

SAN FRANCISCO WILL SOON TRANSFORM the 500-acre former Hunters Point shipyard into a mixed residential and commercial development that will include 10 acres of open space and restored wetlands. Governor Davis signed legislation approving the deal this fall while the Navy reached an agreement with the city to provide \$50.6 million for cleaning up contaminants from the shipyard, closed since 1974.

THE EUREKA CITY COUNCIL may intervene in a lawsuit by the Pacific Coast Federation of Fishermen's Associations and the Northcoast Environmental Center against BurRec over its 10-year plan for the Klamath River. The suit claims the plan violates the Endangered Species Act and will harm coho salmon. The City of Arcata and the County of Humboldt have already agreed to support the suit (for more on Klamath River issues, see page 5) because of the economic importance of the fishery. Meanwhile, 10 environmental groups have sued U.S. Fish & Wildlife over its practice of leasing refuge lands to irrigated agriculture in the Klamath Basin. The groups want 20,000 acres restored to wetlands, which they say will free up 60,000 acre-feet of water demand on the river and improve water quality by filtering pollutants.

CHINOOK SALMON PERSEVERE this year in the Russian River despite a 60% cut in the river's flows by the Sonoma County Water Agency to conserve water. Some 5,000 fish have reached spawning grounds above Healdsburg, delighting the water agency, which was worried that the reduced flows might restrict spawning. Although this year's run is the largest on record, biologists have only been monitoring the river's Chinook for five years, after discovering the fish to be a distinct population.

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Lethal and Legal Sting?

The West Nile virus—the mosquito-transmitted disease that caused sparrows, crows, hawks, and owls to drop dead on the streets of New York City in 1999—is heading west. That it will reach California is a virtual certainty; that there are mosquito species here that can transmit it is a fact. The lowly insect may soon be reviled locally while its habitat—everything from seasonal ponds to freshwater wetlands and stormwater catchment basins—faces considerable scrutiny.

That's why the Contra Costa Mosquito and Vector Control District convened the "Wetlands Without Mosquitoes" workshop this fall for wetland designers and managers. The district's Karl Malamud-Roam told the group that recent legislation now makes it illegal to "grow" mosquitoes. "If you do, you're liable," said Malamud-Roam. Local agencies and municipalities holding stormwater permits or constructing and managing wetlands could all get stung.

The workshop made it clear that not all wetlands are mosquito factories. Salt marshes host few mosquitoes: the tidal to-and-fro flushes out eggs and larvae, disrupts egg conditioning and permits more predators. Freshwater wetlands produce more mosquitoes, but seasonal wetlands, which get wet, hold water for 10 days or so, dry out, then get wet again, offer even better conditions for the insect. One helpful hint for wetland managers is that mosquitoes like vegetation but not wind, waves, or currents. Creating openings in vegetation that face prevailing winds discourages reproduction; so does reducing vegetation.

Malamud-Roam admits that some solutions—installing plumbing, moving water into and off of a site quickly, and reducing vegetation—will compete with other wetland objectives. The district, whose mission is to protect public health, may find itself at odds with

some agencies, although Malamud-Roam assured attendees that the district will work with them.

Tom Huffman with Cal Fish & Game is undaunted by managing marshes for multiple objectives. His agency consults with mosquito districts before doing any work in or designing a wetland. He also manages vegetation with the pests (mosquitoes, not districts) in mind. "If I'm going to flood an area full of dense vegetation, I mow first," he says.

Wetland managers won't be the only ones impacted by the new regulations. For example, the Contra Costa Clean Water Program's municipal stormwater permit, up for amendment, essentially mandates creation of mosquito habitat by requiring on-site water retention features like catchment basins and swales. The vector control district has proposed that the amendment be deferred, but the S.F. Bay Regional Water Quality Control Board's Christine Boschen says the agency is unwilling to do so. The Board is considering making some mosquito-related changes based on comments filed by the district and others.

At the workshop's close, Malamud-Roam recommended what the district had been practicing all day: proactive public relations. West Nile virus is not a huge threat to human health. The number of people who pick it up is likely to remain small, and 80% of those who do will develop immunity without even feeling ill. Only the elderly and immunocompromised are at risk for the severe neurological damage the disease can cause. Horses are also susceptible, but neither they nor humans appear to be reservoir hosts (capable of carrying the virus at high enough levels to pass it on), as birds are.

Malamud-Roam pledged to hold follow-up meetings with sewer, stormwater, waterfowl, and marsh managers. One uninvited party may be present too: the mosquito.

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AH



SPECIES SPOT

WREN WORRIES

The salt marsh song sparrow, a Bay Area native listed as a California Species of Special Concern, may be having trouble coping with the rapid changes occurring in its tidal salt marsh home due to the invasion of Atlantic cordgrass (*Spartina alterniflora*), according to recent research by U.C. Berkeley behavioral ecologist Dr. Cully Nordby. Nordby, who began her study in 2001 under a National Science Foundation award to the San Francisco Estuary Institute, is assessing how *S. alterniflora* is affecting both song sparrow and marsh wren populations in Bay salt marshes. The study is examining nesting habits, foraging behavior, and competition between the two birds in order to understand the impacts of the invasive cordgrass on native animal populations.

