

## DOGGING JUNKYARDS

An effort to get a Hayward auto wrecking yard cleaned up has grown into a campaign to bring dozens of Bay Area and Delta industrial polluters into compliance with storm water regulations.

In 1995, BayKeeper, alerted by citizen complaints, threatened to sue the Pick Your Part junkyard if the owners didn't correct numerous violations. At the time, BayKeeper characterized Pick Your Part as a "typical" auto wrecker — it had hundreds of dead cars dripping oil and other fluids onto the bare earth, there was little in the way of storm water runoff control, and junked vehicles, oil drums and other detritus were sinking into a nearby wetlands. Rather than go to court, the junkyard's owners agreed to clean things up; promised steps included constructing a berm around the site and paving the yard to reduce groundwater pollution.

BayKeeper found that Pick Your Part was "typical" in another way, too. Many owners of industrial sites hadn't bothered to file storm water pollution prevention plans with the state, even though they had been required to since 1992. The group began sending out notices to the violators, threatening to bring them to court if they didn't comply with the law. In most cases, the two sides were able to reach an agreement without a judge, but says BayKeeper attorney Leo O'Brien, "If they want to fight, we fight."

The campaign has shifted away from the Bay Area and into the Delta, O'Brien says, and now includes other types of industrial sites, including a steel manufacturer, a door factory and a scrap metal recycler. BayKeeper estimates that there are hundreds, if not thousands of violators in the Delta region. Someone could go to an industrial area "spin around ten times, throw a rock," and easily hit a scofflaw, O'Brien says. A half dozen letters have just been sent out to Stockton area companies, along with about ten more to businesses in Lodi.

Things haven't been totally resolved with Pick Your Part, either. According to BayKeeper, the yard is still unpaved, and stormwater retention and cleanup efforts have been inadequate. In February, the US EPA issued an administrative order, telling the company to clean up its act or face possible fines of \$27,500 a day. According to EPA's Dan Meer, the agency is closely tracking Pick Your Parts compliance — so far the company has been "pretty responsive," he says. (2/96)  
Contact: BayKeeper (415) 561-2299 O'B



## Valley Grapes Crushing Critters?

Just a few years ago, a driver on the Central Valley's highways and byways would pass field after field of rice, corn, tomatoes and other row crops, interspersed with open pastures. Today, acre after acre of vineyards line many of those roads, a shift that is creating new challenges for those attempting to protect what's left of the Valley's native fauna.

Vineyards are being planted so swiftly that "you can hardly keep track of it," says Cliff Ohmart of the Lodi-Woodbridge Winegrape Commission. According to state Department of Agriculture statistics, San Joaquin County had 48,545 acres of fruit-bearing vines in 1998, and 11,930 acres of non-bearing vines—those planted within the previous three years. In Sacramento County, the acreage planted with vines has more than doubled within the last three years, to 6,560 acres of bearing vines and 6,827 non-bearing. Grapes are now the county's number one crop.

The conversions are being driven strictly by economics, say observers. "The price of land for new vineyards in the traditional growing areas of Napa and Sonoma is so high that it is difficult to make money there," says Ohmart. On the other hand, "vineyards are the most profitable use you can put land to, outside of developing it," according to Pete Schmidt of Ducks Unlimited.

These conversions—which mirror a statewide trend—are not good news for the

numerous species, particularly raptors such as the endangered Swainson's hawk, that managed to adapt to life on the farm even as the grasslands that were their native habitat disappeared. "Raptors can hunt in the pasturelands and row crop fields that replaced the natural environment, and small animals can shelter in the uncultivated margins of fields," says Wendy Halverson Martin of the CALFED Restoration Program, adding that winter-flooded rice and corn fields also offer habitat to birds using the

Pacific Flyway. "But when you convert those fields and pastures to permanent cover crops, such as grapes or orchard fruit, you destroy what little habitat values they still had." Even birds that can hunt among the vines have a hard time of it. "Vineyards and orchards are pretty sterile environments for wildlife," says the Audubon Society's Waldo Holt. "There are no rodents and pesticides eliminate insects, so the prey base is essentially removed."

Not necessarily, says Ohmart, who maintains that the grape industry has taken the lead in promoting environmentally sustainable agricultural practices. Ohmart's commission operates a biologically integrated farming program designed to encourage members to switch to drip irrigation systems, reduce fertilizer and pesticide use, plant cover crops and install owl boxes and raptor perches to help control the resulting populations of rodents.

"Cover crops help with water penetration, prevent surface erosion and encourage microbial growth, which is important for healthy soil," he says. "Healthy soil means healthier, more disease resistant vines and better quality grapes."

**In this special follow-up issue of ESTUARY we've looked back at some of the stories we've printed over the past five years to see what has happened since. If you'd like to see the original stories (see date at story end), call us for a copy or check out our website.**

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## BULLETINBOARD

**WILD AND SCENIC RIVER** designation will be bestowed on 39 miles of the Yuba River's south fork if Governor Davis signs legislation sent to his desk in late September. The designation would protect the Nevada County stretch between Englebright Reservoir and Lake Spaulding from new dams, reservoirs and water diversions. The measure enjoys broad-based support from environmental and sporting groups and local property owners. However, leaders in downstream Yuba County oppose the designation, which would scuttle two large dams proposed as part of a new flood-control system. Meanwhile, CALFED is considering modifying or removing several small dams on the Upper Yuba River, in order to restore fish access to spawning habitat.

