New Progress Cleaning Up Bay Industrial Pollution

San Francisco Baykeeper's Bay-Safe Industry campaign is off to a strong start. Three more Bay Area industrial facilities have recently agreed to clean up their pollution, and we've filed suit against one of the Bay's worst industrial polluters. We're also advocating for tighter controls on pollution from industrial facilities, from the largest to the smallest, across the state.

The Bay-Safe Industry campaign is a multi-year effort aimed at controlling one of San Francisco Bay's most widespread pollution problems—



Baykeeper is suing to compel cleanup of runoff pollution from the Levin-Richmond shipping terminal. The facility allows dust from hundreds of thousands of tons of toxic materials stored on site to be blown and washed into San Francisco Bay.

rampant, illegal runoff into the Bay from industrial facilities.

Although about 95% of the Bay Area's 1,300 industrial facilities have violated the Clean Water Act in recent years, underfunded California regulatory agencies inspect and require improvements at fewer than 5% of these facilities. So Baykeeper is stepping in.

Our latest victories include legally-binding agreements to reduce pollution from:

- Lakeside Nonferrous Metals, an Oakland metal recycling company;
- Berkeley Forge & Tool, Inc., a manufacturer of machine parts for heavy mining equipment; and
- Zanker Road Resource Management, a San Jose landfill and recycling facility that has been contaminating wetlands of the Don Edwards National Wildlife Refuge.

All three facilities are making major upgrades to control their runoff pollution. For example, Lakeside is moving one of its two facilities indoors to prevent storm water contamination, and Zanker is shutting off several of its worst discharge points.

New Case to Clean Up Toxic Materials

Baykeeper is also taking on one of San Francisco Bay's worst industrial polluters, the Levin-Richmond Terminal Corporation. This shipping terminal stores hundreds of thousands of tons of materials such as metallurgical coke, sand, and bauxite, often in huge exposed piles on the shoreline. This allows harmful materials, including petroleum coke dust containing cancer-causing chemicals, to be washed and blown into San Francisco Bay. Levin also may be contaminating the Bay with the banned pesticide DDT.

Legal action against industrial facilities that are significantly polluting the Bay—like Levin—is an important tool of our Bay-Safe Industry campaign (see "Clean Water Act Lawsuits: A Powerful Tool for Curbing Industrial Runoff Pollution," page 6). The campaign

also includes advocacy to strengthen regulations on industrial storm water.

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SAN FRANCISCO

San Francisco Baykeeper is the pollution watchdog for San Francisco Bay, using science and advocacy to reform policy and enforce clean water laws for the benefit of the Bay ecosystem and Bay Area communities.

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Letter from the Executive Director



Baykeeper is excited to be celebrating new victories in our **Bay-Safe Industry campaign**. This campaign is a multi-year effort to curb a major pollution problem in San Francisco Bay: contamination from industrial storm water runoff. We're thrilled that so many of you have signed up to be **Volunteer Pollution Investigators** for the campaign. Thank you for supporting this vital work!

Plus, it's been five years since the **Cosco Busan** oil tanker leaked more than 53,000 gallons of oil into the Bay—and time to take a look at the impact of that disaster.

In staff news, I want to welcome our newest team member, **Amanda Garcia**, managing attorney. Amanda has joined us to oversee the legal work in our Bay-Safe Industry campaign. We're also delighted to have long-time team member **Sejal Choksi-Chugh** serving as our new senior staff attorney.

And we have terrific new additions to the Baykeeper Board of Directors. **Diane Livia** works in habitat restoration at the San Francisco Public Utilities Commission, and also brings communications skills from a career in public broadcast media. **Tina Swanson**, **Ph.D.**, directs Natural Resources Defense Council's Science Center, and prior to that served for 12 years as lead scientist, then Executive Director, of the Bay Institute.

In addition, we want to thank the **team of interns** who worked with us this summer. These law school and college students made tremendous contributions to our mission this year! Thanks to New Sector Alliance AmeriCorps Fellows Tom Colosky (Princeton University) and Shirley Qian (Cornell University), and to interns Peter DiMarco (Stanford Law School), Shana Inspektor (Santa Clara Law), and Li Yugen (Hong Kong Baptist University).