Prior to the exotic cordgrass invasion, the song sparrow nested and lived as the main resident of the open-canopied marshes natural to the Bay. Now, with its familiar habitat changing into tall, dense cordgrass meadows, the song sparrow may be sharing its home more frequently with a new neighbor, the marsh wren. Though the marsh wren is also a Bay Area native, it usually nests in the dense reeds found in brackish or freshwater marshes, defending its territory by breaking the eggs of other species that live nearby. Nordby hypothesizes that the changes brought on by *S. alterniflora*, will favor marsh wrens over song sparrows. "We're still trying to sort it out," says Nordby. "We have yet to correlate Bay-wide distribution and abundance of wrens and invasive *Spartina*, but that is in the works in collaboration with Point Reyes Bird Observatory and the California Coastal Conservancy. I predict that we'll find a pretty strong correlation."

The Nature Conservancy recently awarded Nordby a Smith Conservation Research Fellowship (one of six given nationally) to pursue further work on the effects of the *S. alterniflora* invasion.

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PC



INVASIONS

SPARRING WITH SPARTINA

Mowing, pruning, blanketing, digging, hand-pulling, and applying herbicides are just some of the means being used to rid the Estuary of invasive *Spartina*, the monster cordgrass threatening intertidal mudflat habitat. Where once there were only four invasive *Spartina* species competing with the native *S. foliosa*, now there are many transgressive hybrids—which produce more seed and pollen than either parent—marching up and down the tidal gradient. These hybrid swarms grow fast and large, produce more pollen than the native species, and can self fertilize, transforming mudflats into monocultures of dense grass, according to U.C. Davis ecologist Don Strong. Unchecked, they could destroy foraging areas crucial to shorebirds and other species, he says.

The California Coastal Conservancy is leading the battle against the invasion with a \$2 million CALFED-funded program that earmarks \$500,000 for eradication. The Invasive *Spartina* Project (ISP) Programmatic EIS/R due out by year-end will help coordinate manual and mechanical excavation and evaluate eradication methods, such as dredging, burning, flaming, drowning and draining, and applying herbicides.

The ISP will also look at an umbrella permit for herbicide use according to ISP's Peggy Olofson. The current permitting process has been a costly stumbling block for some agencies and landowners. As it stands now, National Pollutant Discharge Elimination System (NPDES) permits issued by the S.F. Bay Regional Water Quality Control Board require that glyphosate (aka Rodeo, Aquamaster), the only EPA-approved aquatic herbicide and allegedly non-toxic, must undergo standardized toxins testing and monitoring. Winds, tides, and endangered species concerns, such as the California clapper rail breeding season, restrict the timing of herbicide use.

"We don't like to spray, but it's the only proven effective method at this time," says Hayward Regional Shoreline's Mark Taylor. "We have some of the earlier infestations in our parks—they're growing as we speak—and we can't get out there to do any control

work. We hope the EIR will help us because *Spartina* exploded on us last year, and it's too far gone to do by hand." A new herbicide, imazapyr (Arsenal), being tested in Washington state, may prove less toxic and offer better control than glyphosate, according to Taylor.

While the EIR is being finalized, the East Bay Regional Park District is working with CALTRANS in the Emeryville and Albany mudflats to mow and pull seedheads, and Hayward Regional Shoreline has purchased an amphibious vehicle it hopes will facilitate future mechanical control and spraying.

"We've held off using our new machine until the EIR comes out and we hear from the agencies involved," says Taylor, who would like to get to work on *Spartina* in the 364-acre Oro Loma Marsh. The 250-acre Cogswell Marsh is also fully infested, he says.

The City of Palo Alto Baylands Nature Preserve overcame permit problems and is using glyphosate, having found mowing too labor-intensive. Future methods may include tarping, which resident naturalist Deborah Bartens says is not ideal because it covers and kills everything, and because the sediment deposited in just one season by the tides can make the tarps too difficult to remove. Taylor says tarps placed nearly a decade ago along the Hayward shoreline are covered by a foot of mud, with cordgrass and pickleweed growing on top. At Point

Reyes National Seashore, *S. alterniflora* in Drake's Estero was successfully trampled, then covered with geotextile fabric to prevent regrowth. A lone *S. alterniflora* clone in Bolinas Lagoon was dug out with shovels and removed by the Marin County Open Space District and Audubon Canyon Ranch biologists.

ISP biologists are hoping that all these efforts will help hold the line against the invader. Says ISP's Katy Zaremba, "We're trying to prevent seed spread into outer-coast marshes and the un-invaded reaches of the Bay."

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GS

"We have some of the earlier infestations in our parks—they're growing as we speak—and we can't get out there to do any control work."

REGULATION

SMELT TUG OF WAR

Few fish have caused more angst than the Delta smelt. Its addition to the federal list of threatened species in 1993 is credited with forcing California's commercial, municipal, agricultural, and environmental interests to set aside traditional enmities to find a solution to the state's chronic struggles over water allocation. The result was CALFED, the multi-billion dollar, multi-year program that marked a historic shift in California's attitude toward water.

