

JUMPING FROG BACKLASH

Much of California is up for grabs as industry and environmentalists battle over territory that could be protected for species under the Endangered Species Act. The struggle took several new turns recently, when U.S. Fish & Wildlife rescinded the designation of 4.1 million acres stretching from Yosemite to the Los Angeles suburbs that had been considered essential to the survival of the red-legged frog. The Calaveras jumping frog (the California red-legged frog) is down to about 10% of the population that existed back in the days when Mark Twain first made it famous.

Judge Richard Leon, who had been appointed to the federal bench only weeks before by the Bush administration, accepted a settlement between the Home Builders Association of Northern California and Fish & Wildlife, but later reinstated habitat protections after environmentalists protested that he hadn't heard their arguments.

Several weeks before, Anthony W. Ishii, of the U.S. District Court in Fresno, had ordered Fish & Wildlife to keep in place a similar designation of 400,000 acres of East Bay grasslands deemed critical to the survival of the Alameda whipsnake.

This is only the latest legal whipsawing over the provision in the Endangered Species Act that requires federal agencies to draw a line around areas considered essential to the recovery of a threatened or endangered species (see "Habitat Setback", April 2002 *ESTUARY*). This widely misunderstood section of the law requires only that agencies must consider whether development could harm the species. The law virtually never stops development outright, but may alter the way it is done. Unlike listing of species, which must be based solely on scientific considerations, critical habitat designation requires officials to take economic impacts into account. The economic analyses conducted by the agencies over the last 10 years are now falling apart under pressure from industry lawsuits. In the past few months, agencies have rescinded critical habitat designation for 19 West Coast salmon and steelhead species and for one of the rarest bird species in the United States, the cactus ferruginous pygmy owl, which lives in the rapidly suburbanizing valleys of Arizona. A recent industry suit challenging critical habitat designation for the snowy plover along 210 miles of coastline in California, Oregon and Washington promises more of the same.

Peter Galvin of the Center for Biological Diversity, which has taken a lead role in forcing the federal government to desig-

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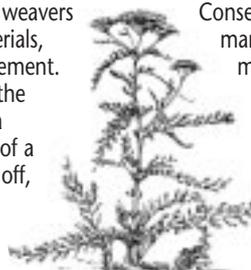
YOUR INDEPENDENT SOURCE FOR BAY-DELTA NEWS & VIEWS



Reweaving Culture into a Creek

The Tending and Gathering Garden began as Shannon Brawley's idea for a senior project three years ago at UC Davis. Since then, it has evolved not only into her graduate work in geography, but also into a unique, community-driven effort to restore a two-acre site in Yolo County's Cache Creek Nature Preserve. The site had been altered by decades of gravel mining, but is now being restored and will be maintained using traditional Native American land management techniques, such as burning, coppicing (pruning plants to the ground), selective pruning, weeding, and replanting. Located on land donated by a gravel-mining company, the Garden is a gallery of local riparian plants that Native Americans have used for centuries—and continue to use—for fiber, basketry, food, watercraft and medicine. Brawley's idea tapped a wellspring of need, as Native American basket weavers, cultural practitioners and educators statewide struggle to find pesticide-free materials and permission to collect and manage them using traditional techniques.

The Garden, planted along two acres of wetlands adjacent to the Cache Creek riparian corridor, east of the Capay Valley, is in its early stages. Twenty-nine native species—among them, willow, dogbane, redbud, purple needlegrass, yarrow and cottonwood—grow on the graded slope of a former gravel-mining pit. Brawley, who envisions many more species in the future, points to white root sedge as an example of how Native American basket weavers combine the harvesting of materials, such as roots, with land management. "Digging up roots helps aerate the soil," Brawley explains, tracing a mature plant's root to the base of a baby plant. "The root is broken off, and the baby plant is replanted somewhere else, so there's reseeded while harvesting."



Common yarrow
Illustration: Rita Alvarez

Although most of its plants are not yet mature enough to be harvested (except for the prolific willow), the Garden will eventually supply basket weavers and educators, such as Kathy Wallace, with materials for their crafts. Wallace, a member of the Karuk, Yurok and Hoopa Valley tribes, is a professor of basketry at D-Q University in Davis and a board member of the California Indian Basketweavers Association (CIBA). She brings her students to the garden, teaching them to identify plants and describing how basket weavers traditionally harvested them.

"After people gather plants, they look at a place and the Earth differently. They begin to have a relationship with the plants, and they become part of the landscape," Wallace says.

Over the past 11 years, CIBA has watched the number of California basket weavers grow from 250 to 650. It is difficult for weavers to gain access to land where traditional native species grow and to find plants that haven't been heavily treated with pesticides (weavers come into close physical contact with the materials, sometimes holding twigs in their mouths, for example, as they weave).

As members of the Garden's predominantly Native American steering committee, Wallace and her colleagues have been central to the Garden's development. But for Wallace, the most significant aspect of the project is the inclusion of Native Americans. "Shannon and the Cache Creek Conservancy have included us in the decision making from the beginning," she says. "They haven't told us what they're going to do for us. We have as much of a stake in the project as they do."

