YOUR SOURCE FOR BAY-DELTA NEWS & VIEWS

ESTUARY

REACHING OUT

Stopping new invasive species from entering the Estuary—and dealing with the ones already here—is an important element of the Comprehensive Conservation and Management Plan's (CCMP) Aquatic Resources Program. This issue's "Losing Ballast" (page 2) describes an exciting new technology that could, if widely implemented, help reduce aquatic invasions into the Estuary and elsewhere. Addressing issues covered in the CCMP's Wetlands Management Program, "Wither Wetlands" on page 6 scrutinizes new federal rules for mitigating for wetland losses.

Volunteers are a critical component in much of the restoration work happening around the Estuary. "Zins and Fins" on page 3, tells how grape farmers and students are restoring the Mokelumne River while the cover story describes current legislative efforts to make sure volunteers can continue to get their hands dirty.

A major focus of the CCMP—and all of our work at the Estuary Project—is educating the public about the Estuary, its ecosystem, and challenges it faces. Public education can come in many forms, as the stories in this issue show—read about Save the Bay's new eye-catching campaigns for a cleaner Bay on pages 4 and 5.

Here at the Estuary Project, we just revamped our web site to enhance the public's access to our materials and information. It was completely rebuilt from the bottom up, and has a new url: www.sfestuary.org. We have added significant levels of new information on the history of the Estuary Project, the CCMP and our current projects. We also improved the search capacity, the visual design, and navigation throughout the site. In one of my favorite new features, we have a spot on the homepage for breaking news about the Estuary and will be keeping that up to date with events. Our redesign allows for quicker review of site contents and contains a much richer base of information and linkages. Past issues of ESTUARY can be downloaded, and a database allows users to search for topics.

—Judy Kelly, SFEP Director

INSIDE

PRECARIOUS PIPES 2
ZINS & FINS 3
MENACED MARSH 4
WITHER WETLANDS? 6

SUNSET FOR VOLUNTEERS?

Imagine you run a non-profit organization that receives a modest grant to do some habitat restoration. Most likely, you're going to bring in volunteers to make that grant money go as far as is possible. But what if state labor officials ordered you to pay union wages to workers? Not only would the money instantly evaporate, but also the project would go unfinished.

This was the situation four years ago when a little-known provision in state labor law came to light in a legal dispute over a restoration project. That provision is once again in the limelight as legislation allowing restoration groups to continue using volunteers is due to expire.

In the 2004 case, community college students near Sacramento were given course credit for work on Sulfur Creek that involved using bulldozers and other machinery to move soil, remove culverts, and haul trees and other vegetation. Labor leaders charged that the students were doing union jobs that would ordinarily garner wages of $20 per hour or more, depending on the task. The environmental organization, the Sacramento Watersheds Action Group, had received a $273,000 grant but would have been liable for nearly $50,000 in back wages if they had had to pay volunteers.

At issue in this case—and what would apply to just about any restoration project—is just when a grant-funded program becomes a public works project. Public works projects require that workers be paid a prevailing wage—a rate of pay set by unions and employers that varies according to level of training and the nature of the work. The California Department of Industrial Relations defines "public works projects," to include "construction, alteration, demolition, installation, or repair work done under contract and paid for in whole out of public funds."

Grant and bond monies are public funds, and the nature of the work in many restoration projects involves the use of heavy machinery to move dirt and rocks, dig up culverts in the case of creek daylighting, and haul trees and other vegetation. And so as interpreted by the Department of Industrial Relations, the code created a de facto ban on volunteer work for restoration projects.

Municipalities and non-profits work on thousands of projects to clean up coastlines, revegetate creek beds, and restore habitats. Smaller, community-based organizations like San Francisco's Nature in the City rely almost entirely on volunteers for projects such as the on-going restoration of Mt. Sutro. Nature in the City's Peter Brastow says volunteers are the lifeblood of projects like this. "We have 30 people at Mount Sutro on the first Saturday of every month; the leverage you create with volunteers is huge," he says.

Not only do volunteers stretch out grant and bond monies, they also augment dwindling staffs of local programs. Brastow points to San Francisco's Department of Recreation and Parks Natural Areas Program where there are only six staff gardeners. Volunteer forces have brought the total number of gardeners to 60—a ratio of 10 volunteers to every one staff gardener. And that's what's at stake.

But labor also has a stake. A chief concern is that employer-sponsored volunteer work could induce contractors to force their employees to work for free. In addition, labor leaders saw potential loopholes in programs that offer vocational training through apprentice positions and other means instead of labor-sponsored training programs.

"We need to create a path where we can build stewardship and have respect for unionism," says Brastow.

Legislators, labor, and environmental groups cleared that path in 2004 when they struck a compromise on language in a bill sponsored by Assemblymember Loni Hancock (D-Berkeley) (see "Use a Volunteer/Go to Jail?" ESTUARY, February 2004). The original bill sought to redefine "volunteer" in the state labor code. In the

continued page 8

TECHNOFIX

LOSING BALLAST

The San Francisco Estuary has been called the most invaded estuary in the world. Some invasive exotic marine organisms arrive on ships' hulls, others through mariculture operations. But ballast water is one of the most important vectors, especially for free-swimming forms. When ships discharge ballast in the Bay, they may be adding new exotics to the mix.