CALFED may be sailing smoothly, but the smelt are making news again. Recent talk by the California Farm Bureau and downstream water users about removing protection for the smelt has agency officials and enviros worried. This October, the smelt met the criteria set for recovery by a scientific team back in the early 1990s, even though the number of fish caught by researchers was the fifth-lowest since 1967. To enviros, a worst-case scenario is that the smelt could lose federal protection, and measures taken to restore it be rescinded. One of the most significant measures was a reduction in the percentage of freshwater pumped by state and federal water projects, from a high of 70% to 35%. These cutbacks stay in place from February to June, when smelt tend to congregate near the pumps.

The same scientists who established the recovery criteria are now calling them into question. Because of the difficulty in tracking the elusive, unpredictable fish, the current standards merely provide a rough gauge of the species' health by comparing the number of smelt caught at specific locations over the years. Nobody knows how many smelt actually live in the Delta. Estimates range from several hundred thousand to 12 million, depending on which scientist one listens to.

"In hindsight, I'm uncomfortable with the targets," says Bruce Herbold of the U.S. EPA. "At the time, we were trying to be reasonable and not rely solely on the luck of the draw. But I'd probably do things differently now."

Starting in 1967, Cal Fish & Game has trawled for smelt and other fish at 120 locations, from San Pablo Bay to Prisoner's Point on the San Joaquin River. Since the smelt received protection in 1993, data from these fishing expeditions have been used to determine whether the smelt is meeting criteria set for recovery under the federal Endangered Species Act. The smelt met that

criteria by the narrowest of margins for the first time this year. But that doesn't necessarily mean the species is in good shape, scientists say. In fact, trawlers came up with only 33 fish this year. If the trawlers had caught two fewer fish, the smelt would have failed to meet the recovery standards.

The smelt met the recovery standard this year because extraordinarily high numbers of fish—more than 300—were caught last year. This year's dramatic drop may have been caused by dry weather in the spring, a crucial time for smelt. But last year's number was so high that the average of the two years met recovery standards.

The Bay Institute's Tina Swanson believes the agencies need to take another look at the recovery standards to see whether they provide the most reliable gauge for the health of the species. This year's low catch could mean the smelt is in the midst of a population crash rather than a recovery, says Swanson, who thinks recovery standards failed to adequately take into account the boom-and-bust water supply in the Delta. The annual freshwater runoff to the Delta averages about 23 million acre-feet. But the real numbers vary dramatically from year to year, ranging from six million acre-feet to 60 million acre-feet.

Swanson says California's wildly gyrating weather may be influencing Delta smelt abundance. "These were the first dry years we've seen since the recovery criteria were developed and instituted, and the numbers have plummeted. If someone were to suggest that this is a recovery, it isn't very durable."

On the other side of the issue, downstream water users and the California Farm Bureau are insisting that U.S. Fish & Wildlife officials conduct a review of the smelt, which is required every five years under the Endangered Species Act. Dan Nelson, executive director of the San Luis & Delta-Mendota Water Authority, cites a recent study estimating that the actual number of smelt is between one million and 12 million. "We think there's a good chance it will show Delta smelt are in a lot better shape than they were 20 years ago and that they're out of danger," says Nelson.

Herbold says that there simply isn't enough information to come up with an accurate count. "I don't think it's a game worth playing," he warns. "I think there are fewer than the study number, but we lack some essential information that would allow us to know. I don't fire up my little spreadsheet and say, no, there are 60,000."

BIRDWATCH



CREATIVE COLONIZERS

Eight years ago, a handful of black skimmers set up housekeeping in the Bay, at the Hayward Regional Shoreline and the Ravenswood unit of the Don Edwards S.F. Bay National Wildlife Refuge. Unknown in California before 1962, the birds colonized the Salton Sea from western Mexico, then coastal Southern California—at least one of the 1994 Bay breeders may have been hatched in Orange County. Since 1994, the skimmers have spread to the Alviso unit of the refuge, Charleston Slough, and the Cargill salt ponds. Last April, 16 were counted at Charleston Slough. These avian pioneers seem to be maintaining their Bay stronghold, according to Cheryl Strong, who monitors colonial waterbirds for the S.F. Bay Bird Observatory, although their long-term prospects for success here are uncertain.

Skimmers are named for their feeding technique. A skimmer flies with its elongated lower mandible trailing in the water; when a fish is contacted, the upper bill snaps down. It's all done by touch, often in darkness. Unique among birds, this mechanism was independently evolved by the long-extinct flying reptile *Thalassodromeus*.

Strong says the skimmers nest on dredge-spoil islands inaccessible to four-footed predators, alongside Forster's terns and American avocets. They may benefit from the smaller terns' aggressive colony defense. Rather than attacking an intruder, skimmers, like killdeer and other shorebirds, put on a distraction display. The nest is nothing fancy, a scrape in the ground without even a seaweed lining.