**CENTRAL VALLEY SPRING-RUN** — but not fall-run salmon — were listed as threatened by the National Marine Fisheries Service under the federal Endangered Species Act in September (spring run fish have been listed under state law for a year). The federal listing gives NMFS the authority to restrict pumping from the Delta in the late fall when young fish are migrating to the ocean. In declining to list the fall-run, NMFS pointed to their robust numbers, but environmentalists counter that most of the several hundred thousand fall-run fish are hatchery-bred.

**BIOLOGISTS PULLING PIKE** from Lake Davis have removed over 100 fish since May 1999 in the scramble to squelch the return of this unpopular invader. Northern Pike, native to Canada and the Midwest, were illegally planted in the 85,000 acre foot reservoir around ten years ago. State fish & game authorities, afraid the voracious pike would escape in the Sacramento River and eat endangered salmon, treated the lake in 1997 to kill the invaders. The treatment — which temporarily compromised local water supplies and stopped angling important to the local economy — raised the ire of area residents. The pike resurfaced in May 1999. "I was sitting in a boat when I got the page from my boss," says Cal Fish & Game's Patrick Foy. "I'll always remember that moment. It was like when you ask your parents what they were doing during Kennedy's assassination." Foy's agency has since held several public meetings inviting the community to give them any or all suggestions for pike control options, or ways to avoid a second pesticide treatment.

## SPECIES

## TERNS ON THE TARMAC

Least terns living on the tarmac at the former Alameda Naval Air Station may find military downsizing rough going. Now that the Navy is no longer using the base, public access is already becoming a problem, says Laura Collins, who monitored the endangered terns for years for the Navy. The temporary 4' chainlink fence installed by the Navy is easily hopped by sightseers who seem to be made more curious by the "do not enter" sign, says the Navy's Nancy Hardin. According to Hardin, kids with bikes and adults on foot so disturbed breeding terns this past season that many of them abandoned their nests. The fledglings starved to death or were eaten by predators. "People don't realize what they're doing," says Hardin. "Once you talk to them, they're more willing to try to help."



Hardin and many others hope the U.S. Fish and Wildlife Service will take over management of the portion of the station set aside for a wildlife refuge — and the sooner the better. Fish and Wildlife's Joelle Buffa says the agency is still in the planning process and that several issues remain to be worked out with the Navy — particularly clean-up of a former dump at the western end of the site, which contains a potpourri of toxic substances, including PAHs, PCBs, radium, TCE and vinyl chloride. "It's our policy not to take over land until it's cleaned up," says Buffa. "We've been burned before." Meanwhile, Collins questions whether or not the EIR/EIS for the reuse plan accurately reflects the terns' needs, citing a lack of buffer zones, roosting opportunities and attention to their foraging ecology. "I don't know if the colony will make it through the transition process," says Collins. "The Endangered Species Act isn't running the show here." (4/97)

Contact: Joelle Buffa (510) 792-0222;  
Laura Collins (510) 843-3263 LOV



## LISTINGS KEEP EVOLVING

Two years after the National Marine Fisheries Service decided to protect steelhead trout using an approach based on evolutionary biology, the idea of Evolutionarily Significant Units (ESUs) has become a reality. Populations of steelhead trout in California, Oregon, and Washington listed as threatened and endangered in late 1997 were divided into ESUs for management purposes. The ESUs aim to preserve genetic diversity in the population as a whole, but don't necessarily protect every population or stream.

The idea of using evolutionary biology as an organizing principle attempts to bridge the gap between those taxonomists who divide things into large categories and those who lean toward smaller classifications. ESUs also provide a way of avoiding the bureaucratic nightmare of preserving every little run and population. "The ESUs are sizeable chunks of habitat," says Robin Waples, the National Marine Fisheries Service official who came up with the concept. "We think this is the right level for federal management."

Since the ESU program went into effect, NMFS biologists have been consulting on large projects such as CALFED and with individual water districts on steelhead protection and recovery. No recovery plan for steelhead is in place yet, but that's the next step, biologists say.

The steelhead listings are facing familiar political fallout. For instance, three steelhead units in California have received protection: Central California coast steelhead, South Central California steelhead and Central Valley steelhead. Originally, NMFS had proposed listing two ESUs in northern California as well, but the agency dropped those petitions. One NMFS official, who asked not to be named, says of the agency's decision to drop the listing proposals for steelhead and coho in northern California and along the Klamath watershed, "I'd be dishonest to say that this wasn't politics."

But sportsmen and environmentalists, including the Federation of Fly Fishers of California and the Center for Biological Diversity, aren't going to let powerful interests, including timber and agribusiness, continue to block new fish protections. They have brought two lawsuits against NMFS for its failure to list steelhead and coho. Says the official, with a note of wonder in his voice, "We're gonna end up with virtually everything listed in California." (2/97) SZ

# POLLUTION

## SALAD GREENS SCARF SELENIUM

Dr. Norman Terry's research has gotten a bit more spicy of late. The UC Berkeley professor of plant biology is a leader in the field of phytoremediation, or the use of plants to clean up heavy metals and other toxic materials from contaminated soil. His research has shown that many common crops, including rice, cabbage, and everyone's favorite vegetable, broccoli, absorb selenium into their root systems, converting it to innocuous dimethyl selenide, which is then released into the atmosphere.