Proposed fixes include onboard sterilization systems using filters, ultraviolet radiation, and chemical biocides. That equipment is costly, though. What if a ship was able to use local seawater as ballast?

Michael Parsons, professor of naval architecture and marine engineering at the University of Michigan, and Miltiadis Kotinis, now at the State University of New York Maritime College, have designed a 640-foot ballast-free bulk carrier. The key feature: a network of large pipes running the length of the ship below the waterline. Instead of taking on ballast water at sea and dumping it in port, the ship's movement would create a constant flow of local seawater. Patented in 2004, Parsons' design is being tested at the university's Marine Hydrodynamics Laboratory with support from the Great Lakes Maritime Research Institute.

Parsons says the idea was born on a committee on ships' ballast in the 1990s: "I was challenged by environmentalists on the committee with a simple question: 'Why don't you get rid of the ballast?' That question kept troubling me. I thought about the problem differently, thinking more like a submarine than a surface ship. You flood the trunks [pipes] more for changing buoyancy than for adding weight. We're opening part of the hull to the sea, creating a very slow flow through the trunks from bow to stern. You're continuously sweeping water through the ship

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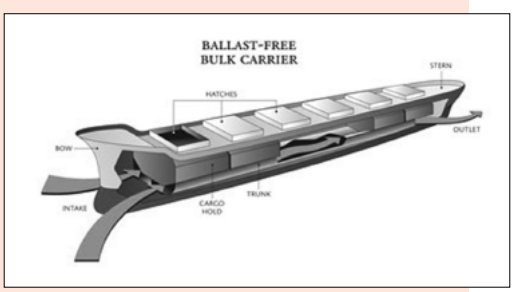


BULLETIN BOARD

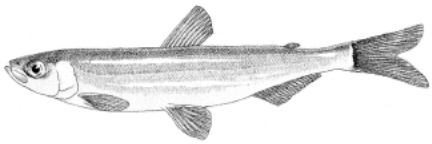
PRECARIOUS PIPES

With a predicted 99% chance of a large earthquake jolting the state within the next 30 years—not to mention sea level rise—resource agencies with pipes and other infrastructure crossing the Delta are feeling a little shaky. That infrastructure includes Highway 4, a railroad line, PG&E gas lines, a petroleum line, Contra Costa Water District pumps, and last but hardly least, EBMUD's water supply aqueducts, which cross five below-sea-level Delta islands protected by 51 miles of levees. "People should not think we're sitting dumb, fat, and happy with our aqueducts there, especially after the Jones Tract failure in 2004," says EBMUD's Doug Wallace. After the levee failed, the aqueducts were submerged for months, a dunking that cost the agency $3 to $4 million just to re-coat its pipes. "Those pipes are not designed to be under water for so long," says Wallace. The aqueducts provide 90% of EBMUD's supply—and their failure could affect drinking water for 1.3 million people, as well as interties with other water supplies, says Wallace. He says his agency currently spends $1.5 million per year to maintain and improve the levees and wants to see money from Propositions 84 and 1E freed up to strengthen the levees now—before something dire happens. In the long run, EBMUD is considering building a 10-mile tunnel 80 feet below ground where the pipes would sit on bedrock and be immune from flooding, says Wallace. But such a project could take 10 years to build and come with a steep price tag. In the meantime, says Wallace, the levees need help. "An earthquake could change that landscape overnight."

DRINKING THE UNTHINKABLE

Eight years in the making, a new $480 million sewage treatment plant in Orange County is now up and running, removing viruses, bacteria, pharmaceuticals, and other contaminants in wastewater before pumping it into settling ponds, where it infiltrates into groundwater and supplies part of the county's drinking water, along with water from the Colorado River. Some of the recycled water is injected into the ground near the coast to form an underground seawater barrier. At full capacity, the plant produces 70 million gallons of drinking water per day, and is the only one operating at this scale in the United States. The Orange County Water District's Shivaji Deshmukh says the key to gaining public acceptance was first educating public officials, city councils, and supervisors about the advanced level of treatment the wastewater is given, and getting them to sign letters of support. Then, says Deshmukh, the District approached community groups—Kiwanis, Rotary, the Coast Keepers, and Surfriders. "They all loved the project, many for different reasons," says Deshmukh. "The environmental groups liked reducing discharges into the ocean; the fiscally conservative responsible taxpayer associations loved the idea of having a water supply at a rate competitive to imported water, and the reliability we're bringing to the county, that we're locking in a supply of new water even in droughts." Deshmukh says the general public's reaction—after hearing officials and enviros weigh in—was, "Why aren't we doing more of this?"

A critical element of the treatment process is reverse osmosis, says Deshmukh, which the District has been using for 30 years. But the new plant updated its pretreatment technology and its reverse osmosis membranes, and also added an advanced oxidation system at the end. "When water comes out of the plant, it is so pure we have to add minerals back in," says Deshmukh. The plant produces enough water to supply 500,000 people for a year.



WESTLANDS TO HELP SMELT

Westlands Water District has purchased more than 3,000 acres of land currently being farmed for hay and oats in the north Delta in Yolo County, with the goal of returning the land to wetlands to help Delta smelt. The property sits directly alongside the Sacramento Deep Water Ship Channel fairly close to Prospect Island, says Westlands' Sarah Woolf. Woolf says the site has a very large floodplain, and Westlands will apply for a permit to breach the levee to allow the floodplain to flood again, offering habitat for Delta smelt and other fish.