Jan Lowrey, executive director of the Conservancy, which hosts the Garden and manages the surrounding 130-acre mosaic of wetland restoration projects, historic farmland and heritage oaks along the creek, concurs. "The process is the project. We ask for the steering committee's input every step of the way and offer to compensate them for their expertise."

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VOLUME 11, NO. 4

AUGUST 2002

BULLETIN BOARD

SOUND SCIENCE? On July 10, the House Resources Committee passed 22-18 a bill sponsored by Richard Pombo (D-CA) that would change the scientific requirements of the Endangered Species Act. The bill, which supporters are calling the Sound Science for Endangered Species Act Planning Act of 2002, raises the bar for listing a species in several ways. It includes a requirement that data collected in the field, rather than statistical modeling, be used to determine whether a species is eligible for protection. "This legislation is a first step in fixing the Endangered Species Act, which over the years, has been blatantly abused by federal agencies and environmental groups alike. This law has impacted millions of people and has caused ruin for thousands more," said committee chair James Hansen (R-UT). Environmentalists are crying foul, saying that the bill outlaws basic methods used by conservation biologists to determine the health of a species. The bill is unlikely to reach the House floor, where party leaders are more concerned about the upcoming midterm election and a backlog of appropriations bills than about kangaroo rats and whipsnakes. But Ed Lytwak, communications director of the Endangered Species Coalition, says that even if it dies on the floor, the bill may serve another purpose: strengthening support in rural areas for Pombo and the other co-sponsors.



CALIFORNIA NEEDS TO TAP INTO THE \$180 BILLION made available by the farm bill approved in May by President Bush, says a new report by the California Wilderness Coalition. The Coalition wants Governor Davis to fight for California's fair share of the funding, claiming the state could receive as much as \$210 million a year (instead of the \$8 million it received per year under the 1996 farm bill) if funding were based on agricultural production. With 292 endangered species and the loss of 47 square miles of farmland every year, says the Coalition, now is the time to develop better incentives for farmers to steward their land. The report can be downloaded at www.cal-wild.org.

KEEPING THE BIG ONES (and throwing back the small ones) may not be what's best for some fish populations, according to a new study in the journal *Science*. In the study, David Conover, professor at the Marine Sciences Research Center at Stony Brook in New York, experimented with three groups of Atlantic silversides, each containing 1,000 fish. In the first group, the biggest fish were harvested; in the second group, the smallest were taken; and in the third, fish were randomly selected, not based on size. Although in the first year, the group from which the largest fish were taken produced the most biomass, in each succeeding generation, the group from which the smallest fish were taken produced more and bigger fish. The third group showed no change in size. The study followed four generations of fish. These results, according to Conover, may mean that management plans limiting catch to bigger fish may be harming fisheries in the long run. Other experts say the study is too limited to change the way fisheries are managed and that more studies are needed.

THE LONG-STANDING MYSTERY OF DEFORMED FROGS may be one step closer to being solved. A new study published in the July 9 *Proceedings of the National Academy of Sciences* found that a parasitic trematode that infects tadpoles may be working in conjunction with pesticides to cause the limb deformities. In the experiment, only tadpoles with the parasite developed deformities; however, when those tadpoles were also exposed to low concentrations of pesticide runoff—Atrazine, Malathion and Esfenvalerate—they developed deformities at a much higher rate than those not exposed to the pesticides. Contact: Sam Scheiner (703)292-8481; sscheine@nsf.gov

CAFFEINATED PESTICIDE A cup of coffee may perk you up, but it does the opposite to snails and slugs. A study published in the June 27 journal *Nature* concluded that even in very low concentrations (0.01% solution), caffeine deterred the persistent mollusks, and that at 1-2% solutions, it killed them (typical cup of coffee averages .05%). Because caffeine is highly soluble in water, slugs may be more susceptible to it through the mucus secretions they produce. Although caffeine may have a promising future as a pesticide, it has turned up in recent studies of the nation's waterways, raising questions about its impacts on aquatic life.



A BAN ON JET SKIS IN MARIN COUNTY WATERS—the first in the state—was reinstated by the state appeals court after an earlier judge had ruled that it was unconstitutionally vague. The 1999 ordinance bans "personal watercraft" (commonly known by the brand name Jet Ski) in waterways under Marin County jurisdiction, from the Pacific Coast to the mouth of the Petaluma River. The Personal Watercraft Coalition says it is being singled out by the ban, while environmentalists say the Jet Skis are threatening birds, seals and other marine life and causing pollution.

FIVE YEARS AFTER THE FEDS BEGAN DREDGING the Lauritzen Channel in Richmond, the U.S. EPA has found that DDT and Dieldrin, two pesticides banned since the early 1970s in the United States, exceed cleanup levels in certain spots in the channel. Although the source of the pollution—a former pesticide company known as United Heckathorn and a Superfund site—has been capped with concrete, pollutants in the channel may be contaminating bottom-dwelling fish, prompting concerns for human health and causing some to question the effectiveness of dredging as a cleanup remedy. According to the EPA, the pollution might be coming from areas that were missed by the dredging operations, from sediment stirred up by dredging or from other unidentified sources.