Strong says 2002 was a bad year for the birds: 10 breeding pairs produced only five chicks. Ironically, this may have resulted from parents' attempts to regulate nest temperatures. Skimmer eggs are highly susceptible to heat stress. At the furnace-like Salton Sea, skimmers have been observed soaking their belly feathers before returning to the nest, and eggs have been found cemented in silty clay. Strong says this may be happening here as well; if so, a trait that evolved when skimmers bred on sandy beaches may be hampering the birds' reproductive success in their new home.

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OUTREACH

GOTTA GO? TAKE THE OATH

Some red-faced boaters attending a recent meeting about organic pollutants in waterways confessed to having taken a whiz in the water when nature called. Sounds harmless, but even a random release can cause problems if enough folks are doing it: synthetic hormones (from birth control pills and hormone therapy) secreted in women's urine can be absorbed by fish, causing physiological changes and affecting the reproductive ability of male fish. Antibiotics—in both sexes' urine—are also turning up. And, while no one admitted to anything but an occasional whiz, just one weekend boater flushing untreated sewage into the Estuary can produce the same amount of bacterial pollution as that of 10,000 people whose sewage passes through a treatment plant.

Elevated fecal coliform levels are often found where recreational boaters congregate, according to federal studies. But illegal discharges are difficult to monitor, says Joan Patton with the S.F. Estuary Project, who adds that "enforcement is a big gap." Offenders should be reported to the harbor master or the local sheriff's department; they can be fined up to \$2,000 for each violation.

Patton suggests boaters learn how to stay out of trouble by perusing the Estuary Project's new boating guides, which contain five to-do lists for preventing pollution, plus maps of 77 pumpout and 29 portable toilet stations at marinas and yacht harbors around the Bay-Delta.

Contact: Boating and Waterways (888)326-2822 or www.dbw.ca.gov; Estuary Project (510)622-2406.

GS

The Clean Captain's Oath

I will not use the Delta as a water closet.

I will pump and dump at a convenient marina receiving station.

I will use vim and vinegar to swab the decks.

I will make merry but be wary (accidents lead to spills).

I will deliver my trash to onshore receptacles.

I will share these wise words and maps with fellow seadogs and mariners.



CONSERVATION

TAKING FOLSOM'S MEASURE

Folsom voters proved defiant on election day, eschewing federal law to approve a ballot measure prohibiting the city from charging residents for the amount of water they use and preserving a flat-rate fee. Supporters of Folsom's Measure P maintain that it was mainly about keeping the city from passing the \$4.9 million cost of retrofitting more than 6,600 homes with water meters on to residents. The installation of the meters—and the reading of them—are key components of a long-term regional water use plan that went into effect in 2000.

Meter use is also mandated by federal law. The 1992 Central Valley Project Improvement Act (CVPIA) requires municipalities using water from the Central Valley Project (CVP) to install meters and charge customers a metered rate five years after the federal tap starts running. BurRec has warned that the passage of Measure P will mean that parts of Folsom will face water shortages beginning in 2005.

"The federal government has required meters not to punish folks but because we live in a water-short state and need to pay for what we take," explains BurRec's Tom Aiken.

Currently, Folsom residents pay \$16.80 a month for unlimited water use. Those with swimming pools pay an additional \$2.20 a month, and residents in an annexed area on the east side of town pay a surcharge of \$11.75 to cover expenses incurred when the city had to get a new source of water for the development.

At issue in Measure P is 8,200 acre-feet of water from the CVP, 7,000 of which the city contracted from BurRec in 1999 to serve new developments on its east side. Measure P author Sara Myers says pre-1914 water rights—equivalent to 22,000 acre-feet—are more than meeting the current needs of Folsom's 45,000 residents. Myers also points to additional rights to 5,000 acre-feet, which the city contracted from the Southern California Water Company to meet expanding development.

"The city made a very big blunder when obtaining 7,000 acre-feet [of CVP water] for one development in one part of town," explains Myers, a one-time Folsom city council member and former BurRec spokesperson. "[The CVP water] is not really being tapped into as the town continues to grow."

While all parties agree the city is not currently using 7,000 acre-feet of the CVP water, water for Folsom's Ashland area is provided by the

city. Folsom gets this water from the San Juan Water District, which in turn gets water from the CVP, along with some from pre-1914 water rights and some from Placer County. It is over this water that Myers feels BurRec is overstepping its bounds. Because the pre-1914 water is part of what the San Juan Water District supplies, Myers says, Ashland should have full rights to this supply without metering.

Not so fast, says Aiken. "[Under the CVPIA], if someone is getting one drop of CVP water, the whole district served by that water must have metering." That provision affects the 1,200 acre-feet of water from the San Juan Water District going to Folsom's Ashland area, which houses some 4,600 residents who will have their water services curtailed in 2005 to levels that Aiken says will maintain the health and safety—showering and drinking—needs of the community.

Aiken believes this cutback should come as no surprise since BurRec renegotiated its water contract with the San Juan Water District in 1995 to reflect the changes in the 1992 federal law. At the time, Aiken says, the San Juan district was financially unable to meet the five-year metering requirement, so BurRec granted it 10 years within which to comply with the law.

