FEDS CONSIDER BOOST FOR BAY

On April 28, Estuary Partnership Director Judy Kelly spoke before the House Committee on Transportation and Infrastructure, subcommittee on Water Resources and Environment in Washington, D.C.

Her testimony pertained to HR 5061, a bill recently introduced by Representative Jackie Speier that would provide substantial, additional federal support—\$100 million annually—to restore and enhance the Estuary. Representative Speier led off the testimony by underscoring the many benefits the Estuary provides, highlighting some of the most critical challenges facing the Estuary, and calling for a greater federal role in protecting this national resource.

Along with Contra Costa County Supervisor John Gioia and the Bay Area Council's Jim Wunderman, Kelly was asked to comment on the ecological health of the Bay, and the adequacy of current federal, state, and local measures to improve water quality and whether additional efforts are needed.

The three speakers stressed the need to continue to strengthen the federal-state partnership at the heart of implementing the Comprehensive Conservation and Management Plan for the Estuary (CCMP) and the Partnership's new Strategic Plan. Kelly gave an overview of the development of the CCMP and the critical issues that face the Estuary. Supervisor Gioia spoke about the need for improved stormwater treatment, and emphasized the renewed commitment of the state and the region to protecting the Estuary through the work of the new Restoration Authority. Wunderman addressed the connection between a healthy Estuary and a thriving Bay Area economy.

Next steps: HR 5061 could be melded with other bills into an omnibus bill for vote on the House floor; it is possible that additional committee hearings will be held on the individual bills first.



Gioia, Wunderman, and Kelly speak to a Congressional committee.



Bay-Delta News and Views from the San Francisco Estuary Partnership | Volume 19, No.3 | June 2010

A CALL FOR LESS SPILLS, MORE DRILLS

A s crude oil continued to gush into the Gulf of Mexico from BP's Macondo well, scientists, agency officials, and nonprofit representatives met in Oakland on May 11 in a timely conference sponsored by the Estuary Partnership and Pacific Environment on preparing a better response to oil spills in San Francisco Bay. Spills are nothing new to the Bay, with two in the past three years—the *Cosco Busan* and *Dubai Star* incidents—and several more during the past couple decades, including the breakup of the tanker *Puerto Rican* in 1984 outside the Golden Gate, which spewed 1.5 million gallons of oil, a Shell Oil storage tank spill of 480,000 gallons into sensitive wetlands near Martinez in 1988, and the leak of some 80,000 gallons of bunker fuel by the *Cape Mohican* while being repaired at the San Francisco dry docks in 1996.

While those spills pale in comparison to the Gulf disaster, the potential for a catastrophe in the Bay is ever present, prompting environmental groups, fishermen, citizens, local responders, and marina owners to call for better protection and preparedness. Pacific Environment's Jackie Dragon started off the forum. "It takes an *Exxon Valdez* to move us to change our behavior," she said. The

Alaska spill prompted legislative action in California, including the creation of the Department of Fish and Game's Office of Spill Prevention and Response (OSPR). Yet, asked Dragon, "Do we have to wait for another *Exxon Valdez, Cosco Busan*, or *Dubai Star* before we take steps to make sure we're fulfilling OSPR's mandate?"

Case in point: the *Dubai Star* spill, during a fuel transfer operation at Anchorage 9 in the Central Bay last October. Operators had not set any oil-containment boom around the receiving vessel before the transfer. "Current California regulations require operators to either pre-boom or deploy 600 feet of boom within 30 minutes



The *Dubai Star*, refueling at Anchorage 9 in the middle of the Bay. Photo courtesy of OSPR.

of a spill, then an additional 600 feet within the next 30 minutes," Dragon explained. "That wasn't done in a timely manner. I was surprised to learn that we never pre-boom fuel transfers at Anchorage 9. When I asked, the response was: 'Because we're not required to.'" She noted that Washington State and Alaska both require pre-booming for high-volume transfers, and that Washington operators regularly do so in 2- or 3-knot currents. AB 234, a new bill sponsored by Assemblymember Jared Huffman (D-San Rafael) (see page 6), would make pre-booming during lightering and bunkering mandatory in California.