Finally, I want to say a big thank you to the 26 swimmers who swam 9 miles across San Francisco Bay in September for Baykeeper's **Swim for the Bay**. We're proud of their accomplishment and honored that they swam in support of Baykeeper's work for a clean and healthy Bay.

Baykeeper is a small organization that succeeds against big polluters because we don't take action alone. Our generous supporters are by our side. Thank you for entrusting us with the responsibility to work as hard as we can on your behalf to safeguard San Francisco Bay from pollution!

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Deb Self San Francisco Baykeeper Executive Director

During the America's Cup 2012 races in August, the Baykeeper boat was out on the Bay every day, an official marshal boat helping maintain the race course boundary.



Cosco Busan Oil Spill Five Years Later—Can It Happen Again?

By Deb Self

November 7, 2012 marks the five-year anniversary of the *Cosco Busan* oil spill. That morning, the 900-foot container ship left Oakland in heavy fog with low visibility. The ship side-swiped a Bay Bridge tower, ripping open two fuel tanks and pouring more than 53,000 gallons of heavy bunker fuel into San Francisco Bay.

Initially, the ship reported 400 gallons of oil had spilled. But a long plume of thick, floating bunker fuel quickly surged south of the bridge on the incoming tide. As the tide receded, the oil rushed out the Golden Gate, coating Baker Beach, Ocean Beach, and the north coast as far as Bolinas Bay. Oil soaked deep into Muir Beach sand and coated birds in Rodeo Lagoon. Then it streamed back into the Bay on the flood tide and began to spread.

For the next several days, the oil ricocheted around the central Bay, leaving a suffocating ring along the shorelines of the East Bay, Richardson Bay, Alcatraz, and Angel Island. Public outrage mounted as media coverage showed oiled birds struggling in the surf and globs of oil coating beaches. Many who might have helped contain the damage complained of being shut out of the response, including willing volunteers and city and park officials who weren't notified of the spill before it hit their shorelines.

Eventually, on-the-water skimmers and beach cleanup crews were deployed. But due to failure to contain the spill early, much of the damage to local wildlife and sensitive habitats had already been done.

How badly was the Bay impacted? Researchers surveyed species in various Bay habitats for signs of oiling and to assess their numbers; however, there was no baseline to compare the data to. Little research had been done before the spill on the normal population levels of the many species that live in the Bay or stop here during migration.

Six thousand birds were killed, and more oiled. Western grebes and surf scoters were especially hard hit; their numbers have decreased rapidly in recent years. There was likely significant damage to the small burrowing creatures at the base of the Bay's food chain. A generation of herring embryos was wiped out by oil-caused deformities, although last year's huge herring spawn may indicate that the Bay's last commercial fishery is recovering.

Five years later, has the rest of the Bay recovered? It's hard to know. Little research has been funded since the spill to measure how well different species are doing. Data from other spills, however, suggests that impacts may linger for decades.

Could a disaster like this happen again? Our region has made valuable progress in prevention and response preparation—but more improvement is certainly needed.

I served on the independent review panel that first evaluated the *Cosco Busan* response, and we created nearly 200 recommendations for preventing a similar spill and making future response efforts more effective. Since then, Baykeeper has worked



A Western Grebe, one of the Bay bird species hit hard by the Cosco Busan oil spill. Data from previous spills suggests that impacts to the Bay and its wildlife may linger for decades. Photo credit Nerissa Villas/Flickr

steadily to implement these recommendations by attending local oil spill planning meetings, participating in on-the-water drills, advising the state's oil spill response agency, and helping develop key oil spill legislation in the California Legislature.

If another major spill happened, would sensitive shorelines be better protected? Baykeeper has invested a lot of time and advocacy to make the answer to this question "yes." We supported six state oil spill bills signed into law in 2008 that mandated important changes. As a result, coordination among government agencies has improved—response officials now notify local governments when a spill happens in the area. And many cities and park agencies now have personnel dedicated to oil spill response preparation who participate in regular drills.