Another aspect of Measure P is that it will likely require an amendment to the Water Forum Agreement the city signed in 2000. The agreement—a non-legally binding contract signed by 40 cities and other municipalities, water suppliers like BurRec, developers, and environmental organizations—has the dual aim of ensuring a safe, secure water supply while protecting the lower American River.

The lengthy agreement grants permission to the various signatories for projects in return for a show of support. In Folsom's case, the city agreed that in exchange for expanding its water treatment facilities it would implement a water conservation plan. A key element to conservation is water meters, says the city's Gordon Tornberg. "We won't be able to live up to our agreement under the Water Forum without meters, but even if we get them, we won't be allowed to use them," says Tornberg.

Conservation looms large in the Water Forum Agreement. Estimates for total water usage took into account all participating cities' and municipalities' growth projections to the year 2030. In light of the Water Forum's goals, the aims of Measure P appear shortsighted, says the forum's executive director Leo Winternitz.

"The problem now is that you plan for the future," Winternitz explains. "If Folsom loses [CVP water] now, chances are they aren't

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MANAGEMENT

CHAOS AT THE CONFLUENCE

The catastrophic dieoff of 30,000-plus fish this past September caused a tsunami-sized ripple in the debate over how the Klamath River and its troubled tributary, the Trinity, are being managed. Critics blame the dieoff on the Department of the Interior's export of full water deliveries this year to over 200,000 acres of irrigated farmland in the upper Klamath Basin, an act that cut flows for salmon on the main stem river. Some say that had there been more water in the Trinity, fewer fish would have been killed since all the fish died just downstream of the Trinity-Klamath confluence. Electronic tags recovered on the fish also showed that many of them were returning to the Trinity to spawn.

"There's no doubt in my mind that there would have been less mortality if there was more flow in the Trinity," says Tom Stokely of the Trinity County Planning Department. Stokely cites a June 2001 draft U.S. Fish & Wildlife report that concluded that increased releases from the Trinity August through September would have lowered temperatures in the Klamath by at least one degree Celsius, making a big difference for fish.

The fish kill struck a nerve with restorationists, resource managers, fishers, and the Hoopa Valley and Yurok tribes who have all

been waiting for the flows agreed upon in the Trinity Record of Decision (ROD) signed by Bruce Babbitt in 2000 to finally be given back to the river. The ROD was based on years of careful studies, and under it, Trinity flows could have been managed to help fish while still allowing Central Valley Project (CVP) diversions of more than half of the river's flow to downstream ag and hydropower, according to the Resources Agency's Tim Ramirez.

But farmers in the Westlands Water District, the Sacramento Municipal Utility District, and the Northern California Power Agency (which includes such cities and agencies as Palo Alto, Santa Clara, Alameda, the Port of Oakland and BART)—filed a lawsuit in early 2001 over the ROD asking that the new and higher instream flow schedule for the Trinity not be implemented for two reasons. First, they argued, diverting less water from the Trinity to the Sacramento River (Trinity water is sent to the Sacramento via a tunnel in the Coast Range) could harm downstream Delta smelt, Sacramento splittail, and winter-run Chinook salmon; and second, the impacts on hydropower production needed to be further analyzed. The judge agreed, and directed that a supplemental EIS (SEIS) be prepared by BurRec, the Hoopa Valley Tribe, and U.S. Fish & Wildlife. He also ordered that flows in the Trinity be capped at the lowest levels allowed under the driest conditions in the ROD until the SEIS is completed.

But the SEIS is stalled, frustrating river advocates and resource managers. According to a strongly worded letter sent in October by California Secretary for Resources Mary Nichols to Gale Norton, Secretary of the Interior, BurRec is attempting to go beyond the scope of what the judge required in an apparent attempt to delay implementation of the ROD. The Nichols letter asks that BurRec complete its work on the SEIS so that the ROD can be implemented during the next water season.

"Implementing the Trinity River ROD will also benefit the lower Klamath River, as the Trinity is its largest tributary," writes Nichols.

Stokely puts it more directly. "Officially, there have been no overt attempts to delay, but it took BurRec nearly a year after

TRINITY RIVER DIVERSION



THE MONITOR

BOARD TESTS BUGS

In May 2000, shortly after the release of new protocols for assessing streams using aquatic insects, Andree Breaux of the S.F. Bay Regional Water Quality Control Board waded into the East Bay's Wildcat and San Leandro creeks to collect bugs, the start of a five-year study to track macroinvertebrates and determine whether or not bioassessment is a reliable water quality assessment tool.



Breaux says bugs can answer questions about land use impacts that other forms of monitoring can't. Because bugs are in the stream for a long time, says Breaux, they can reveal more about conditions than snapshot-style chemical testing. Breaux hired Monique Born of the Sustainable Land Stewardship Institute to assist with field sampling and taxonomic analyses. Born and Jim Harrington authored "Measuring the Health of California Streams and Rivers," a bioassessment manual published by Cal Fish & Game in 2000. To measure water quality, Born and Harrington recommend standard indices, such as richness of pollution-sensitive species, but they have also developed California-specific metrics, such as calculating percentages of more pollution-tolerant caddisfly and mayfly families.