Lately Terry and his colleagues been focusing on Indian mustard, which he says seems to be more effective than the others in selenium removal, and he is also experimenting with genetic engineering techniques, which he hopes will double, or even triple, the plants efficiency in removing selenium, cadmium and possibly other heavy metals.

Another promising plant is pickleweed, which can tolerate high salinity and pollution levels, and removes up to 500 milligrams per square meter of selenium, the highest rate of any of the species he's tested. The plant, common in wetlands, is unfamiliar to most Americans as a culinary delight, but, says Terry. "The French like it as a salad."

Virtually none of the toxins actually remain in the plants themselves, but it's not likely that you're going to see Terry's crops on the menu at your local bistro. (Terry does, however, hold out the possibility that they could be used to feed livestock.) He thinks the technique will be most valuable in cleaning up large areas with relatively low levels of contaminants - the plants are easily cultivated and their extensive root systems probe every nook and cranny where the toxins may lurking.

Most of his work so far has been in the lab, although a test planting in an artificial wetland near the town of Corcoran in Kings County is showing good early results. A few plants, such as lettuce and onions, failed to extract much selenium, but others, like the pickleweed and mustard, are proving their worth.

"We're moving right along on several fronts," he says. "We've had a few misses, but it seems like the technique is working." (6/95, 6/98)  
Contact: Norman Terry (510) 642-3510 O'B

## PENN MINE NEAR CLEAN

East Bay MUD is putting the final touches on its cleanup of Penn Mine. The former copper and zinc mine, which was abandoned in 1954, had long fouled the Mokelumne River with heavy metals and sulfuric acid — during its peak years of operation, all aquatic life was wiped out for forty miles downstream. EBMUD doesn't actually own the site (apparently nobody actually has a deed to the property) but it became involved in the cleanup when it built the nearby Camanche Reservoir.

The federal government told the agency that it was responsible for cleaning up the pollution because the Penn Mine is situated in the reservoir's watershed, but EBMUD went to court in an effort to get the feds to foot the bill. EBMUD claimed the feds were responsible because they had effectively controlled the mine's production during World War II and the Korean conflict. The case dragged through the courts for almost two decades before a Washington D.C. District court judge rejected a final EBMUD appeal last year. Ultimately, EBMUD and the State Regional Water Quality Control Board split the \$10 million remediation costs. The cleanup began in 1998 and the work is 95% done, according to EBMUD's Alex Coates. Workers hauled 350,000 cubic yards of contaminated soil to a nearby landfill, and EBMUD installed monitoring wells. The site has been graded and in mid-October it will be seeded with a special mixture of grasses designed to minimize erosion. After things have been stabilized, the Army Corps of Engineers will revegetate the area with native shrubs and trees, at a cost of approximately \$4.7 million. Beyond that, the agencies will continue to monitor water quality and erosion.

Coates is confident that there will be few, if any, problems with the project. "Things have been well staged to make sure it's successful." (10/93)  
Contact: EBMUD (510) 835-3000 O'B



# THE MONITOR

## SPOT CLEANING

Nineteen places in the Bay-Delta region—including all of San Francisco Bay—are polluted enough to put them on the high priority list in the State Board's Consolidated Toxic Hot Spot Cleanup plan, adopted in June (see Now in Print). The Plan is the culmination of the Bay Protection and Toxic Cleanup Program, which required each Regional Board to identify hot spots in the state's bays and estuaries and develop remediation plans.

Bay and Delta hot spots include such well-known pollution sinks as Mission Creek, Cache Creek and the San Joaquin River. Statewide, the plan identifies 48 hot spots, as well as additional "sites of concern" that do not technically meet the definition of a hot spot, including 11 in the Bay.

The big question now is how to pay for cleanup. According to the plan, the cost of remediation for the Bay and Delta sites is likely to be upwards of \$40 million, and possibly much, much more. Just cleaning up mercury and PCBs in the Bay could cost \$45 million. Legislation that would have imposed new fees on dischargers to help fund cleanup was defeated in the state Assembly in June.

"We've got to figure out a way to carry this program forward," says Save the Bay's David Nesmith. "It's not clear that we can do that within the current political context. (Governor) Gray Davis and the Legislature don't seem to be very interested."