But local oil spill response plans still depend on cleanup managers and crews being brought in from as far away as Texas. To protect sensitive shorelines from oil in the crucial first hours, local governments should be prepared with equipment, staff, training, and solid plans for handling volunteers, so they can serve as the first line of defense.

In addition, a lack of funding threatens the state's ability to rescue and care for wildlife during an oil spill. This year Baykeeper sponsored state legislation that would have fully funded oiled wildlife rescue with a small increase in fees on oil and shipping companies—but the oil industry killed it.

There is still much more to be done before the Bay Area is fully prepared to handle another disaster like the *Cosco Busan* spill. Baykeeper remains dedicated to improving oil spill prevention and response. Thank you for the support that allows us to keep working toward assuring that any oil spill is cleaned up before the Bay's wildlife and shorelines suffer damage.

Baykeeper Volunteers Remove Nearly 400 Pounds of Trash On Coastal Cleanup Day

In September, close to 40 Baykeeper volunteers cleaned up nearly 400 pounds of trash from India Basin Shoreline Park, as part of California's annual Coastal Cleanup Day. Baykeeper has cleaned up the park, located on the city's eastern shoreline in the Bayview-Hunter's Point neighborhood, since 2008. Due to our efforts and the work of local neighborhood volunteers, we've seen a steady reduction in the amount of trash accumulating along the park shoreline. Thanks to our cleanup sponsor, Teva; our cleanup partner, REI; and all the volunteers who pitched in!



India Basin and other eastern shorelines collect a disproportionate amount of San Francisco's trash and marine debris, as compared to western and northern shorelines.



Volunteers dug into the bushes and tall grass along the roadway. These areas had trapped discarded fast food litter that otherwise would have been washed into the Bay.



The trash collected ranged from entire bags of household garbage, to wings from an angel costume, to tiny fragments of plastic and glass—and a large percentage was food wrappers and cigarette butts.

Bay Species Spotlight: Plainfin Midshipman

It's got lights on its stomach and it wakes up houseboaters. The plainfin midshipman *(Porichthys notatus)* is an oddball among the more than 35 species of native fish that depend on San Francisco Bay.

During early summer, the sleep of Sausalito houseboaters can be disturbed by the plainfin midshipman's rumbling midnight mating hums. Also called a toadfish, this species has two types of male competing for one type of female.

Type 1 toadfish males, a foot long and eight times larger than females, build a nest in tidal mud under a rock. Type 1 males then use their stomach bladders to hum advertisements of their nest, hoping to draw a female to lay eggs. The loud humming can last up to an hour. Females sometimes answer with short grunts or growls.

Once a female lays her eggs in a Type 1 male's nest, a Type 2 male, who is about the same size as the females, quickly sneaks in. He fertilizes the eggs before the Type 1 male gets a chance. Type 1 males then guard the bright gold eggs under the rock for about three weeks, until they hatch.

The "midshipman" in this fish's name comes from its photophores—light-emitting organs similar to those of fireflies, used in mating displays and possibly to confuse predators. The midshipman's underside has hundreds of photophores in rows, which reminded the marine biologist who coined the name of a British naval uniform's buttons.



Photo credit Ian Redan

Plainfin midshipmen are an important food for seals, sea lions and migrating eagles. During the seasons when they are not spawning as threesomes in the Bay, toadfish live as deep as 1,200 feet in the ocean.

You can help make the Bay safer for midshipmen, other native fish, and the birds and wildlife who feed on the Bay's fish. Check out our tips for Bay-friendly home and garden projects on page 5.

Tips: Projects to Make Your Home and Garden Bay-Friendly

Your home and garden can help protect San Francisco Bay by minimizing pollution from storm water during rainy winter months.

The rainy season brings a surge of pollution into the Bay. During storms, roofs, paved driveways, sidewalks, roads and parking lots send rainwater rushing into gutters and storm drains. Along the way, the rain collects trash, oil, pesticides, fertilizers and other pollutants. In most Bay Area communities, water that flows into storm drains doesn't get



Photo credit Arlington County/Flickr

treated at a wastewater treatment plant. Instead, storm water, laden with all the pollution it collects, gets emptied directly into creeks and sloughs that flow into the Bay, or into the Bay itself.