BI-COASTAL POLLUTANT PAR Scientists for the first time made a rough comparison between levels of two local problem pollutants — mercury and PCBs — in S.F. Bay with levels in Washington's Puget Sound and Maryland's Chesapeake Bay, and were "surprised to find no large difference with the other estuaries," says the Institute's Mike May. Results of the comparison can be found in the Institute's *Pulse of the Estuary*, published this spring, which summarizes recent pollution monitoring data in the Bay. According to the *Pulse*, 85% of water and sediment samples collected between 1996-2000 contained at least one contaminant at a level that failed to meet established guidelines. About 90% of year 2000 fish samples contained PCBs at levels of concern for human health. Looking back over seven years of data, scientists do not see any clear trend toward either improvement or deterioration, says May. The report can be found at www.sfei.org

EDUCATION

KIDS TRADE PLACES TO LEARN RESTORATION

Rabekkuh O'Neil balances precariously on a flat rock, trying to avoid getting her feet wet in the cold water of Berkeley's Strawberry Creek while making notes on a pad she's holding. Crouched beside her is Akwoung Saechao, who shivers a bit as he dips his hand in the stream to pick a random pebble out of the water. The two then carefully measure the rock with a small plastic ruler. As O'Neil writes the measurements down on her notepad, Saechao reaches down for another specimen.

It's very unlikely that these two ever would have met, especially in such a setting—Saechao is a student at Richmond High, a big, inner-city school just a few miles away from the creek, while O'Neil attends Clearwater Valley High School, located in tiny Kooskia, Idaho (pop. 782). But they are participating in a unique exchange program aimed at opening their eyes to the possibilities of a career helping the environment.

The program, in its fourth year, is the brainchild of Ann Riley, head of Berkeley's Waterways Restoration Institute, and Peter Goodwin, a civil engineering professor at the University of Idaho, Boise. Each year, several students and teachers are selected from Richmond and the Clearwater Valley area, both low-income areas where educational opportunities are generally limited. First, the Idaho group is taken to Berkeley. Along with their urban counterparts, they learn about stream restoration techniques, such as surveying and pebble counts (which tell how much sediment the stream is moving), and about water-quality monitoring. Then, led by Mark Spencer, one of the project's coordinators, they apply their knowledge to a real-life urban creek restoration project on Wildcat Creek in Richmond.

After about a week, everyone piles into a van for a drive to Boise, and a 33-mile back-packing trek into the Frank Church River of

No Return Wilderness. Camped there, the students will use what they learned in Berkeley, as well as new techniques, to measure the progress of restoration work being done along rural waterways. The data they gather in both states will be forwarded to researchers and used in the ongoing evaluation of their projects.

The program is funded by the National Science Foundation and supplemented by local sources. Upon completion, each student receives a \$1,000 stipend, as well as a \$1,000 college scholarship. Students also do follow-up work with the program staff and teachers at their schools. Riley and Goodwin both note proudly that most of their students have gone on to college.

The waterways they are exploring are quite different. As the kids get ready to fish pebbles out of Strawberry Creek, an instructor warns them to avoid glass and needles that might be lurking among the rocks. The Idaho rivers aren't pristine, either—they've long been degraded by grazing and mining—but despite that, a good salmon run is underway this year. Students may get a chance to snorkel and have a face-to-face encounter with a migrating Chinook.

Some of the Idaho students have never visited a city with more than a few thousand people in it, and a few, including O'Neil, had never seen the ocean before they came west for the program. The city kids have an equally novel experience awaiting them—exploring deep canyons instead of busy streets, and being surrounded by bird and animal calls instead of sirens and car alarms.

At the beginning of the program, says the Urban Creeks Council's Josh Bradt, one of the instructors, "we usually see a lot of gentle ribbing of the Idaho kids by the city kids." There's a payback time when they head out into the wilderness, but Bradt says that by the end, many of the students have become fast friends. "I think the cultural exchange is really important."

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**Students
survey
streams,
count
pebbles,
snorkel with
salmon and
sample
water
quality.**

LEGAL BRIEF

DIOXIN BACK TO DRAWING BOARD

A controversial discharge permit has been sent back to the drawing board by a San Francisco judge. Superior Court Judge James McBride says the permit, issued to the then Tosco refinery in Avon two years ago, is invalid because it fails to meet Clean Water Act standards for dioxin reduction.

The suit was filed by S.F. BayKeeper and Communities for a Better Environment against the State Water Resources Control Board and its S.F. Regional Board. McBride ruled that the agencies had failed to impose a numeric-based standard for the gradual decrease of the amount of dioxin discharged by the refinery (now owned by Ultramar). Instead, they allowed the refinery to discharge roughly the same amount of the substance until a TMDL standard for dioxin is finalized, a process that could take a decade or more. Such an approach isn't allowed under the Clean Water Act, McBride ruled. (The Clean Water Act's "TMDL" process involves work between stakeholders and regulators to agree on and divvy up a total maximum daily load for discharges of a particular pollutant to be allowed on a regional basis.)

The Boards argued that refineries are only one of a number of dioxin sources, and that it didn't make sense to impose new limits while the TMDL study is underway.