"Our water supply continually gets cut back because of habitat issues in the Delta," says Woolf. "We are very much in agreement that the health of the Delta needs to be restored, but we haven't seen that come about. Efforts to revive habitats haven't worked, so we thought that rather than sitting around waiting for another organization to do it, we would go ahead and do it ourselves. We expect to take on the full amount of whatever it will cost." LOV

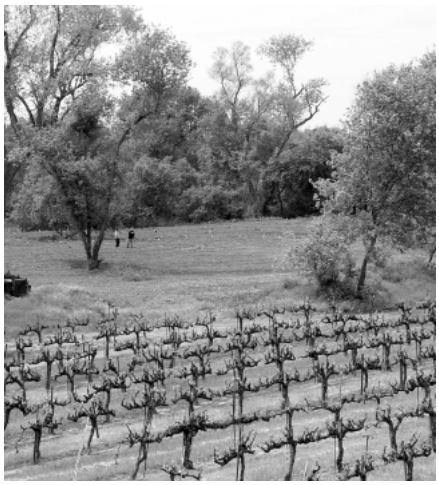
RESTORATION

ZINS AND FINS AND FEATHERS

When John Ledbetter and his son Craig aren't growing or harvesting grapes for making chardonnay, cabernet sauvignon, zinfandel, pinot noir, or other organic wines, they are probably busy restoring the Mokelumne River. A few decades ago, John and his brother took over Vino Farms from their father, who had purchased the land in the early 1970s. Today, along with three of their children, they farm 4,500 acres in Lodi, operating the vineyards under the "Lodi Rules" principles, a sustainable farming program—certified by a third party—that, according to John, "takes in all three legs of the sustainability stool—people, economics, and the environment." The vineyard uses solar power for irrigation; equipment is run on biodiesel.

In April, they added restoration to their green practices, revegetating a 23-acre stretch along the Mokelumne River, in a project designed by River Partners and implemented with Vino Farms' manpower. The restoration targets both fish and wildlife—creating habitat for nesting and migrating songbirds like song sparrows, spotted towhees, yellow warblers, warbling vireos, black-headed grosbeaks, and yellow-breasted chats, and offering shade, cooler water, and woody debris and shelter for fish, says River Partners' Stacy Small, who adds that the project is being done in conjunction with EBMUD's salmon habitat enhancement efforts. "Riparian vegetation provides large wood, vegetation detritus, insects, and shade that benefit the aquatic community. The large wood traps and retains spawning gravel in the system, and provides a substrate for aquatic invertebrates and shelter for fish against predators and strong currents."

Says Small, "One of the problems on the Mokelumne is that much of the native vegetation has been cleared, and it's not re-establishing itself because of competition from invasive plants and altered flow patterns, so no young native trees are coming in on their own. A lot of the cottonwoods that are so important for fish habitat are decaying and growing old, but there's not a younger age class growing up behind them." Native species being planted include cottonwood, valley oak, live oak, red and arroyo willow, and an understory of native blackberry, elderberry, coyote bush, and California rose, says Small. "We're replacing a homogenous understory of non-native, invasive Himalayan blackberry with a more diverse native understory that should make it more difficult for non-native plants to re-invade." Goats and mechanical masticators were used to remove Himalayan blackberry before natives were planted in early April. Existing elderberries that had been overgrown by Himalayan blackberry



Vino Farms, pre-planting

are rebounding, says Small. Elderberries provide habitat for the endangered valley elderberry longhorn beetle, and the farmers doing restoration along the Mokelumne are part of a Safe Harbor Agreement that protects them from penalties if an elderberry bush has to be removed for some reason (see "Groundswell," ESTUARY, December 2006). One planting day involved students from the SLEWS (Student and Landowner Education and Watershed Stewardship) program, who planted and will monitor a native hedgerow, says Small.

But restoration takes more than desire and sweat equity. After applying for and receiving some initial funding from the Sand County Foundation and U.S. Fish & Wildlife, the Ledbetters attracted additional dollars from BurRec and the local resource conservation district; grant funds now total $600,000, but not all of it will be needed, says Craig Ledbetter. The Ledbetters' project, and that of an upstream landowner as well as the Lange Twins downstream, have had a ripple effect, inspiring interest in restoration on the part of more than 50 landowners along the river, according to Yolo County Parks and Resources' Kent Reeves, who, while working for EBMUD, worked to develop that interest and recently sponsored a "Fins and Zins" workshop as part of the Salmonid Restoration Federation conference in March. To enable more restoration, a nonprofit is being set up, and $5 million has been set aside for future projects. "It's just a matter of getting people to the money," says Craig Ledbetter.

Together with upstream and downstream restoration projects close to five miles of the Mokelumne has been restored so far on private land. What is motivating the Ledbetters? Says Craig, "We need the environment to make a living, so we need to do our part to take care of it. For this being a grape growing town, we're pretty progressive."

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CAPITOLBEAT

SPILL BILLS

The Cosco Busan crash last November that sent 50,000 gallons of oil into the Bay revealed a number of gaps in oil spill recovery—namely, that federal agencies should turn to local authorities to take the lead in cleanup and safety efforts. Taking lessons from this incident, legislators in Sacramento have been busily crafting laws to right the shortcomings.