Oil spills are inevitable in petroleum transport, Dragon concluded, and "being prepared is the best defense." "Have we skimped on the best available protection?" she asked. "How much oil







Top left: An oiled scoter being treated at WildCare. Photo courtesy of Alison Hermance, WildCare.

Above: Washing oiled birds is stressful on birds and volunteers. Photo courtesy of JoLynn Taylor, WildCare.

Left: Victim of a spill, this common murre gets greated at WildCare. Note blotch of oil on breast—a single drop can be lethal if ingested. Photo courtesy of JoLynn Taylor, WildCare.

Below: Cleaned grebes in a rehab pool at IBRRC. Photo courtesy of JoLynn Taylor, WildCare.





Submerged ("subtidal") habitat in San Francisco Bay is vulnerable to the impacts of oil and can also be harmed during cleanup. Photo courtesy of Greg Lorenz.

is too much for San Francisco Bay? I hope we take full advantage of this wake-up call. Washington State has a zero-spill goal; that's a good goal for California too."

down." WildCare does initial stabilization before sending victims to the International Bird Rescue Research Center in Cordelia. Birds

"How much oil is too much for San Francisco Bay? I hope we take full advantage of this wake-up call."—Jackie Dragon

Four speakers described recent spills' impacts on the Bay's wildlife and fisheries. Golden Gate Audubon's Mike Lynes recapped the Cosco Busan and Dubai Star events' toll on waterbirds. San Francisco Bay hosts hundreds of thousands of ducks and other birds-70% of all those on the Pacific Flyway. "Birds in the Bay are already under many different types of stress," said Lynes. "They've lost habitat with the reduction of tidal wetlands and riparian areas. A spill is another punch to the gut for these populations." In a post-forum interview. Marc Holmes of the Estuary Partnership and Bay Institute pointed out that the endangered California clapper rail could be wiped off the face of the planet by one spill.

An estimated 6,888 birds were killed by the *Cosco Busan* spill. Most of those collected (dead or alive) were diving ducks, grebes, murres, and cormorants. The postspill Natural Resource Damage Assessment (NRDA) also estimated heavy shorebird casualties. Seventy birds, mostly ducks, grebes, and coots, were recovered after the *Dubai Star* spill. "Both spills occurred in winter, the time with the greatest bird density in the Bay," Lynes noted. "Disruption during winter has impacts on the birds' life cycle throughout the year, and winter with broken wings or open wounds that might normally be rehabilitated must be euthanized since the stress of being cleaned plus treated for other injuries makes survival unlikely.

One drop of oil can compromise a bird's natural waterproofing. "They have to be 100% waterproof before they can be released," said Hermance. First comes washing, a process so stressful the birds' hearts may stop. It's also risky to volunteers; sharp-beaked grebes often go for their eyes. Washed and rinsed patients are moved to a warm room and tube-fed a fish-mash formula. They graduate to warm pools, then cold pools, carefully monitored for signs of incomplete waterproofing: preening, shivering, sinking. As for long-term survival, said Hermance, a pelican brought in to WildCare last fall had been treated and banded in a spill 17 years ago.

Marilyn Latta of the California Coastal Conservancy's Subtidal Habitat Goals Project discussed how oil can damage the Bay's 250,000 acres of marine environments. Subtidal habitats include rocky areas; algal, eelgrass, and shellfish beds; artificial structures; and the mud/shell mix that makes up 90% of the bottom of the Bay. "Subtidal submerged areas are often out of sight/out of mind, but they're intricately connected to the

weather complicates recovery efforts."

