

CRANE-ASSISTED MIGRATION

The recent box office hit "Winged Migration" is a vivid visual reminder that migratory birds know no political boundaries—and that now, more than ever before, remaining wetlands are critical pit stops for these long-distance, feathered travelers. But some species are so endangered that they must be taught the old migration routes of their ancestors, and pilots must in turn be taught how to fly with birds. In the southern San Joaquin Valley, a handful of sandhill cranes are teaching human hang glider pilots to do just that. The lessons, hosted by the Siberian Migration Project, are based outside of Hanford, desirable as a training spot because of its level landscape and atmospheric thermals.

The sandhills, raised especially for training purposes, are preparing pilots to help restore the endangered Siberian crane to its Eurasian habitat. The Siberian Migration Project will use hang gliders, which catch thermals and travel faster than ultra-lights. Humans have made similar restoration efforts with Canada geese, trumpeter swans, and whooping cranes. William Sladen of the Airlie center in Warrenton, Va., used hot-air balloons and hang gliders to lead geese and swans with some success, but these birds have yet to establish their own migrations.

Known to insiders as "sibes," Siberian cranes (the most wetland-dependent of the world's cranes) populate three distinct flyways. The Eastern Flyway is the most populous, spanning Siberia to China; the Central Flyway bridges Uzbekistan and India; and the Western Flyway, focus of the Hanford project, connects central Russia and northern Iran via Azerbaijan. Siberian cranes have all but vanished from their Western route, and have disappeared completely from the Central Flyway. And though their Eastern Flyway numbers are respectable, China's Three Gorges Dam will impact the birds, making their future uncertain.

The Siberian Migration Project will begin by rebuilding the Western population, which will take many years. George Archibald, founder of the International Crane Foundation, says the project will attempt to reintroduce hand-raised sibes into the region if trial runs on the Western Flyway are successful and if conditions there "can be made safe for both humans and cranes."

Back in Hanford, the resourceful sandhill "trainers" are staying fresh in the valley heat. Pilots and cranes take evening walks in fields surrounding the farm where the project is sited. On a recent stroll, the birds

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Ink Blot Ruling Muddies Waters

Justices of the 9th Circuit Court of Appeals may not realize it, but they issued a Rorschach test in early June disguised as a ruling in the long-running dispute, *San Luis & Delta-Mendota Water Authority, Bay Institute v. United States*, over the interpretation of the Miller-Bradley Act.

The Circuit Court ruled that part of a February 2002 decision by Federal District Court Judge Oliver Wanger over the use of 800,000 acre-feet of water was in error. The water, as described in section 3406 (b)(2) of the act and known as (b)(2) water, is primarily designated for the restoration of fish, wildlife, and habitat as well as helping to meet water quality standards in the Bay and Delta, and to comply with the Endangered Species Act. The Circuit Court upheld the claim of environmental groups that the priority for the use of the (b)(2) water is to preserve and increase fish populations before other uses, but it also gave the Interior Department "discretion" within that hierarchy of uses. This makes for an opinion in which each party sees what it wants. No matter whom you ask — environmentalists, water users, or the government — the decision validates their position.

The Court dismissed an appeal by the water users who requested that the government use the severe drought years between 1928 and 1934 as the basis for calculating the amount of (b)(2) water. Users had argued that in instances of an incredibly wet year, the impact on them of dedicating the

800,000 acre-feet for the environment should be less than in normal or dry years.

At the same time, the court upheld the Wanger decision that locks in the method of accounting for (b)(2) water. Previously, the U.S. Department of Interior had not been counting as part of (b)(2) water the snowmelt and rainfall that refilled reservoirs after (b)(2) water was released. This resulted in 200,000 to 300,000 more acre-feet being used for competing "environmental" purposes—fish, wildlife, endangered species, and water quality. With the Wanger decision upheld, water districts can claim this water for their users.

"[Previous accounting] was very disturbing for farmers and users," says San Luis and Delta-Mendota Water Authority spokesman Tupper Hull. "A great deal more than 800,000 acre-feet was held back from farming for fisheries—at one point it was 1.2 million acre-feet. So water users are very happy."

Environmentalists are circumspect about the ruling. "It's mixed bag. We appealed on four issues, and we won on the most important issue," explains Cynthia Koehler, a consulting attorney with Environmental Defense. "Now [Interior] must change its (b)(2) policy."

The Miller-Bradley Act, also known as the Central Valley Project Improvement Act, touches some of the rawest nerves in the California water wars. Congress passed the act in 1992 during a time of multiple water crises including severe drought and large diversions by Golden State water users. What was clear to Congress at the time was that among agriculture and metropolitan users and the environment, the environment received short shrift in water allocation. The act was meant to address this inequity.