"Why go through all that if the TMDL tells you (the refineries) aren't the problem?" asks the Regional Board's Wil Bruhns. BayKeeper's Leo O'Brien called that argument "nonsense," and the judge basically agreed, ordering the agencies to rewrite the permit.

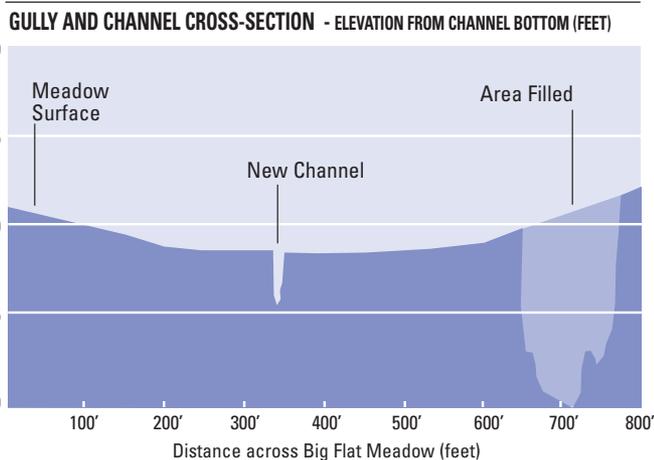
"We expect that with this decision, they will have to change a number of other permits," O'Brien adds. Bruhns says that the same process was used for both private and municipal discharge permits, affecting standards set for mercury, PCBs and other substances. He says that Board lawyers are trying to determine how the ruling might apply to those permits and whether or not to file an appeal. **O'B**

REHAB

PLUGGING AWAY AT RIVER RESTORATION

The long-abandoned floodplain meadows that once acted like giant sponges on the upper Feather River—absorbing heavy flows and releasing them throughout the year—are beginning to do so once again, thanks to an experimental restoration technique called "pond and plug." In 1995, a public-private partnership known as the Feather River Coordinated Resource Management group began experimenting with the technique on a number of tributaries. After monitoring these projects for several years, the group is so encouraged by its results it plans to pond and plug many more miles of damaged mountaintop meadows.

Once lush with tall grasses and wildflowers and alive with bugs, birds, beaver and deer, many of these vast alluvial meadows, nestled among steep Sierran slopes, have become deserts. A panoply of activities—among them, ranching, railroading and mining—dating back to the 1860s, resulted in the dewatering of the meadows as the streams that meandered through them were moved to make room for trains and cows. After the channels were relocated and began to erode and downcut, the meadows turned dry and unproductive, no longer acting as sinks for the sediment, water and nutrients delivered from the uplands in winter runoff, explains Jim Wilcox, Restoration Project Manager for the 22-member partnership



Before large-scale manipulation of the landscape took place, the meadows buffered the effects of flood and drought, says Wilcox, storing floodwater as groundwater and releasing it gradually into the streams over the course of the year. Now, however, during big storms, high flows race through the relocated, deep, narrow gullies like a flume, says Wilcox. Not only does the fast-moving water exacerbate downstream flooding, but the streams continue to erode and downcut, some by as much as 15 feet, to soils deposited 7,000 years ago.

To restore the meadows and their flood storage capacity—and to heal the erosion and gullying—the group is using the pond-and-plug method first used on Maggie Creek in Nevada by river expert Dave Rosgen. Pond and plug involves first moving

the stream back to its historic location—sometimes hundreds of thousands of feet across the meadow.

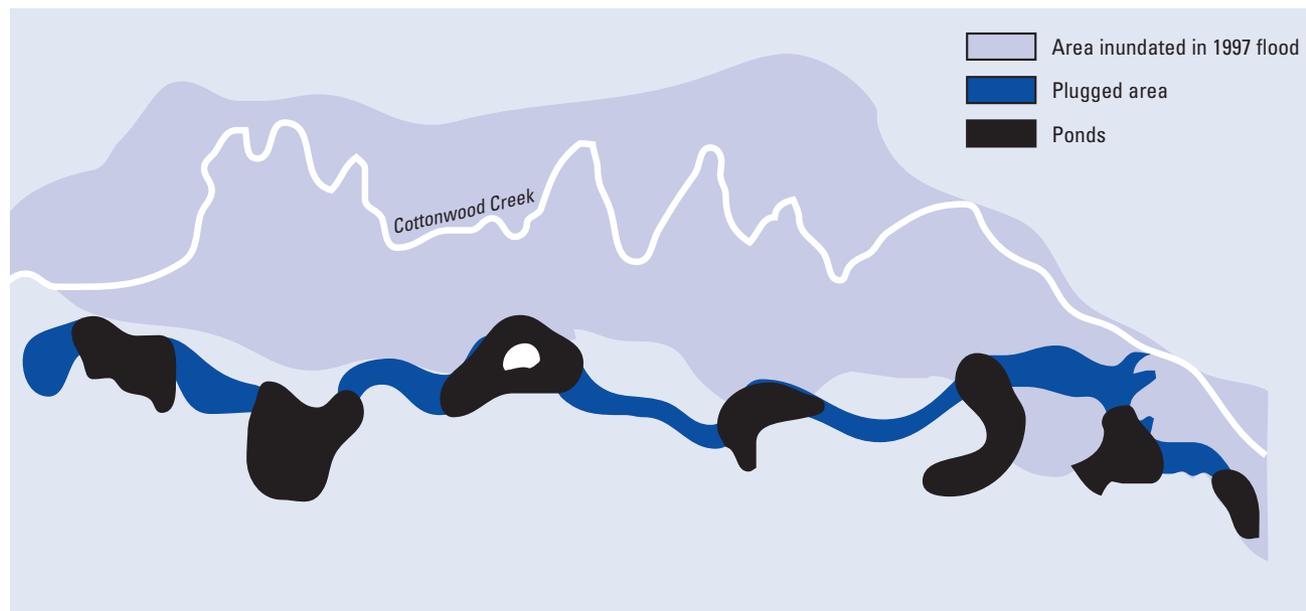
"You can usually find at least pieces of the old stream if not the whole thing," says Wilcox. After workers return the stream to its original location, they dig deep ponds next to the old gully and use the