Lynes touched on oil's physiological and behavioral effects on birds, and Alison Hermance of WildCare elaborated on caring for oiled birds. WildCare, she said, admitted 20% of the birds taken in after *Cosco Busan*. The initial rescue is stressful itself: "If you can catch the birds, they're already shoreline and the water," she said. They're vital for spawning organisms, critical to the food web, but hard to access for cleanup and restoration. "We lack baseline data for subtidal habitats, and have only a short window to collect post-spill data," Latta said. "And we don't have good techniques to monitor the Bay bottom itself."

The Cosco Busan spill, Latta said, befouled rocky intertidal habitat in the Central Bay as well as eelgrass and native oyster beds. "We need better studies that are habitat specific to analyze the importance of impacts through the food chain." What's known is that oil limits photosynthesis, smothers organisms, and alters community structures. It can penetrate soft sediments through animal burrows and around plant stems and persist for years. Long-term consequences include reduced growth and reproductive output and lower habitat value. Cleanup efforts may do as much damage as the spill itself. Hot water, high-pressure hoses, and detergents can kill subtidal organisms; boats, heavy equipment, and human trampling leave scars. "Restoration needs to address the cleanup as well as the oil impact," Latta said.

Latta's Subtidal Habitat Goals Project has recommendations for protecting the subtidal zone, including minimizing impacts, improving responses, and integrating subtidal considerations into response strategies. "Cleanup technology has not advanced to meet the risks." Latta also urged better mapping and data collection, and pilot restoration projects for eelgrass, native oysters, and other components.

Zeke Grader of the Pacific Coast Federation of Fishermen's Associations addressed what is known about fisheries damage from *Cosco Busan.* "Herring will certainly be impacted," he said. "We know that from Prince William Sound. San Francisco Bay's herring fishery is closed. This was the nation's last urban commercial fishery, the largest herring fishery south of British Columbia. We don't know if we'll be able to bring it back."

The Bay, he pointed out, is a major nursery area for Dungeness crab; the long-term impact of the spill on this important species is unknown. "What we need is an ecosystem information system, a repository of information, and some idea of what we don't know."

Grader's other focus was the missed opportunity to enlist the Bay's fishing community in spill response. "For the decade after *Exxon Valdez*, there was extensive training of fishermen and other mariners for cleanup assistance," he said. That faded in the last decade. "At the *Cosco Busan* spill, we had a port full of fishing boats waiting for the crab season," Grader went on. "Some of them called the Coast Guard, asking 'What do you want us to do?' The response: 'Your people can volunteer at those places where they clean the birds.'" He said his organization had supported legislation to mandate the training of fishermen, which met with "a great deal of pushback from the oil industry." His group will continue to push the Coast Guard, OSPR, and oil companies to ensure training.

"We're sitting like deer in the headlights," Grader summed up. "Our cleanup technology is inadequate and old, but with *Cosco Busan* we weren't even using that very well. This was a relatively minor spill and we were totally unprepared to deal with it. It became a disaster because we didn't respond in time."

Seattle-based environmental consultant and spill expert Fred Felleman seconded Grader's call for training fishermen as spill responders: "Fishermen are a golden resource." He asked why cleaning oiled birds remains a state expense: "It should be the responsible party." (OSPR has submitted a letter opposing Huffman's proposed bill mandating pre-booming (page 6)). He agreed that his agency needs to look at new technology, but cautioned: "A whole lot of people will come to you in the middle of the spill and try to sell you a whole lot of stuff."

Scott Schaefer of OSPR said that his agency has developed a contingency plan for non-tanker vessels (like the *Cosco Busan*, not carrying oil as cargo); tightened performance standards for oil spill response operators (OSROs) based on their timeliness in drills; and identified and trained at environmentally sensitive sites in the Bay.