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BULLETIN BOARD

CONTRA COSTA COUNTY VOTERS WILL DECIDE next March whether or not to quintuple the size of Los Vaqueros Reservoir. The estimated \$1 billion expansion would mean razing the existing dam—which inundates 1,500 acres—and replacing it with a taller one that would inundate 3,500 acres. Water District officials believe the expansion would give the CALFED Environmental Water Account a way to store water that would be used to make up for times when Delta pumps are shut down for environmental reasons. Language approved for the ballot measure reflects concerns about the reservoir being used to send more water to Southern California. Water District officials originally wanted to put the Los Vaqueros measure before Contra Costa voters in November. The move to March appears to be a concession to environmental groups that argued last spring to put off the measure until all environmental reviews are completed and voters could be more fully educated. Should county voters approve the measure, CALFED would be allowed to move forward with environmental permitting. What remains unclear is who will pay for the expansion. In the meantime, water district officials are looking for comments on the draft resolution and ballot measure. www.lvstudies.com

ANNOUNCEMENT

The San Francisco Estuary Project is pleased to announce its 2nd annual Small Grants Program. We invite any Bay Area resident, organization, school, business, or public agency to apply for funds ranging from \$3,000 to \$10,000. This year we have a total of \$92,500 to award. You may request a copy of the RFP from Carol Thornton at SFEP (510) 622-2419 or ct@rb2.swrcb.ca.gov. Deadline for submittal is September 12, 2003.

THE NATURAL RESOURCES DEFENSE COUNCIL hails a recent ruling by U.S. District Court Judge Lawrence Karlton as a victory for free speech. NRDC had sent a letter to BurRec in 2002 complaining that BurRec's contract with Westlands meant too much water for irrigators and not enough for fish and wildlife. Two years later, Westlands filed a lawsuit against NRDC asking the court to declare Westlands' contract legal. While Westlands claimed that the lawsuit was simply an attempt to clarify the legality of the contract, NRDC said it was a strategic lawsuit against public participation (or "SLAPP" suit).

EATING TOO MANY BAY FISH could be bad for your health, according to the U.S. EPA, responding to a recent report released by the S.F. Estuary Institute summarizing contaminants in fish caught in 2000. Shiner surfperch and white croaker showed high levels of PCBs, dioxins, DDTs, chlordanes, and PBDEs in their tissues, while larger fish like leopard sharks showed higher mercury concentrations. In 90% of the samples, PCBs were found to exceed state health thresholds; in 69% of the samples, dioxins exceeded the thresholds. DDT has declined in white croaker since the 1980s. The report can be viewed at www.sfei.org. Fish advisories are published at www.oehha.ca.gov/fish.html.

SOUTH BAY FISHERS CLAIM CARGILL SALT ruined their catch of brine shrimp this year. On Sept. 17, 2002, Cargill reported to regulatory agencies that it had accidentally dumped 36,900 gallons of bittern into the Newark Barge Canal after a pipe failed. The canal flows into Mowry Slough, which in turn empties into some of the South Bay's best shrimping areas. Fishers claim that soon after the Cargill mishap, the shrimp disappeared. Cargill claims that there is no cause-and-effect relationship, while Cal Fish & Game biologists say that drier-than-normal weather may have caused declines. Fishers are unconvinced.

IN JULY, AFTER FOUR YEARS of settlement negotiations between enviros and water users on the San Joaquin failed, 14 environmental groups led by NRDC filed a seventh-amended complaint over the health of the river. Enviros claim that the way Friant Dam near Fresno is operated pollutes the Delta and decimates the river's salmon runs. They say the river can be restored without ruining agriculture, while farmers say it is impossible to restore fish and still have water for crops.

SOON "ESTUARY" WILL BE A HOUSEHOLD word like "river" and "ocean"—or at least that's the goal of the National Estuary Project's multimedia campaign unveiled in June in New Orleans. With a grant from the EPA, and help from the National Estuarine Research Reserve System and U.S. Fish and Wildlife, the program will officially kick off on National Estuary Day 2003—September 27—and will include TV spots, radio ads and interviews, and print ads and articles. See www.WhatsAnEstuary.com to view and download an eight-minute multimedia presentation. Email: info@WhatsAnEstuary.com.



BUREAUCRACY



BUDGET CRISIS CRUNCHES BAY

Despite the long-awaited signing of the state budget, for state agencies and non-profits working to protect and restore the Estuary, the ripple effect of the budget crisis is just beginning. For state agencies, the biggest ripple so far is the staff reduction ordered by Gov. Davis: Unless agencies have layoff plans for 10% of their staff, employees with fewer than 30 months of service are to be considered "surplus." Even agencies that also receive funds from federal, fee, and grant sources are affected, because the state can't provide its share of services to help complete projects.