excavation spoils to plug the gully so that it no longer drains the meadow. As the groundwater rises to fill them, the ponds create habitat for waterfowl and other critters. Tenacious willows that have survived along the gullies are transplanted along the new (original) stream channel, while the native meadow sedges, grasses and wildflowers quickly return on their own, helped by the dormant seed bank and fungi in the excavated soil. The invasive star thistle and sagebrush that have taken over begin to retreat.

How successful has pond-and-plug proved on the Feather River?

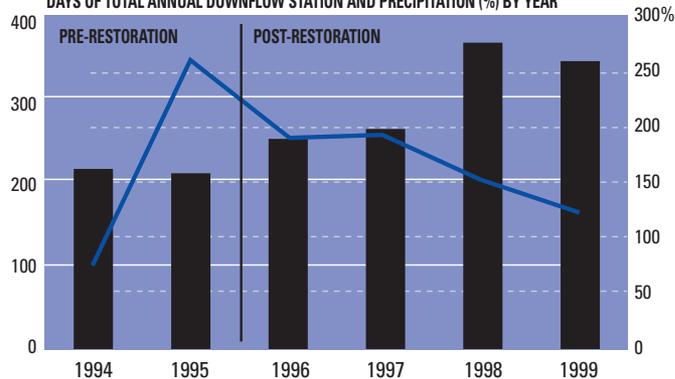
Wilcox has been monitoring the group's first project, the restoration of Big Flat Meadow/Cottonwood Creek in the Plumas

BIG FLAT MEADOW/COTTONWOOD CREEK RESTORATION



Source: Jim Wilcox

FLOW REGIME IN COTTONWOOD CREEK
DAYS OF TOTAL ANNUAL DOWNFLOW STATION AND PRECIPITATION (%) BY YEAR



National Forest (and the first pond-and-plug project in California) since 1995. There, the creek had been captured by an irrigation ditch and had responded by incising 14 feet in places. After the Feather River folks ponded-and-plugged the old gully and recreated the original stream channel, the meadow began to come back to life, with flood flows spreading across and infiltrating its plain (see bottom, p.4). A modified grazing regime has allowed the restored creek to grow thick with willow once again.

ing to heavy rains from Hawaii, "Lake Oroville has to dump water." But with the meadows performing their old function of sponge, some of the runoff is released later in the year, in May or June, making what's coming out more usable downstream over a longer period.

With over 50 projects (10 of them pond-and-plug) and studies under its belt, the Feather River partnership is well on its way to restoring the entire upper watershed, a land area about the size of Rhode Island.

"The birds are back, the waterfowl are back, even the fish are coming back," says Wilcox.

Downstream users benefit too. "In January and February, when the Pineapple Express comes in," says Wilcox, refer-

Next, Last Chance Creek will get a second chance, with a \$980,000 grant from CALFED; construction on the site is already underway.

An ongoing challenge will be reintegrating cattle into the landscape. To that end, landowners—whether private or public—are required to sign an agreement to maintain, monitor and manage the restored landscape.

"These areas won't support the thousands of head you would have found in 1900," says Wilcox. "But some grazing may be possible with reduced numbers and by changing the season of use." Should problems arise, Wilcox and the rest of the partnership will be there to work them out.

"Because we're place-based, we're with our projects forever," says Wilcox.

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CITYBEAT

PROMOTING PERMEABILITY

Lillie Simms, a 40-year resident of San Francisco's Ingleside District, is fed up with looking out her front door onto a sea of small parking lots. Simms took the issue to Supervisor Geraldo Sandoval of District 11, who is initiating new legislation to discourage any more conversion of front yards to blacktop or concrete.

Besides addressing neighborhood aesthetics, Sandoval's proposed ordinance could be important in reducing polluted stormwater runoff into San Francisco's storm drain system and increasing aquifer recharge, says Katie Pilat, hydrologist with the Neighborhood Parks Council. She points out that the Westside Basin aquifer, which runs from Golden Gate Park down to the San Francisco airport, has experienced rapidly declining water levels indicated by a 50% loss of Lake Merced's water volume in the past 60 years.