Another question Breaux set out to answer is whether bioassessment protocols work for urban streams. So far, she says, the answer is yes. Results of her study to date conform to expectations for Bay Area streams: benthic macroinvertebrate communities are more diverse upstream—with one exception. The uppermost site on Wildcat Creek in Tilden Park turned out to be the poorest in diversity. It is adjacent to a picnic area where dogs roam free; Breaux blames the low insect counts on lack of vegetation along—and dogs in—the creek. She added to her study a site away from public use, where she has found higher counts of sensitive species. The study, funded by the California Coastal Conservancy, continues through 2004.

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AH

MANAGEMENT - CONTINUED

the judge's initial ruling to hire a contractor to do the SEIS. Clearly, any delay in preparing the SEIS gives Westlands and others that many more years of benefits from Trinity water and more opportunities to derail the ROD in the courts or in Congress."

When the fish dieoff began, the Trinity Management Council (of which the Hoopa Valley tribe is a member) asked the Secretary of the Interior to increase flows in both the Klamath and the Trinity. BurRec was the only member voting against the motion, Stokely points out. BurRec claimed that extra releases into the Trinity were prohibited under the lawsuit filed by Westlands, et al., and initially refused to release more water into the Klamath. Later, the agency released a two-week "pulse" of water down the Klamath, but it was too little, too late for the fish. This debacle is symbolic of the way BurRec has mismanaged the Klamath-Trinity system over the past several decades, say Stokely and others.

But not everyone is convinced that low river flows caused the catastrophe. Says Westlands' Thomas Birmingham, "The fish kill was certainly unfortunate, but before people start pointing fingers, it's important to determine the cause." Birmingham is waiting for the results of a study on the cause of the dieoff. Other downstream users—such as the San Luis & Delta-Mendota Water Authority—claim that the same amount of water was released in the Trinity this year as would have been under the ROD.

Technically that may be true, says Ramirez, but under the ROD, there is room for more flexibility in implementation than BurRec allowed.

"The volume is firm, but the schedule is flexible," explains Ramirez. "The river gets so much water, but the intent is to manage the system adaptively."

In April, spurred by BurRec's delay in conducting the SEIS, the Hoopa Valley and Yurok tribes asked the judge to release more water into the Trinity as outlined in the ROD. The judge, apparently annoyed by the delays with the SEIS, held a summary judgement hearing in August 2002, but the parties are still waiting for his written

opinion, which will almost certainly be appealed by one side or the other.

And the fight over flows doesn't stop there. Environmental Defense has sent a letter signed by a dozen environmental groups asking the members of the Northern California Power Agency and SMUD to drop their lawsuit. The hydropower benefits to cities like Santa Clara and Palo Alto would be reduced by a very small percentage, according to Environmental Defense's Spreck Rosekrans. California congressman Mike Thompson recently jumped into the pool of controversy, introducing legislation to boost flows in the Klamath and to provide emergency assistance to tribes and fishers hit hard by the fish kill. That legislation, too, is likely to be opposed by farmers, with the Klamath Water Users Association claiming that the science being used to justify the higher flows is flawed. But Ramirez is worried

that "science" is being twisted to make policy calls.

After the 2001 drought left farmers in the Klamath Basin without any water from the Klamath, the Department of Interior asked that the National Research Council (NRC) review the material used by BurRec and the National Marine Fisheries Service (NMFS) to develop an operations plan for 2002. In a controversial interim report, the NRC panel found no scientific support for increasing minimum flows, as recommended by NMFS. However, as Ramirez points out, the interim report also found that

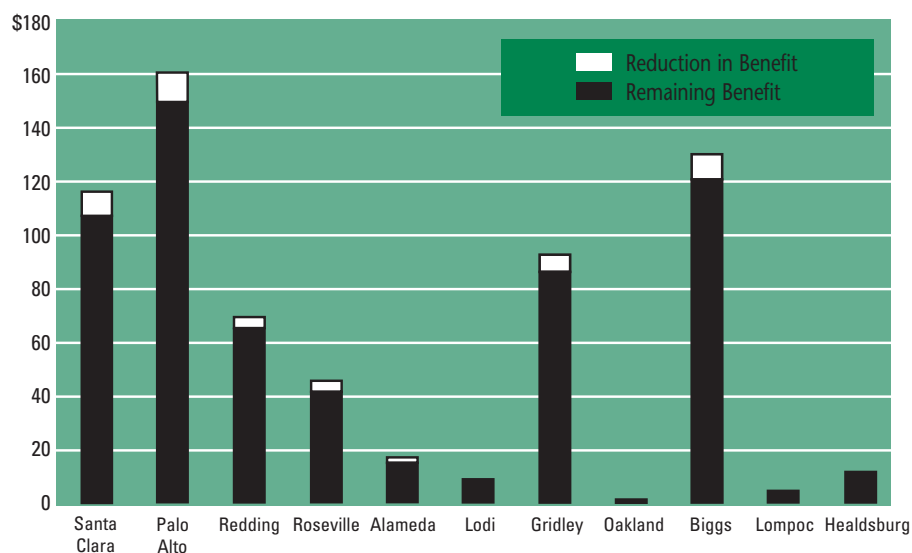
there was no scientific support for reducing main stem flows, as proposed and implemented by BurRec. "We have advocates for the fish and the farmers both pointing to the NRC report saying, 'See, the science supports our position.' But that's not the role of science. Science doesn't make policy; it informs policymakers. And as much as people might like it to, science doesn't eliminate uncertainty; it narrows the gap in knowledge. That's why we need to manage adaptively and learn from our decisions," Ramirez says.