According to the S.F. Regional Board's Wil Bruhns, his agency recently gave notices of potential layoffs to 20 people. A project management staff member of the California Coastal Conservancy's South Bay Salt Pond restoration project just received a 30-day notice of potential layoff. Consultants are being hired, but state rules do not allow them in every instance—only where permanent staff is unequipped. The Conservancy's Nadine Hitchcock explains, "We're different from other agencies in that we retain staff with bonds or funds from land sales transactions. So you'd think we wouldn't be affected!" Because of staffing cuts, there also won't be as many people to process funding applications, something the agency has done particularly well in the past. So the budget crisis will ultimately hit areas that once were relatively safe.

"The real crisis began one-and-a-half years ago, when the state Department of Finance imposed a hiring freeze," says Larry Kolb of the S.F. Bay Regional Board. Since October 2001, state agencies have been losing staff by attrition.

Cal Fish & Game's Bay-Delta branch must leave 30 vacant positions unfilled to comply with the hiring freeze, and consequently has no staff to execute projects. Worse, the agency can't hire employees for seasonal programs, says Chuck Armor.

Restoration projects are often accomplished by state, federal, and NGO partners. But state partners suffer from limited numbers of personnel who are doubled up on projects, laid off, or reassigned. Protecting the Estuary—and coast—also becomes more difficult. Says Jo Ginsberg of the California Coastal Commission, "Due to a lack of staff, there are areas of the coast where we have been unable to pursue every Coastal Act vio-

lation, and we have to focus our attention on the really big violations. We aren't able to do the kind of proactive enforcement we'd like to do. Whenever someone leaves, we can't fill their position, except in-house." State general funds that formerly provided resources for State Board regulatory programs have been eliminated. Now, programs must be supported completely by fees. The State Board is trying to raise \$16 million by proposing fee increases for land disposal programs and municipal stormwater permittees, for example.

NGOs are feeling the pinch as well. A recent Bay Institute undertaking—the Ecological Scorecard—establishes key indicators—water quality, habitat, resource stewardship—of the Bay's health. While the state had been a source of long-term data for the Institute's expert scientific panel working on the project, the Institute must now retrieve the data itself, says the Institute's Grant Davis. The Institute was notified over a year ago of a contract, upon which it based future restoration projects. After getting half way through the restoration work, the Institute learned that the contract had never been executed, and it had to tap its own budget to finish the work.

Things could be worse. Thanks to California voters, open space acquisitions have not yet been significantly affected because funding continues from four recent resource bonds (Propositions 12 and 13 in

2000, and 40 and 50 in 2002) totaling \$10 billion and earmarked for acquisition, water projects, state and local parks, and wetlands protection. However, according to the Bay Area Open Space Council's John Woodbury, the pace of acquisitions may slow, as bond funds are spread out over longer periods in expectation of less future funding. Also, bond money can only be spent to improve public facilities or purchase land, not to pay salaries of state employees. Agencies then cannot provide staff to manage the funding.

The Regional Board has already lost at least 10% of its staff through attrition since the hiring freeze. Layoffs would be devastating to environmental projects, as well as to employees, says Kolb. "[O]ne of the benefits of government service has always been job security. The legislators are stealing from the future. This crisis had a warning, and it is a huge bipartisan failure."

But the real impact may yet be to come. Actual staff cuts—not just warnings—may be implemented any day now, with a notice from Sacramento. Agencies may have to decide which projects to carry out—and which to forgo. Now that the budget has finally been signed, says Armor, agencies will need to step back and assess assets and how to cover programs.

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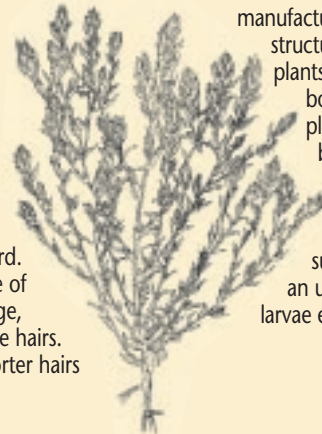
SPECIES SPOT

IMPERILED PARASITE

Soft bird's-beak, a plant on the federal endangered species list since 1996 and without critical habitat designation or a recovery plan, survives in only nine sites along the northern rim of the Estuary. But on the edge of Suisun Bay at the Solano Land Trust's Rush Ranch preserve, Brenda Grewell and other U.C. Davis biologists are giving the troubled plant a helping hand.

"Bird's-beak" comes from the shape of the upper lip of the flower's corolla, which is like the beak of an insect-eating bird. "Soft" describes the texture of the flower bracts and foliage, which are covered with fine hairs. Leaves and stems have shorter hairs that secrete saltwater.

Like their showier relatives, the Indian paintbrushes and owl's-clovers, bird's-beaks are parasites. Although the term evokes creatures like ticks and tapeworms, over 3,000 species of flowering plants have evolved a parasitic lifestyle. Unlike dodder, a more common salt-marsh plant totally dependent on its host, bird's-beaks are hemiparasites, capable of manufacturing their own food. Root structures called haustoria tap other plants' roots for water, nitrogen, carbon, and minerals. Some parasitic plants are specialists, but soft bird's-beak attaches to a variety of hosts: pickleweed, saltgrass, fathen, even exotic forbs and grasses. In turn, it supports a suite of native bee pollinators and an undescribed moth species whose larvae eat its seeds.