"The plan directs the Regional Boards to pursue cleanup of sites if a discharger is identified, using existing authorities," says the State Board's Craig Wilson, adding that responsible parties have been identified for about half the hot spots. Where the responsible party is not identified, the plan directs the Regional Boards to seek cleanup funding from existing sources, including the Clean Water Act Nonpoint Source grants, the State Agricultural Drainage Management Loan Program and CALFED. (8/97, 6/98, 12/98)

Contact: Craig Wilson (916)657-1108 CH

## CAPITAL BRIEF

## ROLE REVERSAL?

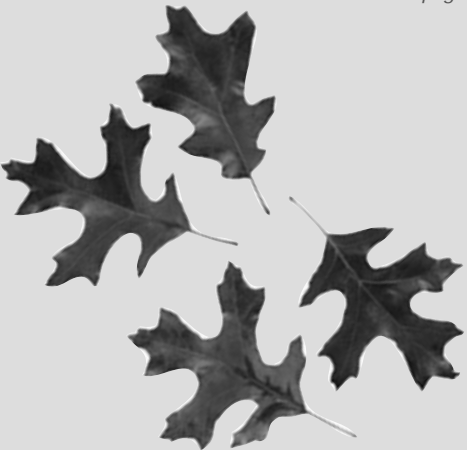
Congressman Don Young of Alaska (R-AK), better known for calling environmentalists "despicable" than sharing their goals, joined the green movement's outcry against a proposed \$1 million spending cap on designating critical habitat for endangered species. This is the third year in a row that U.S. Fish and Wildlife officials have requested the cap.

Why would an agency limit its own funding? Insiders say the problem is that critical habitat is often misunderstood. Critical habitat designation does not preclude development; however, it does mean that the agency has to manage species without "adversely modifying" habitat necessary for recovery. That distinction is often lost, so critical habitat tends to fan the flames of the anti-environmental backlash.

"The agency's feeling is that people don't understand critical habitat and tend to think that it will create development-free zones," said Heather Weiner of Earthjustice. "That isn't true, but the sense within the agency is that they've already been burnt and they don't want any more firestorms." With a spending cap in place, agency officials hit by a raft of lawsuits can argue to judges that their budget doesn't allow critical habitat designation, even though it is required by law.

And why does Young oppose the cap? His aide, Elizabeth Megginson, says Young is concerned by the aggressiveness of Western environmental groups such as the Center for Biological Diversity. In recent years the group has been frenetically filing endangered species lawsuits in the

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## LEGAL

## TRINITY TRAVAILS

Its partisans called the Trinity the "forgotten river," until last summer when flows from the river — 75% of which have been diverted to the Central Valley Project (CVP) since the early 1960s — emerged as a hotly contested prize in the state's water sweepstakes.

Last spring, U.S. Fish & Wildlife and the Hoopa Indian Tribe — which has federally protected rights to the river's fisheries — released the long-awaited Trinity River Flow Evaluation, which calls for doubling the amount of water released to the river to help restore decimated salmon and steelhead populations. The report coincides with negotiations for long-term CVP water contract renewals and ongoing State Board water rights hearings, and could play a role in both processes, as well as in CALFED, the state-federal effort to protect the Bay-Delta environment and water supply. "The Trinity is definitely in the eye of the storm," says Tom Stokely of the Trinity County Planning Department. An Environmental Impact Statement and Report for the flow decision is expected this fall, with a final decision due next spring from Interior Secretary Bruce Babbitt.

Meanwhile, CVP contractors are urging that any Trinity River decisions be linked to CALFED. "We're talking about a \$10 billion CALFED program that will produce, if we're lucky, as much water as they want to reallocate to the environment on the Trinity," says Jason Peltier of the Central Valley Project Water Association. "We're saying the Interior Secretary should look at the totality of water management in California." Language directing the Secretary to examine the Trinity in the context of CALFED was included in the House version of federal appropriations legislation.

Stokely says the CVP gets much more Trinity water than BurRec originally intended. He notes that the diversions recommended by the Flow Evaluation still amount to 53% of the river's flow, and actually represent a 1% increase in the amount proposed in 1952. "This is a case of mission creep," says Stokely. "The Trinity was never supposed to give up as much as it did. All we're asking is that the promises that were made back in the 1950s be kept." (12/98)  
Contact: Tom Stokely (530)628-5949,  
Jason Peltier (916)448-1638. CH

## DRAIN BACK UP

A controversial agreement between BurRec, the State Board and Westlands Water District is pumping new blood into the long-moribund San Luis Drain and giving environmentalists and Delta water users apoplexy.

Under a memorandum of understanding, expected to be signed this month, Westlands would reimburse the State Board and BurRec for the costs of assessing the environmental impact of various drainage alternatives, including reopening the drain and extending it to the Delta. Westlands desperately needs more options for disposing of salt-and-selenium-laden drainwater from farmland irrigation, and wants BurRec to fulfill the original federal vision for irrigating and draining the Central Valley. A series of lawsuits led a federal judge to order BurRec, in 1994, to apply for the wastewater discharge permit necessary to complete the drain — a ruling BurRec has since appealed. The assessments called for by the MOU are the first step towards the permit.

Westlands' David Orth insists the agreement does not necessarily mean the drain's resurrection. "We need to initiate this comprehensive environmental review so that we can find environmentally friendly ways to deal with drainage." Orth says his agency is looking at new technologies for reducing selenium in drainwater.

Environmental groups have urged BurRec not to sign the MOU, at least until an imminent decision in BurRec's appeal of the court's ruling comes down. They also say it is ridiculous to even consider sending more selenium into the estuary when strenuous efforts to reduce such pollution are underway. "There appears to be no reason why 6 million California residents would want to have liquid garbage from another region dumped into the water they just voted to spend hundreds of millions of dollars to restore," the Environmental Defense Fund's Terry Young told a Congressional committee investigating drainage issues. She points out that local oil refineries were recently ordered to cut their selenium discharges by half.