What went wrong in the *Cosco Busan* incident, Schaefer said, included "medical issues with the pilot," visibility, lack of timely notification by the vessel, and a "wholly inaccurate" first estimate of the spill volume. The Marine Spill Response Corporation, the first OSRO on scene, responded within six hours. Overall, he said, 42% of the oil was recovered; 10 to 15% is considered "good." He said OSPR had reacted to other flaws in the response by trying to improve liaison with local governments, creating a "Local Government On Scene Coordinator" position in the Unified Command, making equipment grants

"This was a relatively minor spill and we were totally unprepared to deal with it. It became a disaster because we didn't respond in time." —Zeke Grader

Speaking for the Coast Guard, Captain Paul Gugg and Lieutenant Commander Gus Bannan addressed the Dubai Star spill and the Coast Guard's not yet officially completed investigation. Gugg said, "We suspect that due to the failure of a [Dubai Star fuel] valve, fuel continued to enter the number 2 port tank as they moved on to the next tank. The high level alarms did not activate. Had we had more vigilant monitoring of the event, perhaps the spill would have been noticed before it overflowed the vessel." Bannan acknowledged "a lot of communication issues," and described cleanup efforts on the Alameda shoreline at Crown Beach (almost completed) and Crown Cove. "Our investigation did not indicate there was no one [of the Dubai Star's] crew on deck," Bannan told a questioner. He said the Coast Guard was neither for nor against mandatory pre-booming

to local governments, and developing a plan for handling "convergent volunteers."

In the Dubai Star spill, Schaefer noted inadequate monitoring ("When transferring fuel, the people on the vessel should make sure the flow has stopped") and notification ("a big issue"; the vessel did not make the four required initial telephone calls on time). Noting that the Dubai Star was not pre-boomed during the transfer, he said the currents at Anchorage 9 were too heavy for safe and effective pre-booming. "We haven't found studies on when it's worthwhile to preboom. We're looking at requiring pre-booming until the transfer company can prove they can deploy boom effectively." Schaefer said the Bay's currents were stronger than those in Puget Sound (other, later speakers disputed that statement). Asked what OSPR needs in order to improve prevention, he replied, "That's



Local, state, and federal agencies test new oil spill response cise after the Cosco Busan spill (July 2008). Photo courtesy N

well beyond state or Coast Guard jurisdiction. We can monitor more operations."

Contra Costa County Emergency Services Manager Chris Boyer and Janell Myhre of the Marin County Sheriff's Office of Emergency Services provided local government perspectives. Boyer recalled the confusion that followed *Cosco Busan*: a command post relocated three times, logistical problems, liaison issues. "We were looking for copies of maps and staff reports," said Boyer. "At one point an OSPR employee told me to make a Freedom of Information Act request."

Offered resources went unused: "Chevron provided all their booming and a boat, but they were never used." Local governments weren't all on the same page: "We had no control over the cities. Many were off on their own issues and didn't coordinate with the counties." Although interagency coordination has improved since *Cosco Busan*, Boyer said there were still command post problems during the *Dubai Star* response.

Myhre emphasized organizational changes since *Cosco Busan*: "Normally local government is outside the unified command, working through a liaison. That liaison function didn't work well during *Cosco*



strategies in Bolinas Lagoon in the first full functional exerlarin County Sheriff's Office of Emergency Services

Busan Now we have the Local Government On Scene Coordinator as part of the unified command," reporting back to all the Bay Area counties through a conference call mechanism. Her Area Committee has joined response drills, and she said the new system worked well in the Dubai Star incident. But local government participation, she said, may be constrained by OSPR's budget. Myhre also acknowledged a tradition of volunteerism that began with the battle for Bolinas Lagoon in 1971. "When they were told volunteers were not needed in Cosco Busan, nobody understood," she said. A plan to train volunteers and integrate them with all levels of government is still in draft form.

San Francisco BayKeeper's Deb Self spoke for a network of 200 WaterKeeper groups around the country, including five on the front lines in the Gulf: "Most of our issues are sewage and stormwater, the regular daily threats. But we can be called into action in a spill. With *Cosco Busan*, we got 5,000 calls and emails from would-be volunteers. We were caught off guard and at a loss as to how to plug our resources into a functional system." Eventually, Self said, the Coast Guard stepped in. "We heard



A pre-boomed ship in Puget Sound. Most of the oil spilled here was contained near the ship. The U.S. Navy now pre-booms all of its fuel transfers. Photo courtesy of the Washington State Department of Ecology.

frustration from the state and the Coast Guard: 'We have a big spill and everyone comes out—but you just watch; the nongovernmental organizations and local governments are going to disappear.' I think we proved that theory wrong."