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RESTORATION

FROM RANCHES TO RIVERS



A group of farmers and ranchers in Chico are trading in their cowboy hats and applying their cultivation skills to the field of river restoration. For the past five years, the non-profit River Partners has been working to restore flood-prone orchards and other marginal farmland along rivers back to riparian habitat. The group buys up and restores riverfront property, then transfers it to a public agency, or restores property already owned by U.S. Fish & Wildlife, Cal Fish & Game, the Wildlife Conservation Board, and other agencies.

When his job managing property for the Nature Conservancy ended, John Carlon decided to start his own nonprofit with Barney Flynn, a prune and almond farmer he had worked with on the Conservancy project. "We thought we could improve restoration technology by blending ag skills with ecological skills," says Carlon. The two grew their group to 32 employees with a \$3.2 million annual budget and expanded from the Sacramento River to the Tuolumne, Stanislaus,

San Joaquin, and Feather rivers. At least half of their employees have degrees in agriculture, own a farm, grew up on a farm, or spent most of their career in farming, says Carlon. They also have staff members with Ph.D.s in ecology and biology who help them assess sites and create planting plans.

"Wherever possible, we try to use natural processes and let the system heal itself," explains Carlon. But of the 19 projects they are working on currently, only about 2% have "all the bits and pieces in place" for that to happen. So the group is actively restoring about 2,000 acres of riverside land—collecting seeds, processing them, contracting with nurseries to grow the plants, then preparing the land by clearing it of weeds and old orchard trees, while leaving existing native trees. Then, they plant many more native trees and shrubs (cottonwood, willow, box elder, elderberry, coyote brush, oak, sycamore, blackberry, and wild rose), and a herbaceous and grass layer to comprise an understory. After three years of watering, weeding, and growing, a site is ready to be on its own.

In contrast to a more traditional farming perspective, the partners allow rivers to do

their own thing whenever possible—including meandering and eroding. "We don't think bank erosion is a bad thing," says Carlon. Craig Lederer, a fourth-generation farmer, now restoration field manager with the group, likes the way meanders create "an ever-changing environment—you have old growth snags, you have new willows and cottonwoods coming in with new river deposits. It's an ongoing ecosystem, old and new, ever changing." After biologists evaluate a site and provide a planting plan, Lederer figures out how to implement the project—how to irrigate it, orient the trees, shrubs, and other plants—"the hands-on of what happens." Both Lederer and Carlon say their ag experience has helped them greatly. "If you love to grow plants, restoration is this incredibly fun puzzle," says Carlon.

River Partners hopes to convince more farmers of that. One thing restoring riparian habitat can do for farmers is provide buffers, says Lederer. "The plants filter out the bad stuff and help keep it out of our waterways." That said, Lederer, who was a Glenn County Farm Bureau director for nine years, understands the reluctance of some farmers to embrace conservation and restoration. "A lot of it is that they don't know exactly what's going on, and the unknown is scary." To try to lessen that fear, Lederer hires local people to work on projects whenever possible. Many farmers fear that if rivers are allowed to flow—and meander—naturally, their farms will flood. But Lederer points out that meanders and farms can coexist, with the help of setback levees. On the other hand, he thinks River Partners is on the right track by buying up flood-prone land. While people assume that the soil next to a river is the most fertile, the sand and gravel layers deposited by the river sometimes make it more difficult to cultivate. What River Partners does for the ag community, says Lederer, is give them an opportunity to sell a piece of marginal ground.

What River Partners does for its agency partners, says Kim Forrest with the San Luis National Wildlife Refuge, who is working with the group on the single largest riparian restoration project (800 acres) in the state on the San Joaquin River, is get the job done. "They are aggressive and adaptable and persistent," says Forrest. "They've ratcheted up the bar of professionalism in what they do, using ecology and science. They don't just go out and stick a bunch of willows in the ground in rows. They try to mimic what was here originally."

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TECHNOFIX



STRESS INDUCTION THERAPY

David Goldhamer is redefining the term "stress management." Borrowing from research done by Australians on peach trees, the U.C. Davis researcher has found that intentionally cutting back on water for tree and vine crops—thus putting the plants under stress—at certain times during the growing season yields healthier fruits and nuts. Regulated deficit irrigation (RDI) is based on the notion that certain crops are more stress tolerant at certain periods of their growing seasons than at others. In a three-year study of navel oranges in the San Joaquin Valley, Goldhamer decreased irrigation water to the orange trees by 20% in mid-spring and early summer and found no reduction in the harvest. More remarkable was the quality of the fruit. Once picked, oranges are divided into different categories, including fancy—suitable for eating—and juice quality. Fancy oranges with little or no creasing in their peels garner the most money for farmers; juice-quality oranges, with lots of creases, fetch less money. So while the reduced irrigation did not boost yield, Goldhamer says, it did increase profits because it produced more fancy-quality oranges that sold at a higher price.