Stokely says adaptive management is exactly what didn't happen this past fall at the confluence of the two rivers. He remains bitter over the fish kill—and feels that, contrary to popular opinion, California water wars have not ended—but just begun. "There was very little in Prop 50 for the North Coast or the Trinity," says Stokely, referring to the \$825 million voters just gave CALFED (the cooperative state-federal effort to balance the state's competing demands for water) in November. He says support for CALFED on the North Coast has been jeopardized by Westlands' actions related to the Trinity. "Their predatory tactics have upset the delicate balance between environmental and other consumptive uses of CVP water and undermined the CALFED baseline for the Trinity and B2. This threatens forward movement on CALFED because all parties aren't getting better together, and there are redirected impacts of Delta exports. The dead fish are a redirected impact."

Contact: Tom Stokely (530)628-5949; Tim Ramirez (916)653-5656; Thomas Birmingham (559)224-1523 **LOV**

Clearly, any delay in preparing the SEIS gives Westlands and others that many more years of benefits from Trinity water

PER CAPITA ANNUAL HYDROPOWER BENEFITS FOR NCPA CITIES (\$/YEAR)
(UNDER TRINITY RIVER RESTORATION PLAN)



PLACES TO GO & THINGS TO DO



WORKSHOPS & SEMINARS

JAN

2nd BIENNIAL CALFED SCIENCE CONFERENCE

TUES — THURS
14 THRU 16

Topic: Advances in Science and Restoration in the Bay, Delta and Watershed

Sponsor: CALFED Bay-Delta Program
Location: Sacramento
<http://iep.water.ca.gov/calfed/sciconf/2003>

FEB

CONSERVATION BIOLOGY SYMPOSIUM

SAT
1

Topic: 5th annual symposium, with keynote speakers Peter Kareiva, The Nature Conservancy, and Tyrone Hayes, U.C. Berkeley

Sponsor: The Society for Conservation Biology, Berkeley Chapter
Location: U.C. Berkeley
www.cnr.berkeley.edu/consbio/symposium

FEB

2003 CLEAN WATER SYMPOSIUM

WED
5

Topic: Integrated pest management and water quality

Sponsor: The Alameda County Clean Water Program
Location: Oakland Museum of California
Carol Thornton, CT@rb2.swrcb.ca.gov or (510)622-2419



HANDS ON

DEC

CHRISTMAS BIRD COUNT

MANY DAYS
14 THRU JAN 5

Topic: 103rd season that Audubon citizen scientists inventory bird populations in their communities

Location: throughout Bay Area (contact sponsor)
Sponsor: National Audubon Society
www.audubon.org/bird/cbc

DEC

WETLANDS RESTORATION

SAT
21

Topic: Restore East Bay wetlands

Sponsor: Save the Bay
Location: Martin Luther King Jr. Shoreline, Oakland
www.savesfbay.org/calendar.html

DEC

SOLSTICE PADDLE

SAT
21

Topic: Welcome migrating shorebirds back to the Bay Area

Sponsor: Save the Bay
Location: Arrowhead Marsh, Oakland
www.savesfbay.org/calendar.html

DEC

HOLIDAY PADDLE

SAT
28

Topic: Enjoy the peace of the wetlands as you paddle around Hook Island

Sponsor: Save the Bay
Location: Palo Alto
www.savesfbay.org/calendar.html

JAN

SALMON WALK

SAT
11

Topic: Observe salmon habitat

Sponsor: Save the Bay
Location: Alameda Creek
www.savesfbay.org/calendar.html

SMALL GRANTS AWARDED

The San Francisco Estuary Project is pleased to announce the following awards from its new Small Grants Program. A total of \$111,507 will be used to improve water quality and natural habitat throughout the Bay Area, thanks to an allocation from the U.S. EPA. For more information, call Carol Thornton, (510)622-2419.

Joyce Blueford, Ph.D.