Storm water pollution is one of the largest sources of contamination in the Bay. It is also difficult to control, because it comes from so many places and picks up so many different kinds of pollutants.

Reducing storm water pollution from your property is a small step. But with seven million people living in the Bay Area, small steps add up. The home and garden projects below all help reduce rainy-season pollution in the Bay, and they also help conserve water and prevent flooding.

- 1. Install a rain barrel. Rain barrels are easy, low-cost ways to collect and use rain water to irrigate a garden. Rain runs from roof gutters to a pipe that empties into a barrel. A screen keeps the barrel free of leaves, debris and mosquitoes. Near the barrel bottom, a hose is attached for irrigation. Roofs are an amazing source of water. In an average rainfall year, a 1,000 square-foot roof in San Francisco can collect over 13,000 gallons of rain. Rain barrels typically hold 50 to 100 gallons; you can install more than one. Larger storage tanks, called cisterns, can be installed above or below ground
- 2. Install a rain garden. A rain garden is a landscaped area planted with wild flowers and other native vegetation that soaks up rain that flows off a roof, driveway or other impermeable surface. In a storm, the rain garden fills with a few inches of water that slowly seeps into the soil, where pollutants are filtered naturally. Rain gardens absorb 30% more water than the same area of lawn.

- **3. Install a rain patio.** Rain patios work similarly to rain gardens. Baykeeper Executive Director Deb Self has a backyard patio with a permeable surface of layered gravel that absorbs rain that falls on the roof of her home. The roof drain pipe, which used to send water into the street, now leads to the patio. Once the rain reaches the patio, it sinks into a gravel-filled hole below. From there, water percolates into the soil for natural pollutant filtering.
- 4. Repave your sidewalk or driveway to absorb rain. If your sidewalk or driveway needs replacing, consider new paving materials that keep rain from running off into the gutter. A special kind of concrete called pervious concrete allows rain to pass through into the soil below. Another option is interlocking concrete pavers separated by joints filled with small stones. The small stones provide habitat for beneficial microorganisms that break down pollutants in rainwater.
- 5. Put in a graywater system. Graywater systems are a way to go beyond capturing rainwater, and irrigate a yard or garden with used water from washing machines, showers and sinks (but not toilets). Most systems have a switch to direct the graywater into a garden or back to the sewage system. Using biodegradable soaps—without bleach, boron, dye or salts—keeps graywater safe and fertilizes plants. Graywater can be used to water fruit trees and other edible plants, as long as it doesn't come into contact with the edible parts. Harvesting graywater keeps relatively clean water out of sewage treatment plants, so less treated water is released into the Bay. A home with a graywater system also needs less piped water, saving as much as tens of thousands of gallons of freshwater.

Resources for Bay-Friendly Home Projects

Urban Farmer Store, www.urbanfarmerstore.com *Rainwater harvesting equipment and training workshops at stores in San Francisco, Richmond and Mill Valley. Richmond store has discounted rain barrels for Oakland residents.*

Sonoma County Master Gardeners, ucanr.org/sites/scmg *Information on building rain gardens.*

Berkeley EcoHouse, www.ecologycenter.org/ecohouse A demonstration home and garden with a graywater system, rainwater cistern, plus many more ecological features; offers classes and tours.

Interlocking Concrete Pavement Institute, www.icpi.org *Information on local contractors who install paving that absorbs rain.*

Greywater Action, greywateraction.org

Information on systems for using water from washing machines, showers and sinks to irrigate plants. Classes for do-it-yourselfers and listings of Bay Area trained professional installers.

New Progress Cleaning Up Industrial Pollution (Cont'd from page 1)

Pollution from most industrial facilities in California is regulated under guidelines known as the Statewide Industrial General Permit. This permit is currently being updated by the California State Water Resources Control Board for the first time in twelve years—providing Baykeeper with a critical opportunity to improve pollution standards for industrial facilities across the state.