In their studies, Australian researchers found that RDI did not impede fruit growth and helped reduce offshoots and other growth that detract from a plant's ability to produce fruit, which cuts down on the need for pruning during the growing season.

RDI is not for every crop, notes Goldhamer. He says researchers are looking mostly at tree and vine crops—including wine and table grapes—as candidates for this complex irrigation method. Goldhamer says that based on an estimate of the water used by tree and vine crops in California, RDI could save the state roughly one million acre-feet of water per year.

Many questions remain about RDI, however, including whether there are any long-term effects of stress on the trees, such as increased susceptibility to disease and insect infestations. Multiple years of reduced irrigation could also lead to a build up of soil salinity.

Ultimately, Goldhamer says, RDI has a cultural barrier to overcome. "Growers have been taught that we use irrigation to avoid stress and that stress is not a good thing," he says.

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KC



SCIENCE

FISH SUSPICIONS FOUNDED?

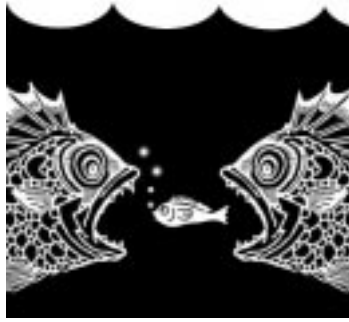
For years, scientists have suspected that predator fish—striped bass, Sacramento pike minnow, and catfish—may lie in wait for the young salmon that are salvaged, trucked around the pumps at the Tracy Fish Facility, and released near Sherman Island via a pipe.

Traditional underwater cameras have been foiled by the Delta's turbid waters, but in recent months, Department of Water Resources biologists have begun using a new acoustic camera—the "DIDSON," developed by the University of Washington—to peer into this murky world. Although the camera has only been used a few times, what it has revealed so far hints that scientists' worst fears may be well founded.

The Bay Institute's Tina Swanson, who saw a video recorded by the DIDSON, says it appears that the predator problem might be more serious than what has been suspected. "We saw huge numbers of very large fish just hanging out near the entrance of the pipe, as well as in the lee of nearby physical structures—pilings, etc. It was very obvious that they were wanting and looking to feed." Swanson also suspects that when one group of fish at the end of the pipe becomes satiated, another group moves in, so that there is a "cycling" effect. "We really need to try to quantify how many fish are there versus how many are released," she says. "We easily saw 50-some fish on the video. We need to know whether they are capable of eating everything that's being released."

The Department's Roger Churchwell cautions that it is too early to draw hard conclusions, but admits that it was surprising to see so many predators hanging out in the channel right at the mouth of the pipe. Says Churchwell, "If that's the case, and the fish really are that concentrated, it lends us to making improvements because we can see what the predators—the stripers, the catfish—are doing, and we can design for that."

The camera—originally designed for the U.S. Navy to help search for mines and patrol harbors—is a floating box with a lens in the front that can be lowered over the side of a boat on a pivoting pipe. The camera operates on a dual frequency, with a high frequency sonar that uses 96 different sonar beams—sound waves transmitted through the water that sense vibrations reflected from an object—to gather detailed images of a fish, a school of fish, or an underwater struc-



ture. The light-weight camera carries a heavy price tag—\$70,000—but BurRec was so impressed with the camera that it has ordered one and will begin using it this fall.

CALFED's Ron Ott says that what

resource managers have seen so far is enough to make them realize that they are on the right track in wanting to learn more. "We need to know how extensive the predation is. When is it occurring? All the time? Day and night? How smart are these predators, and can you fool them? It doesn't do any good for us to collect the fish and then have them eaten." The DIDSON, says Ott, could offer a wonderful way to survey the Delta simultaneously. "That way we can see if it's the same 'guy' robbing 15 different banks, or different predators."

NEXT GENERATION

A MARSH IS BORN

Mix one part industrial wasteland, two parts youth volunteers, a pinch of idealism, and what do you get? With these ingredients, even a patch of ground used for decades as an illegal dump can be transformed into a beautiful and productive marsh—and a symbol of community spirit.

Heron's Head Park, formerly known as Pier 98, proves the point. Located at the mouth of Islais Creek next to Hunters Point Power Plant in one of San Francisco's poorest neighborhoods, the site began as landfill meant to support the footing of a southern bay bridge. Today, the 24-acre restored wetland hosts more than 78 bird species and a wide variety of native plants, and gives more than 1,800 San Francisco schoolchildren each year the chance to make a difference in their own backyard. Students plant native plants, maintain the park, create signs for pathways, and conduct letter-writing campaigns in support of wetland restoration.

"For the younger ones, this might be the first time they've been to any natural area at all," says park naturalist Cleo Woelfle-Erskine, "and to them, it's a totally different world. It's really valuable that that happens in their own neighborhood."