Of seven bills, three deal with the California Department of Fish and Game's Office of Oil Spill Prevention and Response (OSPR). One bill, AB 2032, raises money for cleanup, levying a 25-cent fee on every barrel of oil produced or imported into California. A second provision in this bill tries to address the increasing size of container ships. After deepening their channels and capacity, the Port of Oakland and others will see more ships coming through, adding up to greater danger in the event of an accident. These larger ships have fuel compartments that hold nearly as much oil as an oil tanker. AB 2032 also increases the amount of insurance required for these vessels.

Non-agency scientists and other individuals tried to help soak up the oil by deploying newer technologies for cleanup that OSPR didn't have. AB 2547 would require OSPR to set aside $5 million each year for purchases of modern equipment.

AB 2912 increases OSPR's responsibilities to include overseeing inland oil and chemical spills and raise the penalty for these spills to the level of maritime spills. Two other bills, AB 2031 and AB 2911, seek to address the logjam that resulted in hundreds of volunteers being turned away from shorelines in the days after the spill. AB 2031 would require OSPR to provide grants to local agencies so emergency officials could train volunteers in cleanup and recovery. AB 2911 would fund local agencies and organizations to train volunteers in bird and wildlife recovery in spills.

Another issue arising from the spill was the effects on fisheries. AB 2935 would require Fish and Game to shut down commercial and recreational fishing within the first 24 hours after a spill, determine whether fishing could go ahead within 48 hours, and then test fish and shellfish in affected waters within 7 days.

continued page 7

OUTREACH

VISUALIZING A CLEANER BAY

Targeting Web surfers, bureaucrats, and commuters, Save the Bay has launched two new campaigns against Bay pollution, one via the Internet, the other through old-fashioned phone calls and mailings, both with the goal of making it easier to keep the Bay clean. In "Cities Keep It Clean," Save the Bay partners with cities around the Bay, aiming to help them adopt one or two pollution prevention best practices each year, based on each city's capacity and priorities.

"The concept arose out of our residential pollution program," says Save the Bay's Athena Honore, "which is geared at what regular Bay Area residents can do. We realized that some of our recommendations are kind of hard for people to follow—there isn't always a convenient location to dispose of your thermometer or e-waste without having to drive it somewhere and wait in a line around the block. So we were looking at what would it take to get these programs more accessible to the average person and started looking around at various cities. We found that a lot were doing cutting-edge but common sense things that were Bay-friendly practices. Some had spread from a city throughout the county. We thought, 'These are things that are working; let's see if we can get them going more broadly around the region.'"

So far, the best practices case studies being held up as models for other cities include San Francisco's plastic bag ban, Emeryville's requirement of biodegradable food containers, Oakland's fast food litter fee, San Mateo County's pharmaceutical disposal project, and San Carlos' curbside

continued page 5

LAND USE

MENACED MARSH

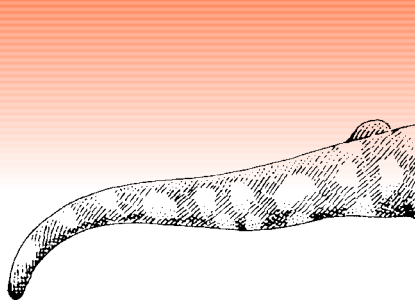
Since the family emigrated from Switzerland in 1895, five generations of Guidottis have worked their land in the Potrero Hills, on the northern edge of Suisun Marsh. June Guidotti, the current owner, is concerned not only for her ranch but for the grasslands that surround it and the marsh beyond. She sees powerful forces working to weaken the marsh's legal protection and open the door to industrial development.

Guidotti has been fighting the planned expansion of a landfill on her doorstep. She's up against a large corporation with ambitious plans, and the pro-growth political culture of Solano County. But she's not without allies: recycling operators who see the landfill as undercutting their businesses, biologists who have raised questions about mitigation for habitat loss, and a small amphibian whose inconvenient presence may help stave off the industrialization of a supposedly protected agricultural zone.

When the state legislature approved the Suisun Marsh Preservation Act in 1977, the Solano Garbage Company ran a waste-disposal site in what became the marsh's Secondary Management Area. The strictly local operation, serving only nearby communities, was grandfathered into the Local Protection Plan. Five years later, the company moved to a new 320-acre site in the Potrero Hills bordering the Guidotti ranch. No one formally objected, and the Solano County Supervisors approved the relocation.

Then Florida-based Republic Services, the third-largest North American waste disposal corporation, bought the Potrero Hills Landfill. Republic had a larger vision. With lower tipping fees, the landfill attracted customers from Sonoma, Marin, Sacramento, San Mateo, and Santa Clara counties—as far away as Gilroy. As of last year, up to 85% of its business came from outside Solano County. The site began to fill up. In 2005, Republic followed up on a previously proposed 260-acre expansion, designated the Phase II site.

Critics of the expansion have warned from the beginning that it would bury the upper portions of Spring Branch Creek under 345 feet of garbage. The lower reaches would be rechannelized and culverted. "If you channelize the creek for two miles, combining the two branches in underground culverts, by the time you reach Suisun Slough you may be significantly changing the upper slough where Spring Branch Creek provides a large percentage of water inflow," says Arthur Feinstein of Sustainability, Parks, Recycling and Wildlife Legal Defense Fund (SPRAWLDEF).