Salt is another concern of drain opponents such as Contra Costa Water District, which takes water from the Delta. "Salinity affects our ability to carry out operations," says the District's Richard Denton, who adds that the drain's proposed discharge site at Chipps Island is near a drinking water uptake. "The District continues its historic opposition to the Drain and any attempt to move forward with it," says Denton. (10/95, 6/96)  
Contact Terry Young (510)658-8008,  
David Orth (559)224-1523 CH

## SCIENCE

### CATTLE QUEEN

Livestock grazing is bad for the environment concludes range scientist Joy Belsky, who earlier this year published a paper rounding up the last decade of research on livestock grazing in the western United States.

Contrary to a previously reported unpublished study that showed no effects from grazing on certain springs in the Central Valley, Belsky's paper surveyed virtually all the ecological aspects of livestock grazing in the western United States, from effects on ground-nesting birds to water quality. The news was overwhelmingly bad. Livestock grazing has damaged 80% of the streams and rivers west of the Mississippi, according to a U.S. Department of Interior report that Belsky unearthed. Another report by the U.S. Environmental Protection Agency indicated that riparian areas throughout much of the West are in "their worst condition in history."

Belsky's report, in the *Journal of Soil and Conservation Science*, summarizes the results of 143 scientific papers on the effects of livestock grazing. Although Belsky works for a conservation group, the Oregon Natural Desert Association, she said she made an extra effort to seek out papers that would buttress claims by grazing supporters. These include the idea that the hooves of a 1,000-pound animal act like Rototillers, helping promote plant growth by churning up soil. *Au contraire*, said Belsky.

"I was really interested in looking at some of these claims," Belsky said. "We looked very hard for papers that showed benefits and couldn't find any. There were papers that showed no effects. Usually the authors themselves pointed out that something had gone wrong, either with the research methodology or an unusual event, like a flood. Every paper that cited a positive or neutral effect, we cited."

Using peer-reviewed scientific publications as well as government documents, Belsky's paper, catchily titled "Survey of Livestock Influences on Stream and Riparian Ecosystems in the Western United States," paints a bleak picture of a starkly beautiful but desperately arid region where water and wildlife are synonymous. For instance, Robert Ohmart, an ornithologist at Arizona State University, estimated that 60-70% of Western bird species depend on the cottonwood-willow habitat found along the banks of western rivers.



In the highly arid states of Arizona and New Mexico, 80% of wildlife species are dependent on this habitat, the most productive in North America in terms of biodiversity, but also the most endangered. In Arizona, which Ohmart studied extensively, only three percent, or 10,000-11,000 acres, of willow-cottonwood habitat remains. Given this data, it's easy to understand why the overwhelming majority of Western salmon and trout are threatened or endangered and why native and neotropical migratory birds are losing ground fast.

Yet Belsky's paper also cited statistics indicating that the number of cattle in the western United States doubled between 1940 and 1990. Obviously, that's not true in the urbanized San Francisco Bay Area, where conservationists sometimes make alliances with ranchers to keep out subdivisions. But as the scientific evidence on the ecologically destructive effects of grazing mounts, it casts doubt on whether the cowboy really can save us from ourselves.

Why is the cowboy myth so resilient? Belsky says she leaves that kind of theorizing to the softer sciences, like history or political philosophy. Her focus is on something more tangible: the disturbing possibility that western wildlife may not outlast America's romance with the cowboy. (12/98, 2/99)  
Contact: Joy Belsky (503)228 9720. email: jbelsky@onda.org SZ

## REHAB

### SAN JOAQUIN TRUCE

Willow and cottonwood saplings are growing along one of the most degraded stretches of the San Joaquin River for the third year in a row, thanks to a pilot project that sent water flowing between Friant Dam and Mendota Pool, where diversions have long made summer flows a rarity.

The flows are part of pilot project spawned by the ongoing efforts of a Natural Resources Defense Council-led coalition of environmental groups and the Friant Water Users to settle a long simmering lawsuit over releases from Friant Dam. "The pilot project is a sign of significant progress toward an agreement between historic adversaries on putting water back in the river," says NRDC's David Behar.

The pilot project called for 35,000 acre-feet of releases between July and October, in addition to the base flow normally released to meet riparian diverter needs immediately below the dam. The project was funded through a \$2.5 million CALFED grant, which compensated the Friant users for the flows through a water swap and other measures.

The flow regime was designed to mimic nature, says Behar, with high initial flows that slowly declined as the summer progressed. The flows allowed new trees to

germinate, and also irrigated saplings that germinated as the result of involuntary spills from Friant Dam during the last two — unusually wet — years, according to the Bay Institute's Peter Vorster.

Another goal of the project was to collect and analyze data on vegetation and hydrology to aid future restoration. "We want to find out what that part of the river is about," says Behar. "For example, what type of groundwater impacts are we seeing as a result of putting summertime flows in the river for the first time in 50 years?"