Swanson says that one solution to the predator problem—if confirmed—may be establishing many more release sites. She also recommends taking a more holistic view of the entire system. "I think we need to look at all of the steps along the way in what we do to these fish. As we gain more science, it becomes clearer that on whatever scale you look at it, the Delta fish facilities have an impact. This camera is giving us a much clearer picture of how the impacts actually happen."

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Students from Thurgood Marshall Academic High School visited the park, performed water monitoring, and toured a sewage treatment plant to learn how to combat sewage overflows. Then they presented their findings to the San Francisco PUC, which is conducting a wastewater master planning process.

"We took the students to the Calera Creek Water Recycling Plant in Pacifica, which incorporates state-of-the-art technologies, including a constructed wetland," says Woelfle-Erskine. "They knew so much about it—they told the PUC, 'This technology exists, we can explain how it works, and you guys need to implement this.'"

Students will also participate in designing a self-sustaining greenhouse and a classroom at the park, to be completed in 2004. The park's programs are a collaborative effort: The Port of San Francisco finances the park, Literacy for Environmental Justice runs the environmental education programs, and the Center for Habitat Restoration at City College provides interns who help with environmental monitoring. Contact: Brenda Salgado (415)508-0575 **JA**

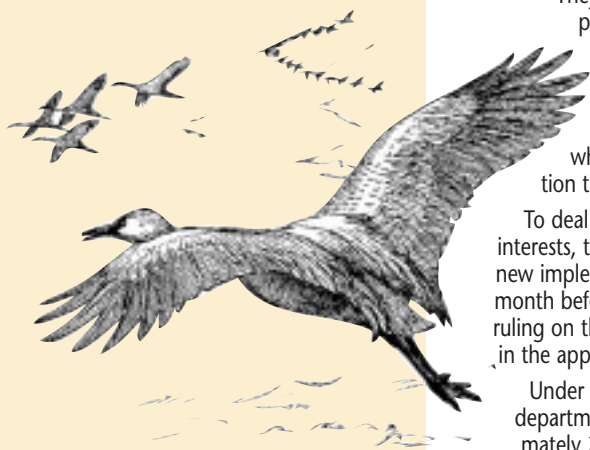
CRANES CONTINUED

took wing and outdistanced pilot Abijeet Gole. The sandhills, he says, flew about a mile, landed in an orchard, then disappeared. Gole was relieved when he saw several small heads peek over the levee of an irrigation canal. The birds were just cooling their heels.

When they aren't relaxing, the sandhills eagerly follow a hang glider over the farm's level fields. Project staffer and San Francisco Park Patrol Ranger Lorraine Grassano says that this is the first attempt to use hang gliders for bird migration over such long distances. The project couples a noisy Mosquito engine with the hang glider to help pilots lift and stay aloft. "The chicks are not really afraid of it, but we have to determine how they will take engine noise," she says.

Leading the cranes aloft, the white-winged hang gliders are no match for the elegance of the cranes. "Cranes symbolize many things—marital fidelity, hope, and peace," says Grassano. "Cranes need wetlands. When we protect cranes from extinction, we protect wetlands and their attendant species, and that's what will preserve our own species. In that sense cranes embody fidelity—to other species, to ourselves, and to our children."

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CVPIA CONTINUED

The act directed the Interior Department "to dedicate and manage 800,000 acre-feet of Central Valley Project yield for the primary purpose of implementing the fish, wildlife, and habitat restoration purposes." The act listed other projects such as improving water quality in the Bay and Delta and meeting the requirements of the Federal Endangered Species Act that would also receive a part of this water during a water year.

A water year begins on October 1 and ends September 30 to coincide with the predominant rainfall/snowmelt seasonal pattern in the state. So a water year begins when flows are low, temperatures are high, and the rains have yet to begin. This is significant as the Interior Department interpreted the act to mean there were competing needs for the (b)(2) water among water quality for the Delta and Bay, endangered species, and fish. Officials were left to determine how much water to use for fish when they didn't know how much water they would need for water quality purposes as these needs don't become known until spring and summer. This led officials to reserve water for water quality while providing a less than desirable amount for fish during their spawning season in the fall, says the Bay Institute's Tina Swanson.

"They were hamstrung by the fish protection provision," explains Swanson. "They hoarded the water in the fall and sometimes wound up with leftover (b)(2) water in the fall when there are fewer fish protection things to do with it."

To deal with what it saw as competing interests, the Interior Department issued a new implementation rule on May 9—a month before the 9th Circuit reached its ruling on the appeal and during testimony in the appeals case.

Under the new Interior rule the department would dedicate approximately 200,000 acre-feet for fish for the period between October and January. The amount is not a cap, and the department acknowledges it may vary from year to

year. The remaining (b)(2) water will be held to help cover the costs associated with water quality protection and endangered species compliance. The net effect of this rule is that far less than 800,000 acre-feet will be used for fish.