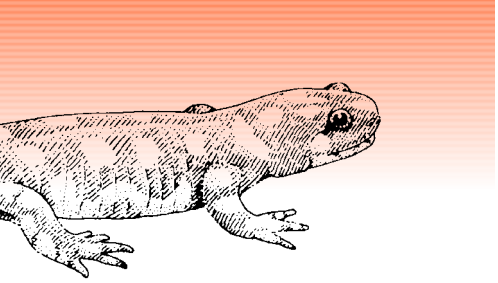


The Phase II site is also known habitat for the California tiger salamander (*Ambystoma californiense*). The eight-inch-long yellow-and-black salamander, endemic to grasslands in the Central Valley and adjacent Coast Range foothills, breeds in vernal pools or stock ponds and waits out the dry season in gopher and ground squirrel burrows. At least 75% of its habitat has been lost to development, and it is also vulnerable to disease, predation by bullfrogs and introduced fish, and hybridization with non-native species imported as fish bait. The salamander's main population, including Solano County, is federally listed as threatened; isolated populations in Sonoma and Santa Barbara counties are classified endangered. Special-status plant and bird species also occur at the site.

The county's Planning Commission rejected Republic's Environmental Impact Report (EIR), but was overridden by the Supervisors, who certified the EIR and approved both the project and the marsh development permit. June Guidotti, as spokesperson for Protect the Marsh, took the county to court over the EIR approval. She was joined in the suit by the Northern California Recycling Association (NCRA) and two of its directors, SPRAWLDEF Research and Development Director David Tam, and Alameda County recycling advocate Arthur Boone. Their issue was the site's low tipping fees; higher fees at competing Bay Area landfills generate revenue for local recycling programs. Last February, Superior Court Judge Paul L. Beeman ordered Republic to revise and recirculate its EIR. He found flaws in the treatment of air and water quality issues, and said insufficient consideration had been given to alternative sites.

The recyclers also joined Guidotti in appealing the county's decision on the marsh development permit to the Bay Conservation and Development Commission (BCDC). BCDC in turn created a Science Review Team to evaluate the EIR. The team's report, released in August, described significant ecological impacts from the landfill expansion and criticized Republic's proposed mitigation measures. Vegetation ecologist Pamela Muick, former executive director of the Solano Land Trust and the California Native Plant Society, noted loss, fragmentation, and degradation of upland wetlands and grassland habitat and "permanent degradation of the Spring Branch Creek headwaters."

PRBO Conservation Science's W. David Shuford noted the presence of several special-status bird species. The landfill expansion site, he said, was used for nesting by loggerhead



shrikes (a California Species of Special Concern), and for foraging by long-billed curlews (a federal Bird of Conservation Concern and Audubon Watch List species), tricolored blackbirds (state and federal concern), and golden eagles (a fully protected raptor). Shuford was also concerned that crows and ravens, attracted to the landfill, would prey on nearby nesting populations of western snowy plovers and California least terns. "Mitigation measures are weighted too heavily toward wetland habitats…and too little toward grassland habitats and birds," he concluded.

Perhaps most critical was the response by UC Davis's H. Bradley Shaffer and graduate student Christopher Searcy to proposed mitigation measures for the loss of California tiger salamander habitat. Shaffer and Searcy surveyed the expansion site for salamander breeding areas, then developed a mathematical model for mitigation that weighed the biological value of each acre of habitat lost against the value of new breeding-pond habitat to be created. In the biologists' judgment, the proposed mitigation "does not offset the lost biological value" resulting from the expansion.

"Expansion or not, there will be something done on that site."

The new DEIR, issued just before Christmas, revisited the air, water, and alternative-site issues as instructed, but also attacked the findings of the BCDC Science Review Team, incorporating language from a report by LSA Associates, Inc. "BCDC was, I think, hoping to see an actual substantive response to the opinions of the science panel and appropriate mitigation proposals," says Feinstein. "Instead, the response was to reject the science panel's opinions."

According to the DEIR, "a number of issues raised by [Pamela Muick] were inaccurate or misinterpreted scientific facts," especially regarding what the report called "the drainage feature known as Spring Branch Creek." As for the birds, "no listed species has been observed nesting on the Phase II parcel or using the parcel on a regular and continuous basis," said the EIR. Counters Feinstein, "The bar is not listed species under the Endangered Species Act. The California Environmental Quality Act is not designed to just look at that, and the Local Protection Plan clearly states that the requirement is that no project should 'have significant ecological or aesthetic impacts on the Marsh.' You don't have to destroy endangered species to have a significant adverse ecological impact." The DEIR also slammed the results of Shaffer and Searcy's California tiger salamander model, pointing out that it had not been peer-reviewed or adopted by resource agencies.

The Final EIR should be out in time for the Solano County Supervisors' June 10 meeting. Its approval by the supervisors can once again be appealed to BCDC. Whatever the outcome, controversy is likely to continue. Republic has been planning a power plant at the Phase I landfill. "Expansion or not, there will be something done on that site," says Republic's Kevin Finn. It has not been decided whether the plant would use landfill gas to generate electricity, or pressurize the gas for off-site export to local energy users like Travis Air Force Base or for vehicle fuel. Also unclear are the water requirements of a possible generating plant, and where the water would come from. The draft of a new General Plan for Solano County, circulated last winter, would change the land use designation for the Phase I site from agricultural to a new category, "water dependent industrial."