Self said BayKeeper had made 191 recommendations for improving spill response a year after *Cosco Busan*. These included catching the spill immediately, creating an effective information flow, integrating local officials, and engaging local volunteers. "We have good plans in place," she said, "but culture-wise we still have a ways to go."

Oceanographer Toby Garfield of San Francisco State University's Romberg Tiburon Center explained how high-frequency radar monitors Bay and coastal currents. Sixty units are in place, three inside the Bay between the Golden Gate, Bay, and Richmond-San Rafael bridges. Their data have been used to simulate the trajectory of oil spills. "We can run scenarios at any time and start building up a history," he said. "With two more antennas we might be able to cover Anchorage 9 [where ship refueling takes place]. But there are no operating funds at the state level beyond this year. The lights will go out on this program."

Marie Liu, consultant with the State Senate Committee on Natural Resources and Water, reviewed the legislative response to Cosco Busan: "The legislative process, for better or worse, is very reactive." Among bills that passed and were signed by Governor Schwarzenegger, SB 1739 (Simitian) strengthened training requirements for OSROs, AB 2031 (Hancock) required notification of local governments and created local spill response manager positions to train volunteers, AB 2935 (Huffman) incorporated volunteers into the planning process and established a fisheries closure procedure, and AB 2911 (Wolk) improved funding for the Oiled Wildlife Care Network.

HELP FROM HARBORS

Ted Warburton, harbor master with the City of Brisbane Marina, sent a one-ton truck to Treasure Island during the *Cosco Busan* spill, wanting to help, to pick up boom—but was turned away. Says Warburton, "We asked, 'Would you please give us boom and barriers so we can protect our marina?'" The state and federal response, says Warburton, was that paperwork needed to be filled out first. In contrast, the local government agencies/offices of emergency services worked well with the marinas, says Warburton. "But they had the same problem we did, finding out what resources are available, where are they, and who can get them?" Warburton wants to have enough equipment on standby to protect his harbor-and help others around the Bay-during the next spill. "We think we have a better handle from a local perspective on these spills sometimes and how they are migrating around the Bay. During the Cosco Busan, I got a call from the South Beach Marina in San Francisco telling me, 'Hey Ted, there's a lot more oil all over the place than what's being reported.' We had a phone tree with other marinas; we could have helped a lot more had we been allowed to." Because harbor masters are—literally—in contact with the waters of the Bay daily, says Warburton, "We often know where the sensitive habitat areas are, Colma Creek [home to endangered clapper rails], and Brisbane Lagoon, for example. We see all kinds of wildlife at the marinas-fish and skates under the docks, grebes and scoters-we could coordinate with wildlife rescuers too. It would be nice to know where the deployable resources are."

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Vetoed bills included SB 1056 (Migden) requiring a two-hour response to spills and notification of all nine Bay Area counties, AB 2032 (Hancock) increasing the per-barrel oil fee for the OSPR Administrative Fund, and AB 2547 (Leno) to provide technical grants for improved oil spill response technology and set up a universal mutual aid agreement among responders. Liu said some of these ideas are likely to resurface as the Gulf spill provokes a reevaluation.

Better spill cleanup technology is out there, Felleman said: "Norway has the better mousetrap. They were disappointed by industry's failure to develop oil spill response technology so they created their own boom: three types called Current Buster, Ocean "The threat of someone watching is a good thing." The U.S. Navy is catching on: "They used to have a bad oil spill record in Puget Sound. Then they started pre-booming. Recently the USS Abraham Lincoln had a transfer spill near dark during a major storm. The Navy had that double-boomed; not a drop got out."

Panelists singled out collaboration, training, and the danger of complacency. Some contended the Bay Area is better prepared for a spill today than it was three years ago. Jackie Dragon was more cautious: "We've heard excellent stories of progress, but some progress is on paper."