"The remaining unpaved yards are some of the only conduits left where rainwater can enter the ground and replenish some of the water. Even small pieces of land can add up to capturing significant amounts of valuable

rainwater," Pilat says. More and more San Francisco homeowners are paving their front yards as a solution to the city's huge parking deficit. According to a recent article in *The New York Times*, San Francisco leads all other American cities in vehicles per square mile—6,916 compared to New York City's 5,500—and the number of registered vehicles in San Francisco outnumbers available public parking by 37,000 spaces. Add to that increased auto ownership per household regionwide and the expense of maintaining front yard greenery, and the decision to pave becomes even more tempting.

"We're becoming an asphalt jungle," says Sandoval. "Two hundred years ago, San Francisco was covered with sand dunes, and there was an intensive effort to landscape the city. Now, much of that is being undone, slowly but surely, by property owners."

The current planning code states that at least 20% of a home's front yard setback be appropriately planted. Many people, however, are unaware of the code or simply ignore it, according to Sandoval's office. His proposal strengthens the code by requiring that

homeowners maintain at least that 20% landscaped area in perpetuity and by prohibiting parking in the required "setback" space directly in front of the house. The S.F. Board of Supervisors is scheduled to vote on the ordinance in September.

Randy Hester, professor of landscape architecture at U.C. Berkeley, acknowledges that paving yards provides an immediate relief to the parking situation but warns of the trade-offs. "Whether paving 20, 30 or 100 square feet, when that's multiplied by 1,000 or even 10,000 homes, the amount and speed of runoff are affected," he says. "When water enters the soil, the soil acts as a natural septic tank—whether it be sandy soil or loam, pollutants are removed. Getting more water to percolate into the soil rather than run off improves the quality of the water."

The Public Utilities Commission supports Sandoval's proposed legislation and is encouraging homeowners to landscape with drought-resistant, water-efficient native perennials and shrubs.

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PEOPLE

BAY RESEARCH INSTITUTE
GETS NEW GURU

Mike Connor is one of those irritating individuals who remembers names—irritating, that is, for the rest of us with mid-life Alzheimer's. Word on the street is he's a people person, and that's why the S.F. Estuary Institute hired him as Executive Director. A staffer from another agency, who'd only met the 50-year-old lifetime bodysurfer once, was astounded when at a recent crowded public meeting, Connor hailed her with a confident "Hi Mabel."

Though the Institute—long-known for its monitoring of Bay pollution levels and mapping of historic wetlands, among other things—has been leaderless for about a year, interim director Bruce Thompson nicely navigated various cash flow and project management problems, say onlookers. But staff, board members and regional interests alike all seem excited about the arrival of the new kid in the Institute's head office this June.

"Mike has already impressed us with his ability to communicate clearly and to understand the problems we have to deal with in a technically and politically complex estuary," says Board Chair Steve Ritchie.

"He's added new energy to the place," adds Institute program director Mike May. "It surprised me how well he's been able to take in all the details of everyone's issues and actually offer support and solutions."

Connor worked most recently as Vice President of programs and exhibits for the New England Aquarium, and prior to that as a chief scientist for the Massachusetts Water Resources Authority. He's managed several East Coast estuary projects for the U.S. EPA (and consulted for the S.F. Estuary Project in the 1980s), worked on environmental policy for non-profits such as the Amity Foundation and the New Alchemy Institute, and even studied Japanese watershed management techniques. He did his undergrad at Stanford, his PhD at MIT, and his post-doc at Harvard, and calls himself a biological oceanographer.

The ocean, says Connor, has been surging through his system ever since he first started bodysurfing at the age of eight, during summer vacations at Rehoboth Beach in Delaware. He thought becoming an oceanographer would allow him to play in the ocean all the time, but has since

found himself mostly behind a desk.

Looking back over his life, Connor speaks of three turning points in his career. The first occurred on a snowy night in 1973 in a small South Korean village, where he had been volunteer teaching. In the midst of supping with a local family, some of the country cuisine took its revenge, and he ran for the "pyunso"—a hole in the ground under a thatched roof. As he jumped for relief, the entire structure collapsed under him, leaving him faced with the appalling prospect of appearing before his host pants down and royally slimed. "I said to myself, 'If I get out of this alive, I'll work on waste management,'" says Connor, who went on to build a pipeline to reroute sewage sludge discharges out of Boston Harbor (reducing bacterial contamination to a 50-year low).

The second turning point came, he says, in grad school when he learned the importance of not taking everything you read as the "truth," and seeking confirmation from multiple sources. The third point occurred during his Harvard post-doc, when he realized that: "Most problems aren't science-limited, but getting-info-to-the-people-limited."

This science-to-policy link has since become a mantra for his career. Connor likes to cite Vannevar Bush's 1950s book *Science is Not Enough*. The book argues that scientists have a social compact with society in that they conduct their work with public dollars, and should thus apply themselves to solving their community's problems, rather than holing up in ivory towers. "It's not necessary for every scientist to be at every public meeting," says Connor. "But scientists need to treat other interests with respect, and think about the relevance of their work to the questions of today and tomorrow. There are windows of opportunity, for example, when people and policymakers are ready for new bits of information. Science isn't useful unless it's ready at the right time."