Zoning changes would have to follow before the plant could be built, and BCDC would have the opportunity to weigh in. "If the county changes the General Plan that affects anything in the Suisun Marsh boundary, that would change the county's Local Protection Plan," explains BCDC's Ellen Sampson. "For them to utilize new designations, they have to be approved by our Commission, and must be consistent with the Preservation Act and Suisun Marsh protection policies."

June Guidotti will be keeping an eye on all the players in the federal, state, and county arenas, going to the public library to review and copy documents. Guidotti is concerned that the Suisun Marsh Protection Plan may not be strong enough to stop the expanded landfill and power plant, and that the environmental community doesn't appreciate the threat to the marsh. Meanwhile, she must cope with the smell, noise, dust, flies, and windblown plastic bags from the existing Phase I landfill. "Every day something is happening because we don't have control of the property."

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OUTREACH CONTINUED

pickup of e-waste, cell phones, and batteries. While the campaign is in its early stages, Save the Bay plans to contact cities through stormwater program managers, city managers, and city councils and give them a package of materials that includes the case studies, model ordinances, and outreach materials. "We are putting together a list of target cities, often cities that aren't being as active environmentally in a certain area," says Honore. "It's about positive working relationships. We're looking forward to getting more cities on board." The case studies include detailed suggestions to help cities implement the practices. "If you're going to require compostable containers, for example, then it makes sense to provide green waste containers for people at home," says Honore.

Save the Bay's other campaign targets Web users and commuters. Web users can visit Save the Bay's Web site and pledge to reuse grocery bags, maintain their cars, and properly dispose of household toxics. In return, they receive a reusable Save the Bay bag. The most compelling Web component is a short video that shows a driver nonchalantly getting into his car; the camera then pans to the underside of the car and follows a drop of oil from the undercarriage to the street and into a storm drain pipe, where it then makes its way to the Bay. Meanwhile on buses, in MUNI stations, and on BART platforms, skull-and-crossbones images of plastic bags and e-waste are designed to make commuters think twice. "It's so hard to convey stormwater messages," says Honore. "It helps to make it visual."

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BIRDWATCH

STATE OF THE BIRDS

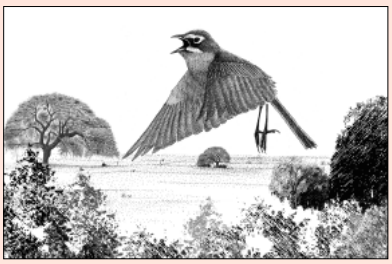
Good news for California waterbirds; mixed news for others, according to the newly released *California Bird Species of Special Concern*, edited by W. David Shuford and Thomas Gardali, and jointly published by the Department of Fish and Game and Western Field Ornithologists. Seven species have been dropped from Fish and Game's list of Bird Species of Special Concern. Breeding populations of ospreys, white-faced ibises, and (at least coastally) double-crested cormorants have increased significantly in recent decades. The California gull, formerly listed because of its vulnerable Mono Lake population, has enjoyed exponential growth at its San Francisco Bay nesting colonies—enough to pose a threat to other colonial-nesting waterbirds. Southern California's elegant terns, which summer in the Bay Area, have also boomed, and rhinoceros auklets have held their own.

On the debit side, several wetland birds have been added to the list.

The lesser sandhill crane, which nests in the far north and winters in the Central Valley, has lost foraging habitat as grain fields, irrigated pastures, and grasslands are replaced by vineyards, orchards, and vegetable crops. Unlike the closely related greater sandhill crane, the lesser does not frequent rice fields. Redhead ducks have been affected by loss of wetlands, contaminants, and possibly hunting pressure. Bryant's savannah sparrow, a coastal subspecies, has suffered from loss, fragmentation, and contamination of habitat.

Wetland and riparian birds held over from the 1992 list include American white pelican, least bittern, black tern, black skimmer, yellow warbler, San Francisco common yellowthroat, yellow-breasted chat, Alameda, Suisun, and Samuels' song sparrows, and tricolored blackbird.

continued page 7



Yellow-breasted chat by Andy Birch

REGULATION

WITHER WETLANDS?

The wetlands mitigation rule adopted by the US Environmental Protection Agency in April will either lead to rampant loss of wetlands or mark a step forward in wetland mitigation practices, depending on who you ask. The EPA adopted the rule despite opposition from a large coalition of environmental organizations, such as the National Wildlife Federation, the Sierra Club, and many wetlands groups.

The rule, which defines acceptable mitigation for losses of wetlands and other aquatic resources, is known as 404(b)(1), referring to the Clean Water Act's section 404 and the Army Corps of Engineers' permitting program. The coalition filed a 100-page report listing its concerns, chief among them that while the Clean Water Act has reduced pollution into waterways, shallow water bodies and streams continue to be lost to development at a rapid rate. Environmentalists fear that the new rule, which allows the Corps' district engineer to make mitigation decisions, is likely to exacerbate that trend.

Art Feinstein of Citizens to Complete the Refuge, a party to the coalition, says that the district engineer already had great leeway to make decisions: "They put a huge emphasis on watershed planning [for mitigation], but then they said, `Well, watershed planning is really hard to do.' There is so much discretion left to the district engineer rather than to the hands of science."