Vorster and Behar both say that the project's most important achievement was its demonstration that cooperative efforts between enviros and the Friant users can succeed. "Traditional adversaries worked together to make something happen. That itself will be a boost to the long-term settlement," says Vorster. Although the pilot project was for 1999 only, Behar says he has high hopes that ongoing negotiations will allow it to continue next year. (6/99)  
Contact David Behar (415) 459-5210 CH

## RESTORATION

### RETURN OF THE NATIVE

Last March one of three steelhead found in Alameda Creek and implanted with radio transmitters swam up Niles Canyon, over a low dam, and about a mile up a very steep section of Stony Brook Creek, where she was blocked by a culvert. "We found Stella in a pool with five (non-migratory) rainbow trout," says Jeff Miller of the Alameda Creek Alliance, whose members want to see steelhead thrive once again in this urban stream. "We've been checking the creek since then and have counted about 1,000 healthy fry. There's no reason steelhead couldn't reestablish themselves here." Healthy trout have also been found in Indian Joe and W-Tree Creeks, two more small tributaries. Genetic tests performed by Hopkins Marine Lab of fins from fish found in Alameda Creek in 1997-1998 indicated that the fish were wild steelhead native to the Central California Coast and most closely related to fish in Lagunitas Creek.

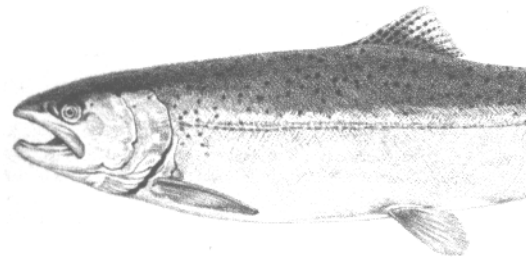
While some fish, like Stella, are able to make their way past the creek's many dams to spawn upstream, others become stranded. For the past several years, Alliance volunteers have hand carried stranded fish across the dams, with help from East Bay Regional Park District biologists. Another problem is getting juvenile fish to the Bay during outmigration season. If flows are insufficient, fish in the upper reaches become landlocked, says Miller, who would like to see the San Francisco Public Utilities Commission (SFPUC) — whose dams are in the creek's upper reaches — do some smolt trapping to better understand the timing of juvenile migration. "That could help us get better flows in the lower creek at the right time. We could release strategic pulses of water to help them get to the Bay," says Miller.

In the meantime, the Alameda County Flood Control District is completing a feasibility study for a fish ladder at its BART weir, one of the stream's major obstacles. Assuming the study finds no insurmountable obstacles, Miller says the Alliance will submit a proposal to the Army Corps for restoring the flood control channel that currently encases the lower 11 miles of creek to a more natural stream, and look to the San Francisco PUC or the Alameda County Water District for sponsorship. "Even if the water district doesn't get involved in the project, they still need to provide for fish passage around their three inflatable dams," says Miller. The rubber dams divert the creek

water into adjacent percolation lakes used to recharge groundwater and prevent salt water intrusion from the Bay.

In April, the Alliance, the Center for Biological Diversity and seven fishers' associations sued the National Marine Fisheries Service (NMFS) for failure to issue protective regulations for steelhead. "If our lawsuit against the NMFS is successful, the first time steelhead are killed or prevented from migrating upstream by the inflatable dams, we will sue the water district for take of steelhead under the Endangered Species Act," vows Miller.

In response, the water district cites its participation in the feasibility study as well as its concerns about losing the function of its inflatable dams. SF PUC's Mike Carlin says the PUC's fish biologists are concerned that existing dams may be providing some type of habitat for other fish; he is also concerned that Niles Dam, built in the



1800s, may have historical significance. However, he says his agency has really just started to look into the issue. "What hasn't happened yet is for all users to get together and proceed in some sort of logical fashion on this." (4/98)

Contacts: Jeff Miller:  
Alamedacreek@hotmail.com;  
510/845-4675; Mike Carlin 415/554-9535;  
Craig Hill (Alameda Co. Flood Control):  
510/659-1970, ext. 401 LOV

## WATERWATCH

### SOUTH BAY REFRESHER

Despite a massive new local water recycling system, saltwater marsh in the South Bay continues to be converted to brackish marsh, though whether due to El Niño or wastewater discharges is still under debate.

About 8% of the marsh near the San Jose/Santa Clara Water Pollution Control Plant's outfall disappeared during the El Niño winter of 1997-1998, the same loss that occurred in other spots like Guadalupe Slough. According to both the Regional Board's Wil Bruhns and Lindsay Wolfe of San Jose's Environmental Services Division, the plant's discharges remain below the Board-ordered limit of 120 million gallons per day. Bruhns also points out that the scale of marsh conversion has diminished.

U.S. Fish & Wildlife's Peter Baye says heavy discharges into Artesian Slough and Coyote Creek continue to be a problem. "The marsh conversion is very real and it's been progressive. In drought years, you see a very exaggerated impact; in wetter years, it's harder to read. It's hard to say with precision how fast the conversion is occurring because people interpret the vegetation differently (whether salt marsh or freshwater), but the conversion probably tracks the volume of discharge."

Baye says the conversion is not just associated with the volume of the discharges but the season in which they occur. "During the growing season, the vegetation responds more

to discharges." Baye says that one of the problems in the South Bay is that before massive levee construction and Bay filling, freshwater discharges were distributed over a wide area of the South Bay; today they are concentrated in narrow, levee-lined streams.