Back in Boston, observers say Connor did a good job of getting buy-in from confused and often angry stakeholders about the scientific studies necessary to ensure that the Boston Harbor project could move forward. The way he sees it, "My whole career since that Korean toilet has been trying to figure out the back and forth between research science and public policy, how to decide what you know and don't know, and how to deal with the uncertainties. The S.F. Estuary Institute's niche is at that interface, and it's good playing a translation role."

Unlike his experiences in the pyunso, Connor seems eager to wade into all of the muck and mire of California's convoluted environmental scene—welcoming the chance to apply his skills and experience to a bigger arena than Boston. "I was looking for a job with complexity and controversy," he says. **ARO**

FROG CONTINUED

nate critical habitat, charges that the agencies are taking a dive under orders from the Bush administration, which received hefty campaign contributions from real estate developers and other industries.

"We feel confident that the critical habitat rules will come back," says Galvin. "There's nothing in these rules that lets Fish & Wildlife off the hook. The fear is how much more habitat will be lost while they go back to do better economic analysis and what that will do to the ability of these species to recover."

Eric Glitzenstein, an environmental attorney in Washington, D.C., says he believes there is a long-term strategy by the Bush administration to come up with the narrowest possible critical habitat designations and leave the remaining land open to development.

If the red-legged frog, whipsnake and plover lawsuits reveal anything, they show a landscape that is still very much unsettled. While there is hope for environmentalists in the courts, agencies are at least temporarily ceding territory in many of the areas where the pressure to develop is fiercest.

"We're in this jump-ball period," says Don Barry of the Wilderness Society, a Washington, D.C.-based environmental group. Barry worked for more than 20 years on endangered species policy at the U.S. Department of the Interior and was one of those who spoke against pushing the issue of critical habitat. Now he says he's not sure which course would have been the most effective.

"Where it's going to go isn't clear," says Barry. "But it will fall one way or another. The karma is set." **SZ**



PLACES TO GO & THINGS TO DO



WORKSHOPS & SEMINARS

AUG
THURS
29

EROSION CONTROL WORKSHOPS

Aug. 29 (Novato); Sept. 5 (Concord); Sept. 25 (Vallejo); Oct. 3 (San Jose)

Sponsor: S.F. Estuary Project

Locations: Various
(510)622-2419 or ct@rb2.swrcb.ca.gov

SEPT
TUES—WEDS
10
11

PREVENTION FIRST SYMPOSIUM

Topic: Onshore and offshore pollution prevention symposium, including marine oil terminal engineering and maintenance, and ballast water management.

Sponsor: State Lands Commission

Location: Long Beach
www.sl.ca.gov

SEPT
THURS — SAT
19
20
21

WETLAND SCIENCE

Topics: Wetland science, arid wetlands, wetland regulatory policy and practice, global climate change, wetland mitigation and restoration, fish and wildlife ecology.

Sponsor: The Western Chapter, Society of Wetland Scientists

Location: Romberg Tiburon Center
sws-wc@wra.ca.com or (415)454-0129

SEPT
FRI
27

OPEN SPACE CONFERENCE

Topics: Developing a new regional open space vision, regional update, enhancing human diversity in conservation, annual awards, exhibit of open space photography.

Sponsor: Bay Area Open Space Council

Location: Presidio, San Francisco
bcapps@mindspring.com

SEPT
SATURDAYS
21
28

EDUCATORS' WORKSHOPS

Topics: Watching Our Watersheds; Reducing Pollution in Our Homes and Schools.

Sponsor: Aquatic Outreach Institute

Location: Stanley Middle School, Lafayette & Wagner Ranch Elementary, Orinda

www.aoinstitute.org
or Tamara at (510)231-9493

SEPT
SATURDAYS
21
28

KIDS IN CREEKS

Topic: Engaging students in hands-on science and inquiry-based learning and in community creek restoration.

Sponsor: Aquatic Outreach Institute

Location: Coyote-Hellyer County Park, San Jose (Sept. 21 & 28)

Palomares Elementary School, Castro Valley (Oct. 5)

www.aoinstitute.org
or Christin at (510)231-5784

OCT
5



MEETINGS & HEARINGS

AUG
SAT
30

HERRING FISHERY HEARING

Topic: Public hearing on amendments to California regulations related to the herring fishery.

Sponsor: Fish & Game Commission

Location: State Building, Oakland
(916)653-4899 or www.dfg.ca.gov

NOV
FRI
1

CCMP IMPLEMENTATION COMMITTEE MEETING

Sponsor: S.F. Estuary Project

Location: Oakland
(510)622-2321



HANDS ON

AUG
FRIDAYS
23
AND
30

SUNSET AT THE SQUARE

Topic: Free evening concerts with proceeds from beer sales benefiting WaterKeepers Northern California

Sponsor: WaterKeepers

Location: West Plaza Stage, Ghirardelli Square
Jennifer Sachs at (415)561-2299 ext. 110

SEPT
SUN
1

SNOWY PLOVERS

Topic: An inside look at PRBO efforts to protect and restore a threatened species.

Sponsor: Point Reyes Bird Observatory
(415)868-1221 ext. 307

SEPT
SUN
8

ADVOCACY WORKSHOP

Topic: Advocacy for the upcoming November election.