The coalition also disliked, as Feinstein puts it, an emphasis on leaping straight to mitigation. "One of the biggest issues—which was rejected in response to our letter—is that [the rule] undermines the sequencing that is supposed to take place. First you are supposed to avoid the impacts, and if you can't do that, you're supposed to minimize the impacts, and if you can't do that, you mitigate. This rule is all about acceptable mitigations, and any emphasis on avoidance is lost."

Recently retired from the EPA, Michael Monroe comes to a different conclusion. He says that the main difference between how the rule is applied now—as opposed to its former guidance—is to put mitigation banking at the front of the line when the Corps is deciding how project mitigation should be implemented. The rule is also an attempt to eliminate in-lieu fees. "Some people just wanted to write a check to some environmental nonprofit," Monroe says. "Historically there were instances where mitigation money didn't get spent appropriately. The draft rule says we're going to get away from that. The end result of the rule is that if someone wants to mitigate using in-lieu fees, they have to meet a much higher standard."

Monroe says the rule also mandates that smaller projects, which would have fallen through the cracks earlier, must buy mitigation credits. "Say a city is going to put a culvert over a creek," he says. "A regional water board wouldn't make the city provide mitigation, but now they make them buy credits in the mitigation bank."

Monroe is realistic about the sequencing issue that concerns Feinstein. "In theory the mitigation rule shouldn't impact the agency's ability to hold applicants' feet to the fire," he says. "First they have to demonstrate that they're avoiding, then that they're minimizing before we get to the mitigation requirements in this rule. But in the practical world, if someone has bought 200 acres for mitigation purposes, that person ends up completing a complex, comprehensive document that fills the largest three-ring binder in the universe. Finally they go out and build their wetlands. Now here comes the developer needing to buy credits. I think it's hard for an agency to spend a year on a mitigation project and then turn an applicant away. This is the argument that the existence of mitigation banks makes it easier for applicants to fill wetlands. Legally that's not true, but in the real world I think there's some truth to that. We're in the infancy of mitigation banking, and the jury's still out."

The rule insists on extensive watershed planning to determine what mitigations would be appropriate—but as Monroe says, there are few complete watershed plans to aid those decisions. "One good part of the rule is that it encourages watershed planning," he says but notes that the federal government has yet to fund such planning in a significant way." With scientific plans in place, the Army Corps "could take a more comprehensive look and determine the best place to put money." Monroe believes the rule represents real progress as mitigation banking matures and science comes to the watershed.

Besides emphasizing mitigation, the rule encourages offsite mitigation. Says Feinstein, "Wetlands are very site-specific, for flood control, for habitat, for other functions. If you move the mitigation elsewhere, you've moved that function from one point to another, and it doesn't always work. Wetlands support species that you wouldn't necessarily get in a new location."

In fact, studies demonstrate that mitigation often fails. A 2001 study—"Count it by Acre or Function: Mitigation Adds Up to Net Loss of Wetlands"—published in the National Wetlands Newsletter found an 80% net loss of wetlands (development coupled with failed mitigations). The study noted that even when the mitigated wetlands met the permitted standards, they "are slow to attain functional equivalency with their reference sites or with the sites they replace—if they ever do attain equivalency." LD

PLACES TO GO & THINGS TO DO

CONFERENCES, WORKSHOPS & EXHIBITS

JUNE SAT-SUN 7-8 & 14-15

RIVER OF WORDS' YOUNG AT ART GALLERY

TOPIC: Open studio with children's art from around the world
LOCATION: Sawtooth Building, Bay One, 8th Street and Dwight Way, Berkeley CA
SPONSOR: River of Words
www.riverofwords.org

AUG SUN-FRI 3-8

ECOLOGICAL SOCIETY OF AMERICA CONFERENCE

TOPIC: 93rd Annual Meeting
LOCATION: Midwest Airlines Center, Milwaukee, WI
SPONSOR: Ecological Society of America
gross@tiem.utk.edu or aleta@esa.org

AUG MON-FRI 18-22

WETLANDS WORKSHOP

TOPIC: Application of Ecological Engineering Principles for the Management of Water
LOCATION: Humboldt State University, Arcata, CA
SPONSOR: Humboldt State University Office of Extended Education
rag2@humboldt.edu; (707)826-3135

HANDS ON

JUNE SATURDAY 14- & JULY 12

SUMMER RE-LEAF OF SAN PABLO CREEK

TOPIC: Help restore San Pablo Creek
LOCATION: San Pablo Creek behind El Sobrante Library, El Sobrante
SPONSOR: SPAWNERS, The Watershed Project
(510) 665-3538;
Juliana@thewatershedproject.org

SEPT SATURDAY 20

CALIFORNIA COASTAL CLEANUP DAY

TOPIC: Clean trash from marshes and creeks.
LOCATION: Coastal locations statewide
SPONSOR: California Coastal Commission
coast4u@coastal.ca.gov;
(800) COAST-4U

SAVE THE DATE!

OCTOBER 22-24 2008

5th Bienniel CALFED Science Conference

GLOBAL PERSPECTIVES AND REGIONAL RESULTS:
Science and Management in the Bay-Delta System

Sacramento Convention Center

Denton.debra@epa.gov;
tsommer@water.ca.gov

STATE OF THE BIRDS CONTINUED

The new list ranks bird species at three levels of priority, based on population trend, range trend, population size, range size, endemism (whether the species is restricted to California), population concentration, and threats. Wintering birds as well as breeding birds are included at three taxonomic levels: full species, subspecies, and distinct population. Species already listed as endangered or threatened are not included.