Dragon says that while the threat of large spills from tanker and cargo vessel collisions

"You can pull this stuff through water at 3-5 knots and can actually store oil."—Fred Felleman

Buster, and Harbor Buster. You can pull this stuff through water at 3-5 knots and can actually store oil. It's almost like a skimmer." The US and Canadian navies have adopted Norwegian boom technology, but that's as far as it's gone. "It's not cheap," he added.

"Pre-booming is not rocket science," said Felleman. Since 2004, the procedure has been required in Washington State for transfers of over 500 gallons per minute. Alternative measures are allowed if prebooming would be unsafe or ineffective. Compliance has been high, with a few exceptions like BP's 68% pre-booming rate. "In the Columbia River where currents are swift, 80% of operators pre-boom. Statewide, 84% of fuel transfers are pre-boomed." Effective monitoring helps: and elisions in the Bay is ever present, pre-booming during fuel transfers at least captures the "low-hanging fruit."

The forum also highlighted the fact that better containment and recovery technology, and who pays for it, need to be addressed. Says Marc Holmes, "Much of the post-*Cosco Busan* legislation was window dressing. There were no serious financial penalties, no serious regulatory requirements, no independent science panels to recommend something better than we have now." He said the legislature could have tackled the issue of antiquated spill response technology by requiring the oil and shipping companies to fund research and development efforts. JE/LOV

Watch some video highlights from the forum at www.sfestuary.org



A killer whale in Puget Sound enjoys oil-free waters, thanks to strong spill prevention measures. Photo courtesy of Fred Felleman.

BOOM BILL

State assemblyman Jared Huffman (D-San Rafael) says the idea for AB 234—which would



require ships to put out precautionary boom before they begin refueling in the Bay—came after the two recent oil spills in the Bay. "In the aftermath of the *Cosco Busan* and *Dubai Star*," says Huffman, "the question was, what can we learn about the rules and practices surrounding the refueling of these vessels in the middle of the Bay? One of the things we found is that our rules are not as protective as what you see in Puget Sound, for example, where they pre-boom just in case something goes wrong."

Huffman says he thinks that instead of the "fire drill exercises" that usually go on after a spill, preventive measures need to be taken beforehand. "In the *Dubai Star* the folks conducting the refueling operation were not paying attention. Oil was spilling over the side while they were on the other side of the boat doing something else. Prebooming would have contained that."

He says the pre-booming required by AB 234 is obviously not a "silver bullet" that will remedy all spills, but that a *Dubai Star*-type spill is a "situation that just never needs to repeat itself. We're talking about spills that are not that huge—this is not going to be the *Exxon Valdez*—yet think about the potential for something to go wrong. Why have any oil spill ever foul up marinas or sensitive wildlife areas or other parts of San Francisco Bay? This is one way we can prevent that."

Huffman says he is aware that OSPR is reluctant to require pre-booming, but he is not satisfied with their objections: "They range from [OSPR] saying that the tides don't allow it; however, we've looked at Puget Sound and other places and they pre-boom in tidal conditions and currents every bit

Places to Go and Things to Do



JUNE 15-17 TUESDAY-THURSDAY INTERNATIONAL GROUNDWATER/AGRI-CULTURE CONFERENCE

TOPIC: Toward Sustainable Groundwater in Agriculture LOCATION: San Francisco Airport Hyatt Regency, Burlingame SPONSOR: Water Education Foundation and UC Davis (916) 444-6240; www.watereducation.org

JULY 14-16 WEDNESDAY-FRIDAY BAY-DELTA WATER TOUR

TOPIC: Bay-Delta water issues LOCATION: Tour begins and ends in Sacramento SPONSOR: Water Education Foundation (916) 444-6240; www.watereducation.org