One solution would be to do something totally different than recycling, like using excess freshwater to replenish groundwater, suggests Baye. Another would be recreate a complex network of channels and marsh. "The long term solution is to restore a lot of tidal marsh," says Baye. "In the short term, instead of discharging into narrow concentrated sloughs with no potential for dissipation, we could send the discharges into some of the salt ponds as they become available for acquisition, and use them as tidal mixing basins so they can offer some multiple use benefits." To avoid impacting birds that now use the salt ponds, says Baye, the water in the mixing ponds could be re-mixed with Bay water to increase the ponds' salinity.

"These discharges need not be a problem. They could be used to replicate natural systems if we could just manage them differently or restructure the habitat to accept them differently. Because as we all know, growth in the South Bay is not going to go away." (4/97)  
Contact: Peter Baye (707) 562-3003; Wil Bruhns (510) 622-2327; Lindsay Wolf (408) 277-5533  
LOV

# PLACES TO GO & THINGS TO DO



## WORKSHOPS & SEMINARS

**OCT**  
**20**  
WEDS  
**WATER ISSUES BRIEFING**  
Topic: Bay-Delta and Beyond  
Sponsor: ACWA  
Location: Oakland  
(916)441-4545

**NOV**  
**2**  
TUES  
**WATER RIGHTS, WATER WRONGS**  
Topic: Review of current water rights laws and options for improving the allocation of the state's limited water resources.  
9:00 AM — 4:15 PM  
Sponsor: S.F. Estuary Project  
Location: Oakland  
(510)622-2465  
<http://sfep.abag.ca.gov>

**NOV**  
**10**  
WEDS  
**EROSION CONTROL AND LAND RESTORATION SEMINAR**  
Topics: Principles of erosion control, including revegetation methods, re-establishing native plant communities, runoff and soil loss calculations, sediment basin and structure design, stabilization using willow wattling, brush matting and other biotechnical methods.  
Sponsor: U.C. Extension  
Location: Davis  
Cost: \$240  
(800)752-0881

**NOV**  
**10**  
WEDS THRU  
**12**  
FRI  
**FACILITATING AND MEDIATING EFFECTIVE ENVIRONMENTAL AGREEMENTS**  
Sponsor: CONCUR  
Location: Berkeley  
Cost: \$795  
(510)649-8008  
[www.concurinc.com](http://www.concurinc.com)

**NOV**  
**17**  
WED  
**WATER RESOURCES ASSESSMENT AND MODELING**  
Topic: One-day course provides a technical overview of the physical and biological processes related to water resources management in California. Includes a survey of assessment tools and models, as well as their development, limitations and role in water resources decision making.  
9:00 AM — 3:00 PM  
Sponsor: U.C. Extension  
Location: Berkeley  
(510)642-4111

**NOV**  
**29**  
MON & TUES  
**AND**  
**30**  
**AQUATIC POLLUTION: THE CASE IN SAN FRANCISCO BAY**  
Topics: Bioavailability, bioaccumulation, biotransformation, and the fate of contaminants in an estuarine environment.  
8:30 AM — 5:00 PM  
Sponsor: U.C. Extension  
Location: San Francisco  
Cost: \$325  
(510)642-4111

**NOV**  
**30**  
TUES  
**THE CHALLENGE OF ENDANGERED SPECIES**  
Topic: The effect of federal and state endangered species acts on water resources management decisions.  
Sponsor: ACWA  
Location: San Diego  
(916) 441-4545



## MEETINGS & HEARINGS

**OCT**  
**20**  
WED  
**FRIENDS OF SAUSAL CREEK**  
Topic: New action plan  
7:00 — 9:00 PM  
Sponsor: Aquatic Outreach Institute  
Location: Dimond Library, Oakland  
(510) 231-9556



## HANDS ON

**OCT**  
**30**  
SATURDAYS  
**& NOV**  
**6**  
**KIDS IN CREEKS**  
Topic: Hands-on activities for learning and teaching about aquatic insects, pollution prevention, animal tracking, storm stenciling and water quality monitoring. Open to Contra Costa County K-12 educators.  
9:00 AM — 4:30 PM  
Sponsor: Aquatic Outreach Institute  
Location: Danville  
(510)31-5784

**NOV**  
**6**  
SATURDAYS  
**13**  
**CREEKS, WETLANDS AND WATERSHEDS CONFERENCE**  
Topics: Field trips on topics ranging from water quality and aquatic insect monitoring to nature based art.  
Sponsor: Aquatic Outreach Institute  
Location: Various  
(510)231-5778

**NOV**  
**13**  
SAT  
**FROG SURVEY TRAINING**  
Topic: Train volunteers for survey program to identify declining frog and toad populations in Northern California.  
3:00 PM — 7:00 PM  
Sponsor: EBRPD, USGS  
Location: Coyote Hills Regional Park, Fremont  
(510)795-9385

## NOW ONLINE IN PRINT

*1998-99 River and Watershed Conservation Directory*  
River Network  
Copies from (503)241-3506

*60 Ways Farmers Can Protect Surface Water*  
University of Illinois  
Copies from (800)345-6087

*Benefits of Watershed Management*  
Planning and Conservation League  
Copies from (916)444-8726  
<http://plc.org>