For example, industrial facilities are currently required to keep all pollutants out of the Bay—but there's no list defining which pollutants this includes. Facility operators therefore don't know which pollutants to test for, or they may believe they don't have to control a pollutant because it isn't explicitly listed. Baykeeper is advocating for the Board to establish a definitive list of pollutants that industrial facilities must control.

Advocacy for Clear Limits on Pollution Amounts

We are also urging the adoption of clear limits on the amount of each pollutant a facility may allow to flow into San Francisco Bay and its tributaries, which the current regulations do not have. To aid regulators in developing explicit pollution limits, Baykeeper's staff scientist has analyzed five years of runoff pollution data from over 4,000 California industrial facilities. We're using this analysis to propose precise, science-based limits for every harmful pollutant in industrial runoff.

Meanwhile, some industry representatives have proposed changes that would weaken the controls on industrial storm water pollution. Baykeeper is advocating strongly for the State Water Board to reject all of these "dirty industry" proposals.

In Baykeeper's efforts to both strengthen regulations and compel cleanup at industrial facilities, the long-term health of the Bay is at stake. Fish collected in industrialized areas have abnormally low levels of hormones necessary for growth and survival. Salmon exposed to copper pollution lose their ability to find their spawning streams or evade predators. Oil and grease are toxic to the hearts of fish, and nickel is lethal to shorebirds.

Baykeeper will continue moving forward with advocacy and legal action to reduce industrial runoff contamination in the Bay, so that wildlife can thrive and all who swim, boat, kite, fish and surf can enjoy safe waters and clean shorelines.

Help Baykeeper advocate for stronger controls on industrial pollution! Sign up for our e-news at www.baykeeper.org to learn how you can stand up for clean industry and healthy waterways.

Clean Water Act Lawsuits: A Powerful Tool for Curbing Industrial Runoff Pollution

San Francisco Baykeeper's recent victories to clean up industrial storm water pollution are a result of our Clean Water Act citizen lawsuits. The Clean Water Act intentionally gives the power to bring suit against polluters to individuals and groups like Baykeeper—so when dischargers and regulators aren't keeping pollution in check, local activists can step in to require that polluters follow the law. Here's how it works:

Baykeeper begins by researching pollution violations reported by an industrial facility. We then visit the site by boat or other public access point to observe the layout, exposed operations, and discharge locations. We take samples of the facilities' storm water runoff and have them tested by a certified laboratory. If we find evidence that a facility is seriously polluting the Bay—either directly or through tributaries or storm drains that flow into the Bay—Baykeeper initiates legal action.

Baykeeper's legal and science staff then work with the facility to identify where pollutants are coming into contact with storm water and where the polluted runoff is discharging from the site. Our staff scientist has the expertise to recommend measures to significantly reduce the facility's storm water pollution. This saves the facility the cost of hiring a consultant to provide the same service. It is one reason that many facilities we've sued in our Bay-Safe Industry campaign have been able to work cooperatively with us to develop their pollution cleanup plans.

Once Baykeeper and the facility agree on what steps are needed to bring them into compliance with the Clean Water Act, we sign a legally-binding settlement agreement. It specifies cleanup measures and a schedule for testing the facility's storm water runoff for pollutants over three to five years. Baykeeper and the facility also agree on any appropriate mitigation payments, which are required by the Clean Water Act to help repair the damage from past pollution. These funds go to other nonprofit organizations working to restore the San Francisco Bay watershed.

During the years covered by the agreement, Baykeeper monitors the results of the facility's storm water testing. If the facility is still contaminating the Bay, the agreement can specify that they must try a different solution or upgrade to more advanced technology until they achieve effective pollution reduction.

Without the authority provided by Clean Water Act lawsuits, industrial facilities could simply dismiss Baykeeper's request that they stop polluting. The Clean Water Act also obligates polluters to cover the fees and costs incurred by bringing a lawsuit against them. Without this provision, Baykeeper could not afford to bring the lawsuits necessary to clean up industrial pollution, and the pollution would continue unchecked. For these reasons, Clean Water Act lawsuits are one of the most effective ways our small nonprofit can take action to protect San Francisco Bay.

