included barbecues, dishes, plastic barrels, boat propellers, pulpits, outboard engines and an occasional marine battery.

5. Education

Staff disseminates Clean Marina information in *Docklines* (“Clean Marina Corner”) and *The Log* newspaper. It also distributes Clean Marina literature from California Sea Grant, the California Coastal Commission, DBW and the U.S. Coast Guard. Harbor Patrol educates boaters in the field and distributes “pollution packets” describing BMPs for clean boating and boat maintenance. All Harbor Patrol Officers are trained in BMPs for underwater hull cleaning, with five-year certifications. This training helps them monitor hull-scrubbing operations in the field. The Harbor Operations Manager serves as examiner during California Clean Marina certifications in other harbors and will help coordinate Santa Barbara Harbor’s recertification in 2011.

6. Compliance and Enforcement

a. Marine Sanitation Device (MSD) Inspections

Dye-tabling Marine Sanitation Devices (MSDs—“holding tanks”) is required for vessels visiting Santa Barbara Harbor and for new slip assignments and new live-aboard assignments. MSD inspections remind boaters of the Department’s commitment to preventing sewage discharges and help educate them about Clean Marina standards.

The number of MSD inspections in FY 2009 was 14% less than the previous year. Staff believes the discrepancy is due mostly to 1) a reduction in slip trades, transfers or permits issued, down from 175 in FY 2008 to 123 in FY 2009; and 2) a drop in total recreational visitor-boat days in FY 2009 compared to FY 2008.

<u>Year</u>	<u>MSD Inspections</u>
FY 2003	1,230
FY 2004	1,280
FY 2005	1,199
FY 2006	1,259
FY 2007	1,370
FY 2008	1,160
FY 2009	992

b. Discharge Violations

There were 14 known pollution violations in FY 2009, down from 22 in FY 2008. They included discharge of sanding dust, paint chips, sawdust or fiberglass dust in the water, an MSD dye discharge from a leaky seacock, hydraulic fluid washed off the deck, improper fueling and an outboard-engine oil leak. One citation was issued for an egregious discharge of transmission fluid while using it to oil exterior wood on a vessel. The disproportionate ratio of warnings to citations reflects the Department's emphasis on education as a primary enforcement tool.

<u>Year</u>	<u>Total</u>	<u>Warnings</u>	<u>Cites</u>
FY 2005	32	29	3
FY 2006	19	16	3
FY 2007	23	19	3
FY 2008	22	18	4
FY 2009	14	13	1

COST SUMMARY:

FY 2009 PROGRAM COSTS

Storm Water Pollution Prevention Plan	\$ 7,800
* Dry Season Water Quality Testing	N/A
Salad Boat	16,000
** Oil-Absorbent Pads	9,800
** Abandoned Watercraft Disposal	10,300
** East Beach Water Quality Testing	5,000
Replace Dockside Debris Nets	663
Replace Bird-Protection signs	700
** Hazmat Turn-In Disposal	6,900
** Used Oil Disposal	11,300
Total Annualized Program Cost:	68,463
* Undertaken By City Staff	68,463
** Total Reimbursable Cost	43,300
<u>FY 2009 Adjusted Clean Marina Program Cost</u>	<u>\$ 25,163</u>

Clean Marina Program Costs

FY 2003	\$ 40,647
FY 2004	\$ 25,476
FY 2005	\$ 27,627
FY 2006	\$ 32,400
FY 2007	\$ 33,770
FY 2008	\$ 25,900
FY 2009	\$ 25,163

CONCLUSION:

The Clean Marina Program continues to be an important contribution to the Department's overall mission. It highlights the importance of maintaining a clean ocean environment for those who visit, recreate or work in Santa Barbara Harbor, as well as the marine and avian life that depend on it to thrive.

Attachments:

1. Water Quality Sampling Results—Harbor
2. Water Quality Sampling Map—Harbor
3. Water Quality Sampling Results—East Beach Mooring Area
4. Water Quality Sampling Map— East Beach Mooring Area
5. Dissolved Oxygen Sampling Results—Harbor
6. Product Information Sheet—Non-Copper Hull Paint
7. Waterfront Department Letter—Coastal Marina Permit
8. Salad Boat Debris Cleanup Map and Log Sheet

Prepared by: Mick Kronman, Harbor Operations Manager