The book profiles each listed species, covering range, seasonal movements, historic and recent status, ecological requirements, threats, management and research recommendations, and monitoring needs. The volume has striking Keith Hansen cover art, and line drawings by Andy Birch and Tim Manolis. See: www.dfg.ca.gov/wildlife/species/ssc/birds.html

JE

SPILL BILLS CONTINUED

Finally, AB 2441 would require all vessels carrying hazardous chemicals to have a tugboat escort in California's harbors. As ESTUARY went to press, the bills were being heard on the Assembly floor. KC

NOW IN PRINT & ON LINE

Bird Cards, Plant Cards, and Weed Cards. Visual guides to common species. Center for Land-based Learning. www.landbasedlearning.org/products.php

Natural History of the Point Reyes Peninsula (fully revised and expanded edition) by Jules G. Evens. University of California Press, June 2008. www.ucpress.edu/books/pages/11048.php

Pesticides in Urban Surface Water. Annual Review of New Scientific Findings 2008. http://www.up3project.org/documents/UP3FinalScienceReport2008.pdf

San Francisco Estuary Project's new web site: www.sfestuary.org.

FEEDBACK

"Moth Mess," April 2008 ESTUARY

Editor,

I think the part that this article missed is that this "mess" may put California's pest prevention program in jeopardy. I feel you must have an interest in maintaining that. All credible science says this eradication program is safe. The Monterey Bay National Marine Sanctuary ran marine and freshwater toxicology tests and concluded that there was no harm. The Department of Fish and Game report on the bird kill concluded that the pheromone application did not cause it. The pheromone is the safer alternative. Some day you may find yourself in a situation where you are trying to justify an eradication program against an invasive exotic organism. Maybe they will ask you to show what harm those few zebra mussels are causing and a few vociferous opponents will present many spurious claims about your eradication options. Then you may wish there had been more support of this terrestrial effort to eradicate the light brown apple moth.

We should work to strengthen our pest exclusion systems and support the eradication of harmful invasive species. They are a great threat to agriculture and the natural environment. These projects may be long, difficult, and contentious, but they are extremely necessary. Case in point: the Asian longhorn beetle was just declared eradicated in the State of Illinois after a 10-year effort. See http://www.pestalert.org/oprDetail.cfm?oprID=313.

Bob Roach
Assistant Agricultural Commissioner,
Monterey County

YOUR SOURCE FOR BAY-DELTA NEWS & VIEWS

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San Francisco Estuary Project

SUNSET FOR VOLUNTEERS? CONTINUED

final bill, a volunteer was defined as: "An individual who performs work for civic, charitable, or humanitarian reasons for a public agency or corporation under section 501(c)(3) of the Internal Revenue Code, without promise, expectation, or receipt of any compensation for the work performed."

To address labor's concerns that workers could be coerced into volunteering, legislators made additional refinements: "Individuals shall be considered volunteers only where their services are offered freely and without pressure and coercion, direct or implied, from an employer." That is the language in the law that will expire at the end of this year if no legislation passes to take its place. This spring, state Senator Roy Ashburn (R-Bakersfield) introduced a bill that would have made the provisions in the earlier Hancock bill permanent. But the American Federation of State, County and Municipal Employees filed a letter in opposition to this bill, arguing that many of these volunteer jobs should have a union-trained employee hired into a paid position.

The Ashburn bill failed in committee. But a bill in the Assembly, sponsored by Warren Furutani (D-Los Angeles), has passed two Assembly committees and will go to the entire chamber soon, says environmental policy consultant Vern Goehring. This bill extends the Hancock provisions for another four years, sun setting in 2012.

"Labor has always questioned whether this is some backdoor way to bring in non-union employees or volunteers to do the work of trained labor," explains Goehring, who helped negotiate the compromise language that enabled labor to support the Hancock bill four years ago. Goehring says the current sticking point for labor is what effect the use of volunteers is having on wages and the employment climate for union members. There is simply no way to tell, he notes. "During four years there have been no complaints filed with the Department [Industrial Relations and Labor], yet the unions say they've heard some complaints," says Goehring.

To fill in this information gap, Goehring says parties are working out a way to study the effects. At press time, the language of the bill would extend the effective date by five years and have a report done by an objective third party in the fourth year to see whether these concerns are a reality and address them. Once any issues are addressed, the exception for volunteers could become permanent.

CONTACT: Vern Goehring (916)444-8194 KC

Ideas, questions, feedback?
Send to lowensvi@sbcglobal.net

LOSING BALLAST CONTINUED

and out. So you're always filled with local sea water, not hauling water from one part of the world to the other."

Tank tests with a 16-foot model and computational fluid studies suggest an unanticipated benefit: a reduction of up to 7.3% in power requirements. Tests this summer will attempt to verify this. "It's a huge power reduction, a hard-to-believe improvement in power, and we have to convince ourselves that all of it is real," Parsons says. If so, fuel savings would likely offset added construction costs for ballast-free carriers. Retrofitting older ships would be almost impossible, however.

The project was inspired by problems with invasive organisms in the Great Lakes, where 185 non-native aquatic species have been tallied. The most notorious, the zebra and quagga mussels, were likely ballast-riders.

CONTACT: Michael Parsons, parsons@umich.edu JE