Volunteer Investigators Help Find Industrial Pollution

New volunteer teams survey and collect water samples from potentially polluting facilities

New Baykeeper Volunteer Pollution Investigators are fanning out across the Bay Area, helping us find out which industrial facilities are polluting San Francisco Bay.

Volunteer Pollution Investigators are one way Baykeeper is expanding our Bay-Safe Industry campaign. We're working to rein in industrial storm water runoff, a major source of pollution in San Francisco Bay (see page 1). Our new volunteers are helping with a key step—gathering evidence of pollution.

Play in the Bay Safely with the Swim Guide App

Is the water clean enough for swimming, surfing and other in-the-water recreation? Consult Baykeeper's new, free smart phone app, Swim Guide, to find out. Swim Guide provides up-to-date water quality information on more than a dozen Bay and



ocean beaches in the Bay Area. It's available from the Apple App Store, for Android from Google Play or online at www. theswimguide.org.

You can also use Swim Guide to report pollution to Baykeeper, get directions, view photos and share with social networks. Download it today! Working in teams, more than 50 new investigators are conducting advance surveys of industrial facilities we've identified as possible polluters of the Bay. The teams are identifying potential pollution sources and locations for taking samples of storm water runoff. During this year's rainy season, investigators



will return and collect storm water discharge samples.

If the samples show evidence of pollution, Baykeeper will take action. For minor pollution that is easy to remedy, we may simply contact the facility with advice on how to clean up the source. For major polluters, Baykeeper will take legal action under the Clean Water Act to compel the facility to make changes in its operations to prevent contamination of the Bay.

The volunteer pollution investigator program was designed by Baykeeper's summer fellows from New Sector Alliance AmeriCorps, Tom Colosky and Shirley Qian. Thanks to them and to our new team of pollution investigators! Your efforts are a big boost to Baykeeper's work on behalf of a healthy San Francisco Bay.

Help Safeguard San Francisco Bay from Pollution with Your Gift to Baykeeper It only takes a moment to donate using the enclosed envelope, or visit www.baykeeper.org/donate





Fall/Winter 2012 Baykeeper News

Congratulations, Swim for the Bay Swimmers!







On Sunday, September 30, 26 swimmers made a 9-mile crossing of San Francisco Bay in San Francisco Baykeeper's 2012 Swim for the Bay. We're so proud of their accomplishment, and honored that they swam to raise funds for Baykeeper's work for a clean Bay.

The seven relay teams started out under the Golden Gate Bridge on a clear early morning. The swimmers had currents to fight along the way, but they enjoyed sunny skies, warm weather, and smooth water. As they headed east across the Bay, they had views of the Marin headlands, San Francisco city skyline, Alcatraz, Treasure Island, and the Bay Bridge. Then we celebrated the swimmers' amazing feat at an after-swim party at San Francisco's historic Dolphin Club. We are so grateful for the tremendous support of the Bay's open-water swimming community. Thank you for helping make this event a success for the Bay!

Thanks to the 2012 Swim for the Bay Participants!

Rick Avery, Cesar Manzano, John Nogue, and Arnie Oji, piloted by John Ottersberg; Bonnie Brown and Suzanne Greva, piloted by Andy Stock; Paige Coulam, Brendan Crow, Jesse Czelusta, James Falbusch, and Katie Harrington, piloted by James Fahlbusch; Rick David, Tom Keller, Daniel Madero, Peter Molnar, Jeff Russell, and Ralph Wenzel, piloted by Peter Molnar; C. Brian Elginsmith, Rachel Elginsmith, and Leigh Fonseca, piloted by Barry Christian; Lolly Lewis, Jason Prodoehl, and Eric Shupert, piloted by Mike Silva and Diane Walton; and Denise Lillian, Ilana Peterson, and Anne Schonauer, piloted by James Bock. The Baykeeper boat team included Gary Emich, Race Director, Geoff Potter, Head Volunteer Skipper and Susanne Friedrich, volunteer photographer.



www.baykeeper.org Pollution hotline: 1-800 KEEP BAY