But this new Interior rule was based on the Wanger decision. The 9th Circuit ruled that the primary purpose of the (b)(2) water is for fish restoration, and environmentalists have written Interior Department officials asking them to comply. An Interior Department spokesman would not comment on the 9th Circuit ruling.

Environmentalists wrote a letter to Assistant Secretary Bennett Raley on June 9 requesting the department to withdraw its May rules and replace the hierarchy of purposes with that of the 9th Circuit ruling, among other things. The department has yet to respond to this letter and would not comment on it for ESTUARY.

Attorneys for the San Luis Delta-Mendota Water Authority believe the department doesn't need to change a thing in its new rules. "The Ninth Circuit says that Interior has discretion over how it accounts for (b)(2) water and that's what Interior's policy says, too," says attorney Jon Rubin.

Enviros see a different shape in the Circuit Court's "ink blot." "From where I sit, Interior must change its rule. I hope the government will simply comply with the ruling," says Koehler.

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**No matter
whom you ask
—
environmentalists,
water users, or
the government
—
the decision
validates their
position.**

PLACES TO GO & THINGS TO DO



WORKSHOPS & SEMINARS

AUG
THUR
28

CALIFORNIA WATERSHED COUNCIL MEETING

TOPIC: Grant funding offered by the state from Props. 40 and 50.

LOCATION: Sacramento

SPONSORS: Resources Agency & Cal EPA Ken Coulter, COULK@dwq.swrcb.ca.gov

AUG
THUR
28

EROSION CONTROL WORKSHOPS

TOPIC: One-day workshops offer morning classroom format and afternoon visit to active construction site to discuss and demonstrate site planning and management for compliance with state and federal regulations, including NPDES.

LOCATIONS: Various Bay Area locations

SPONSORS: S.F. Estuary Project, S.F. Regional Board & Friends of the S.F. Estuary
Carol Thornton, (510)622-2419; ct@rb2.swrcb.ca.gov; www.abag.ca.gov/bayarea/sfep/programs/construction/index.html

SEPT
FRI
5

LIQUID ART: A CELEBRATION OF ART IN PUBLIC PLACES

TOPIC: Panel of artists and water resource specialists will discuss what's been missing in California's water conversations. Art exhibit includes public artworks that incorporate water.

LOCATION: San Francisco

SPONSORS: MWD & SomArts Cultural Center
Debra Sass, (213)217-7230; dsass@mwdh20.com; http://www.somarts.org

SEPT
SAT
6

SNOWY PLOVERS & THE CONSERVATION OF COASTAL HABITATS

TOPIC: Biologists will discuss efforts to save the threatened snowy plover and coastal habitats.

LOCATION: Abbotts Lagoon

SPONSOR: PRBO Conservation Science (415)868-1221; http://www.prbo.org

SEPT
FRI
19

CALIFORNIA WATERSHED FORUM

TOPIC: One-day forum to examine the new statewide watershed policy and formulation of the California Watershed Council.

LOCATION: Sacramento

SPONSORS: Watershed Management Council & California Watershed Network
www.watershed.org or www.watershed-network.org

SEPT
MON & TUES
22
23

GIS APPLICATIONS IN WATERSHED MANAGEMENT

TOPIC: Lectures, demonstrations, and hands-on practice to learn the tools of ArcView 3.x.

LOCATION: Davis

SPONSOR: U.C. Davis
(800)752-0881; http://universityextension.ucdavis.edu/courses/coursedescription.asp?type=A&unit=LUNR&SectionID=111679&AreaName=GIS

OCT
WEDS
8

SURFACE MINING & RECLAMATION ACT

TOPIC: An overview of the California Surface Mining and Reclamation Act, reclamation standards, and the act's relationship to CEQA

LOCATION: Davis

SPONSOR: U.C. Davis
(800)752-0881; http://universityextension.ucdavis.edu/courses/coursedescription.asp?type=A&unit=LUNR&SectionID=111705&AreaName=Natural%20Resources



HANDS ON

SEPT
SAT
20

CALIFORNIA COASTAL CLEANUP DAY

TOPIC: Clean up at over 600 shoreline sites on the coast, San Francisco Bay, and inland waterways.

LOCATIONS: Various coastal sites

SPONSOR: California Coastal Commission (800)COAST04U; Coast4u@coastal.ca.gov; www.coastal.ca.gov/publiced/pendx.html

SEPT
SATURDAY
THRU
OCT
12

COASTWEEKS

TOPIC: National three-week celebration of our shorelines, starting with Coastal Cleanup Day.