JUNE 15-17 TUESDAY-THURSDAY INTERNATIONAL GROUNDWATER/AGRI-CULTURE CONFERENCE

TOPIC: Toward Sustainable Groundwater in Agriculture LOCATION: San Francisco Airport Hyatt Regency, Burlingame SPONSOR: Water Education Foundation and UC Davis (916) 444-6240; www.watereducation.org

AUGUST 1-6 SUNDAY-FRIDAY 95H ANNUAL ECOLOGICAL SOCIETY OF AMERICA MEETING

TOPIC: Global Warming LOCATION: Convention Center, Pittsburgh PA SPONSOR: Ecological Society of America www.esa.org/pittsburgh

SEPTEMBER 27-29 Monday-Wednesday 6th Biennial Bay-Delta Science Con-Ference

TOPIC: Ecosystem Sustainability: Focusing Science on Managing California's Water Future LOCATION: Sacramento SPONSOR:Delta Science Program and Delta Stewardship Council



JULY 14 WEDNESDAY BASTILLE DAY AT THE NATIVE PLANT NURSERY

LOCATION: Palo Alto Baylands www.safesfbay.org; (510) 452-9261

JULY 17 Saturday

SUNSHINE DAYDREAMS AT EDEN LANDING

LOCATION: Eden Landing Ecological Reserve, Hayward/Union City www.safesfbay.org; (510) 452-9261

SEPTEMBER 25 SATURDAY CALIFORNIA COASTAL CLEANUP DAY

LOCATION: Coastal locations statewide SPONSOR: California Coastal Commission www.coastal.ca.gov/publiced/ccd/ccd.html

PUT THESE IN YOUR POCKET

New to Bay Area nature? Or maybe you need to reconnect with our local ecosystems...If so, four new colorful guides with illustrations and minimal but helpful text by the prolific John Muir Laws are for you (Heyday Books and Audubon California, 2009). The guides are organized by habitat type, which makes them ideal for newbie naturalists: "Things you'll see along creeks, rivers, and ponds; at the beach and on the bay; among the oaks and pines; and on grassy hills and fields." Each guideavailable for \$5.95 or as a complete boxed set for \$21.95-features the creatures and plants you are most likely to come upon while exploring that habitat.

inprint & online

Bottled and Sold: The Story Behind *Our Obsession With Bottled Water* by Peter Gleick. Island Press, May 2010. www.pacinst.org/bottledandsold

Introduction to California's Beaches

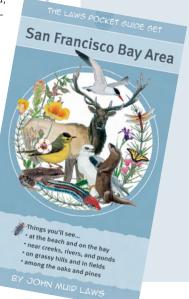
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ESTUARY NEWS is your news source on Bay-Delta water issues, estuarine restoration efforts, and the many programs, actions, voices, and viewpoints that contribute to implementation of the S.F. Estuary Partnership's Comprehensive Conservation and Management Plan (CCMP). Views expressed may not always reflect those of Estuary Partnership staff, advisors, or CCMP committee members. ESTUARY NEWS is published bimonthly and is funded by the San Francisco Estuary Partnership.

BOOM BILL (CON'T FROM PAGE 6)

as strong as what we face in San Francisco Bay. I'm not buying what I'm hearing. If conditions are too dangerous, maybe we shouldn't be refueling at all at those times."

Huffman adds that OSPR "didn't like any of the bills that were introduced after the *Cosco Busan* either, the typical response from agencies that don't like to acknowledge that there are problems or accept fixes from the legislature. So there there's the usual bureaucratic resistance and inertia. Hopefully in the aftermath of the Gulf spill, public pressure and common sense will prevail over bureaucratic status quo. We don't ever have to have a refueling incident like this again if we have the right policies in place, so why not do it?"

Huffman had one successful bill (AB 2935) introduced after the *Cosco Busan* spill, requiring better volunteer incorporation and

increased protection for sensitive wildlife habitats. AB 234 goes before the state senate in early June; if it passes the assembly, Huffman hopes it will go before the governor by the end of the summer. For more on the bill, see http://democrats.assembly.ca.gov/ members/a06/leg.aspx. LOV

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