*California Environmental Information Catalog*  
<http://ceres.ca.gov/catalog>

*Consolidated Toxic Hot Spots Cleanup Plan*  
State Water Resources Control Board  
Copies from (916) 657-1247  
[www.swrcb.ca.gov](http://www.swrcb.ca.gov)

*Creek and Watershed Map of Fremont and Vicinity*  
Oakland Museum  
[www.museumca.gov/creeks](http://www.museumca.gov/creeks)

*Inventory of Watershed Training Courses*  
U.S. EPA  
Copies from (800) 490-9198  
[www.epa.gov/OWOW/watershed/wacademy/catalog.htm](http://www.epa.gov/OWOW/watershed/wacademy/catalog.htm)

*Regional Monitoring Program for Trace Substances 1997 Annual Report*  
S.F. Estuary Institute  
Copies from (510)231-9414

*Tribal Environmental and Natural Resource Assistance Handbook*  
Domestic Policy Council Working Group on American Indians and Alaska Natives  
[www.epa.gov/indian/tribhand.htm](http://www.epa.gov/indian/tribhand.htm)

*Watershed Stewardship: A Learning Guide*  
Oregon State University  
Copies from (541)737-0817

*Western Water Resource Issues*  
Congressional Research Service  
[www.cnre.org/nle/h2o-31.html](http://www.cnre.org/nle/h2o-31.html)

## EDITOR'S NOTE

Several readers commented that while *ESTUARY's* recent story entitled "Fever Breaks on Mercury" pointed out potential problems with mercury loads in the Cosumnes River and Cache Creek, it failed to note that the ecological benefits of, and opportunities for, restoration projects in such unique watersheds may far outweigh any mercury-associated drawbacks.



## GRAPES CONTINUED

For some, the environmental impacts of vineyards themselves are less troubling than the potential long-term implications. "It seems likely that in many cases the conversions are merely a steppingstone to further development," says CALFED's Martin. However, not everyone shares this concern. "I think the capital outlay to put in grapes is large enough that people won't turn around and develop it," says Holt. "It takes a while to recoup your investment."

To be on the safe side, CALFED is buying agricultural easements to make sure that land is not converted to vineyard. "We can't afford to buy land that has been converted to vineyard. We're buying it now to ensure that beneficial agricultural practices are preserved and the option for future restoration is maintained," says Martin. CH

Contact: Wendy Halverson Martin  
(916)657-2666, Cliff Ohmart (209)367-4727

## ROLE REVERSAL CONTINUED

intermountain west and Alaska, and recently filed suit to get critical habitat designated for Bay Area species including the Alameda woodsnake, the red-legged frog, coho salmon and the Bay checkerspot butterfly. "If the budget is capped at \$1 million, the only place they'll be designating habitat is where these lawsuits are being filed, where the judges are making them do it," says Megginson. "Mr. Young wants a more evenhanded approach, not one Endangered Species Act for the West and one out East."

Ideally, of course, Young would like the entire critical habitat provision to go away. In an April 9 letter urging Ralph Regula, chairman of the House Interior Appropriations subcommittee, to deny Fish and Wildlife's budget cap request, Young wrote "If the Secretary of Interior believes that the designation of critical habitat is a waste of taxpayer funds, he should have the courage to ask the Congress repeal the entire provision." SZ

## Want to join ESTUARY newsletter's Editorial Advisory Board?

ESTUARY is looking for informed people active in myriad issues and representing diverse stakeholder interests to serve on its advisory board.

The purpose of the board is to keep ESTUARY in touch with diverse issues and voices throughout the Bay-Delta watershed and California's water world.

Board members are contacted six times a year by fax, phone or email with a request for story ideas and contacts. Lists of potential stories are often circulated for ideas on angles and possible sources of information. Once a year ESTUARY holds an annual meeting to review the year's issues and discuss new directions. Board members do have any responsibilities for ESTUARY's management or administration.

Current board members come from government agencies, research institutions, business and farming interests, and public education groups.

Please submit nominations including name, phone and a brief note on background to Ariel Rubissow Okamoto, (415)989-2441 or (415)989-9024 fax or bayariel@aol.com.

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Editorial Office: PO Box 791  
Oakland, CA 94604  
(510)622-2412

Estuary Web site at

<http://step.abag.ca.gov>

Subscription Q&A: (510)622-2321

## STAFF

Managing Editor: Ariel Rubissow Okamoto

Senior Editor: Cariad Hayes

Graphic Design: Darren Campeau

Contributing Writers: Bill O'Brien  
Lisa Owens-Viani  
Susan Zakin

ESTUARY is a bimonthly publication dedicated to providing an independent news source on Bay-Delta water issues, estuarine restoration efforts and implementation of the S.F. Estuary Project's *Comprehensive Conservation and Management Plan* (CCMP). It seeks to represent the many voices and viewpoints that contributed to the CCMP's development. ESTUARY is funded by individual and organizational subscriptions and by grants from diverse state and federal government agencies and local interest groups. Administrative services are provided by the S.F. Estuary Project and Friends of the S.F. Estuary, a nonprofit corporation. Views expressed may not necessarily reflect those of staff, advisors or committee members.

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