Sponsor: Audubon's San Francisco Bay Restoration Program

Location: Aquarium of the Bay (near Pier 39 in San Francisco)
www.AudubonSFbay.org
or Lisa Rosen at (415)947-0331

SEPT
SAT
21

COASTAL CLEANUP DAY

Sponsor: California Coastal Commission

Location: Local creeks and along the Bay and coast
www.coastal.ca.gov or (800)COAST-4U

SEPT
SAT
21

BAY SUNSET CRUISE

Topic: Breeze around the Bay on a historic Red and White Ferry. Enjoy the sunset and the moonrise from the water on the autumnal equinox.

Sponsor: Save the Bay
(510)452-9261 or sarah@savesfbay.org

OCT
FRI
18

NATIONAL WATER MONITORING DAY

Topic: Test local creeks, rivers and the Bay for temperature, pH, dissolved O₂ and turbidity.

Sponsor: State Water Resources Control Board, America's Clean Water Foundation, Association of State and Interstate Water Pollution Control Administrators
www.yearofcleanwater.org

ESTUARY

AUG
2002

7

NOW IN PRINT & ONLINE

Draft Toxic Hot Spot Cleanup Plans for Diazinon and Chlorpyrifos

Central Valley Regional Water Quality Control Board
(916)255-6300

www.swrcb.ca.gov/nwqcb5/available_documents/index.html

Reclaiming the South Bay Shoreline: A Vision for Wetland Restoration at Moffett Field

July 2002. Save the Bay

(510)452-9261 or www.savesfbay.org

Salton Sea Atlas

ESRI Press, Redlands

www.esri.com/esripress or through local bookstores

San Francisco Bay National Estuarine Research Reserve. Final EIS; Final Management Plan.

July 2002. U.S. Department of Commerce, NOAA; San Francisco State University.

Contact: Dr. Todd E. Hopkins, Acting Program Mgr.
(415)338-3703

Wild Harvest; Farming for Wildlife and Profitability, A Report on Private Land Stewardship

July 2002. California Wilderness Coalition

www.calwild.org

www.awwa.org

A new website for issues related to the drinking water profession. The American Water Works Association

www.nsgo.seagrant.org/research/nonindigenous

Sea Grant Draft for Invasive Species Research Proposals



ON GOING

WEDNESDAYS & SATURDAYS

STREAMSIDE SONGBIRDS

Topic: Take a biologist-led tour of a banding station, as part of SFBBO's Streamside Songbird Outreach Program. Visit old and new riparian habitats and watch closely as birds are banded and released.

Sponsor: San Francisco Bay Bird Observatory
outreach@sfbbo.org

ANY OTHER DAY

SEE THE SAN JOAQUIN RIVER

Topic: Explore the San Joaquin River by canoe or kayak.

Sponsor: San Joaquin River Parkway and Conservation Trust
www.riverparkway.org
or Liliane Wheeler at (559)248-8480

GARDEN CONTINUED

Native Americans from tribes throughout the state advise Brawley and the Conservancy on traditional land management techniques and help piece together the Garden's unique palette of plants by consulting elders and researching their own past. But the process does not stop there. The group also gathers input from local farmers, the gravel industry, Yolo County policy makers and members of the UC Davis Environmental Design department on how to best restore the land.

"First and foremost, this is a community-oriented project," says Brawley. "It is an ongoing experiment in how all interested parties can work together around common, important issues like the environment, education, restoration and stewardship."

Part of the Conservancy's mission is to rid the area of invasives, such as tamarisk and *Arundo donax*, or giant reed. These problem species aggravate silting and mercury pollution in the creek. "These are long-term problems that aren't going away," Brawley says, "and good examples of why commit-

ted community stewardship and tending to native species are so important."

Contact: Shannon Brawley or Jan Lowrey (530) 661-1070 or www.cachecreekconservancy.org VS

OPPORTUNITIES**GRANTS****HABITAT CONSERVATION FUND GRANTS—
APPLICATIONS DUE OCT. 1, 2002**

This program is administered by the California Department of Parks and funds habitat acquisition, enhancement and restoration of wetlands, aquatic, and riparian habitats, and interpretive programs. Cities, counties and districts eligible. www.parks.ca.gov/default.asp or (916)653-7423

JOB OPENINGS

Save the Bay seeks enthusiastic, outgoing person to engage and mobilize its membership and the larger community on critical Bay environmental issues.

Letter/resume: Community Organizer, Save The Bay, 1600 Broadway, #300, Oakland, CA 94612. Fax: (510)452-9266.

Email: savebay@savesfbay.org

The Ocean Conservancy is looking for a Pacific Fish Conservation Manager responsible for executing projects related to the organization's marine fish, wildlife and habitat conservation policies in the Pacific with emphasis on science and advocacy. Email: jobs@oceanconservancy.org

The Salmonid Restoration Federation seeks an Executive Director (half to two-thirds time position). Responsible for administering the nonprofit corporation, fundraising, contract supervision, conference coordination and public relations. Email: srf@north-coast.com

YOUR INDEPENDENT SOURCE FOR BAY — DELTA NEWS & VIEWS

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