LOCATIONS: Various coastal sites

SPONSOR: California Coastal Commission
To have event included in Coastweeks calendar, contact Annie Frankel (415)597-5888; afrankel@coastal.ca.gov; www.coastal.ca.gov/publiced/pendx.html

SEPT
WEDS - FRI
24
THRU
26

NORTHERN CALIFORNIA WATER FACILITIES & FISHERIES TOUR

TOPIC: Travel the length of the Sacramento Valley to visit Oroville and Shasta dams, Feather River Fish Hatchery, Red Bluff Diversion Dam, location of proposed Sites Reservoir, area farms, and ecosystem restoration projects; enjoy a salmon barbecue and a houseboat cruise on Shasta Reservoir.

LOCATION: Sacramento

SPONSOR: Water Education Foundation (916)444-6240; www.watereducation.org

NOW IN PRINT & ON LINE

America's Living Oceans—Charting a Course for Sea Change. June 2003.

Pew Oceans Commission. www.pewoceans.org

California Clean Marinas Guidebook. June 2003.

California Coastal Commission.

www.coastal.ca.gov/ccbn/2ND-DRAFT-GUIDEBOOK.PDF

The DFG Newsroom. June 2003.

California Department of Fish and Game. [Cal Fish & Game] www.dfg.ca.gov/news/index.html.

Drainage Without a Drain. February 2003.

The Bay Institute, Environmental Defense, and Contra Costa County and water agencies. www.bay.org/Pubs/drainage.pdf

Layperson's Guide to Groundwater. June 2003.

Water Education Foundation. www.watereducation.org

Los Vaqueros Advisory Election Resolution. July 2003.

Contra Costa County Water District. www.lvestudies.com/

A Primer on Stream and River Protection for the Regulator and Program Manager.

A.L. Riley. S.F. Regional Water Quality Control Board. \$12.00 per primer from the Friends of the S.F. Estuary. (510) 622-2465

San Francisco Bay: Portrait of an Estuary. John Hart. October 2003.

The Bay Institute and Audubon. www.bay.org

Spotlight on Conservation Final Workshop Report. July 2003.

California Legacy Project. www.legacy.ca.gov

Water Acquisition Handbook: A Guide to Acquiring Water for the Environment in California. Donald B. Mooney and Marsha A. Burch. July 2003.

Trust for Public Land. www.tpl.org

Water Quality Education Materials: Nonpoint Source Pollution Tool. July 2003.

Puget Sound Action Team. www.psat.wa.gov

The Western Way of Water: Using the West's Most Precious Resource. June 2003.

Western Water Alliance. www.westernwateralliance.org/resc_reports.html

West Nile Virus Maps. 2003.

U.S. Geological Survey. http://westnilemaps.usgs.gov

What You Need to Know About Your Water—Annual Water Quality Report, Year 2002. June 2003.

East Bay Municipal Utility District. www.ebmud.com/water_&_environment/water_quality/annual_report/default.htm

A Year in the Life of Lake Merritt. July 2003.

Lake Merritt Institute. www.lakemerrittinstitute.org.

IMPERILED PARASITE CONTINUED

Ninety percent of soft bird's-beak's historic habitat has been lost with conversion of tidal marsh to farmland. Changes in tidal flows reduce habitat quality. Exotic plants like yellow star thistle and perennial pepperweed crowd it out or distract its pollinators. And if a bird's-beak seedling attaches to a winter-annual grass, the mismatch between lifecycles is fatal: The host dies back before the seedling becomes established.

Grewell and her co-researchers planted soft bird's-beak seeds in test plots at Rush Ranch in 2000. They found that the plant does best in patchy habitat, with gaps to provide sunlight for seedlings, and that clipping back the vegetative canopy gives the parasites a crucial boost, although exotic plants take advantage of the gaps. The Rush Ranch plants are gaining new ground; last year many seedlings were found outside the experimental plots.

Contact: Brenda Grewell,
bjgrewell@ucdavis.com **JE**

**SIXTH BIENNIAL
STATE OF THE ESTUARY CONFERENCE****OCTOBER 21-23, 2003**Henry J. Kaiser Convention Center
10 Tenth Street
OAKLAND

Is the Bay healthy? Can we eat the fish? Learn more about the current state of the San Francisco Bay-Delta Estuary—its waters, wetlands, biological resources, and watersheds—at the sixth Biennial State of the Estuary Conference. The conference is sponsored by the S.F. Estuary Project, Friends of the Estuary, and more than 30 other government agencies and organizations. Leon Panetta, Chairman of the Pew Oceans Commission, will be the keynote speaker. Conference attendees will have a unique opportunity to view rarely seen native estuarine and introduced fish species on display in a 1,500-gallon mobile fish tank. Among the conference topics to be addressed are legacy pollutants, stormwater contamination, the threat of flame-retardants and endocrine disrupters, habitat restoration, fish and wildlife assessments, and the Estuary's role in California water management. The registration fee of \$190 includes three lunches, two late afternoon poster session receptions, and three publications. Student and group rates are available. For more information, check the web site or call the S.F. Estuary Project at (510)622-2465.

www.abag.ca.gov/events/estuary_state

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