Community and Industry Awareness of Ecological Indicators along Mud Slough, Southern S.F. Bay, \$5,000

Friends of Five Creeks

Restoration of Cerrito Creek at El Cerrito Plaza, Maximizing Volunteer Involvement, \$3,000

Santa Clara Valley Audubon Society

Wetlands and Woodlands Discovery Program, \$3,900

Santa Clara Valley Audubon Society

Stormwater Erosion Elimination Program (SWEEP), \$5,000

Urban Creeks Council

Urban Creek Restoration Environmental Education Program, \$9,150

City of Fremont

Stivers Lagoon Educational Enhancement Project, \$6,667.42

S.F. Bay Bird Observatory

Birds and Bioaccumulation in the Bay, \$10,000

Friends of Orinda Creeks

Flood Design Adequacy Evaluation, \$10,000

Friends of Corte Madera Creek

Watershed Plan Restoration of College of Marin Ecology Study Area, Environmental Outreach, \$6,000

Dept. of Health Serv., Environmental Health Investigation Branch

S.F. Bay Fish Outreach and Education Project, \$10,000

Alameda Creek Alliance

Alameda Creek Steelhead Restoration Project, \$3,000

Strawberry Creek Lodge Foundation

Strawberry Creek Restoration and Outreach Project, \$4,800

The Bay Institute

Publication: Bay-Delta Ecological Scorecard, \$10,000

Alhambra Creek Watershed Action Group

Watershed Map to Promote Awareness and Stewardship, \$7,490

Save the Bay

Canoes in Sloughs Watershed Education Program, \$5,000

Bay Area Open Space Council

Research and Education Strategy for Reducing Water Quality Impacts of Surface Runoff from Transportation Facilities, \$5,000

Golden Gate Audubon Society

Alameda National Wildlife Refuge Stewardship Education Program, \$7,500

ESTUARY

OCT
2002

7

NOW IN PRINT & ONLINE

CVPIA Land Retirement Demonstration Project 2001 Annual Report.

The U.S. Department of the Interior CVPIA Land Retirement Program.

www.mp.usbr.gov/regional/landret/2001annrpt.html
or Bob May (559)487-5137

Draft Economic Analysis on Critical Habitat for Coastal Plants.

November 2002. U.S. Fish & Wildlife Service.

<http://sacramento.fws.gov>

Draft Economic Analysis on Proposed Critical Habitat for Vernal Pool Species.

November 2002. U.S. Fish & Wildlife Service.

<http://sacramento.fws.gov>

Draft Program EIR: Expansion of Ferry Service in the San Francisco Bay Area.

Public comment period extended through Jan. 30.

www.watertransit.org

Evaluating the Ecological Condition of the South Bay: A Potential Assessment Approach.

July 2002. Center for Ecosystem Management and Restoration.

www.cemar.org or (510)420-4565

A Jewel in the Pacific Flyway: The Story of Gray Lodge Wildlife Area.

John Cowan. California Waterfowl Association. www.cal-waterfowl.org or (916)648-1406

Oak Woodland Bird Conservation Plan.

2002. California Oak Foundation. (510)763-0282

<http://www.californiaoaks.org/html/merch2.html>

Paving Our Way to Water Shortages: How Sprawl Aggravates Drought.

American Rivers/Natural Resources Defense Council/Smart Growth America.

www.amrivers.org/landuse/sprawldroughtreport.htm

The State of the Nation's Ecosystems.

Cambridge University Press. Heinz Center for Science, Economics and the Environment.

www.heinzctr.org/ecosystems

or (202)737-6307

Water Education Posters: Wetlands, Water Use, Wastewater, Navigation, Ground Water, Water Quality for elementary and middle school students.

U.S. Geological Survey.

<http://water.usgs.gov/outreach/OutReach.html>
or (888)ASK-USGS

A Year in the Life of Lake Merritt.

October 2002. Lake Merritt Institute. (510)238-2290

DECEMBER THRU AUGUST

PHOTO EXHIBIT

Topic: Hidden Treasures of SF Bay

Sponsor: Dennis Anderson Photography and California Academy of Sciences

Location: California Academy of Sciences, Golden Gate Park

www.bluewaterpictures.com

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CONSERVATION CONTINUED

going to get it back, and they'll have to have it to meet their projected planning water needs in 2030."

Myers is mostly undaunted at the prospect of losing the CVP water. Nonetheless, she is thinking about other water sources for the Ashland area. "If the city was creative, it would make a deal with private well owners to serve Ashland if they chose to do it," Myers says.

Developing a private well for public water use is complicated, explains Tornberg. It requires checking to see whether there's an adequate sanitary seal, whether groundwater is adequate, and whether treatment is needed, among other things. But figuring out how to deal with water supply in a post-Measure P world is equally complex and will require much attention in the coming months.

Contact: Gordon Tornberg (916)355-7370; Sara Myers (916)988-8298; Tom Aiken (916)988-1707 **KC**

REGULATION CONTINUED

The dearth of hard information suggests that removing the smelt from the federal threatened species list would be premature, according to Kevin Fleming, a biologist with Cal Fish & Game. "Once you delist, you lose any hammer," says Fleming.

After U.S. Fish & Wildlife reviews the smelt's status, water users may have cause to recall the old adage "Be careful what you wish for, you just might get it." In addition to determining whether the species is still in trouble, scientists may re-think the criteria for recovery. This may not necessarily mean more water for the pumps. "They darn well better re-think, especially if they're going to have any integrity about using science," says Swanson.

Contact: Bruce Herbold (415)972-3460; Tina Swanson (415)721-7680 **SZ**

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