

SPECIAL FOLLOW-UP ISSUE

In this issue of *ESTUARY* we've updated some of the stories we've covered over the past few years. If you'd like to see the original stories (see date at story end) call us for a copy or check out our website.

YET ANOTHER DECISION ON THE STATUS OF THE SACRAMENTO SPLITTAIL is due by March 22. The U.S. Fish & Wildlife Service listed the silvery-gold member of the minnow family as threatened in 1999. However, the San Luis and Delta-Mendota Water Authority and the State Water Contractors sued the Service, alleging that the Service had failed to use the best scientific and commercial data available. A federal court found in favor of the plaintiffs and ordered the Service to reevaluate the listing determination.

NATIONWIDE THE DESTRUCTION OF WETLANDS has been cut by 80 percent over the past decade because of federal laws and conservation programs protecting such areas from developers, farmers and loggers, according to a Fish & Wildlife report released in January. A net of 644,000 acres of wetlands were lost between 1986 and 1997 in the lower 48 states—an average of 58,500 acres a year, compared with 290,000 acre net loss per year in the mid-1970s to the mid-1980s. The report estimates that 105.5 million acres of wetlands remain.

RAIN AND AIRBORNE PARTICLES contribute 15 to 35 percent of the nitrogen in the coastal streams that flow into U.S. estuaries, according to a new study from U.S. Geological Survey, the National Oceanographic and Atmospheric Administration, and the Blackland Research Center at Texas A&M University. The study is the first comprehensive evaluation of the nitrogen contribution of sources such as cars, trucks and power plants to the nation's waterways. The study also confirmed that estuaries receive much of their nitrogen from non-atmospheric sources, including farms, pastureland, and wastewater treatment plants. Agricultural runoff contributed the largest share, more than one-third in most of the coastal watersheds studied. (See *Now In Print*)

HIGH BACTERIA COUNTS measured by an environmental watchdog group suggest that it may not only be unsafe to eat the Delta's fish (because of high mercury levels), but also to swim and ski in it. Using quality controlled methods, DeltaKeeper began monitoring bacteria in Delta waterways last May, and found coliform levels in the "hundreds of thousands" in Delta waterways, and *e.coli* that was "way up there too," according to group head Bill Jennings. He says the results confirm all the anecdotal evidence he had of bacterial contamination (usually caused by fecal matter). "People would tell me that as soon as they started to ski at the beginning of the season, they'd get sick," he says. (209)464-5090

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Worthless Puddles?

The U.S. Supreme Court dealt seasonal wetlands—one of California's most rapidly-disappearing types of habitat—a devastating blow in January when it ruled that isolated, non-navigable wetlands are no longer subject to federal regulation even if they are being used by migratory birds or endangered species. The decision could mean that seasonal wetlands and vernal pools on the ever-shrinking open spaces around the Bay and Delta may face even more peril.

In a five-to-four vote, the Court ruled that the Army Corps could not stop a group of communities in suburban Chicago from bulldozing some seasonal wetlands to build a landfill. The net result, say some experts, is that developers and private land-owners may no longer need to obtain permits from the Army Corps under Section 404 of the Clean Water Act if they plan to fill ponds or seasonal wetlands on their land.

"A lot of people are scared that we are going to have vernal pools paved over in California and never even know it," says the Sierra Club's Eric Parfrey. The Bay Institute's Marc Holmes agrees. "The Corps wasn't always completely supportive about preservation but at least we had some idea of when destruction was occurring. I think now people won't even bother to contact the authorities. They'll be advised by their attorneys and nominal biological consultants that it's okay not to consult with the Corps."

Holmes says the decision was "blatantly political," the result of years of lobbying by the National Association of Homebuilders and the National Wetlands Coalition (a group that wants to open up drilling in the

Arctic). He laments the probable loss of yet more of this valuable habitat type. While some people view seasonal wetlands as worthless puddles, they are in fact valuable refugia for many species of shorebirds, says Holmes, even when there is no surface water evident. "Seasonal wetlands are rich in invertebrates feeding in the mud. They're an important component of our aquatic ecosystems. But with this decision the Court is ratifying the wholesale destruction of those ecosystems."

Other experts hope the decision will prompt greater efforts on the part of state regulatory authorities and say that while the decision "wasn't helpful," it isn't the end of the world either. "The states will need to decide if they are going to take a larger role," says EPA's Tim Vendlinski. "Or Congress can be more specific in defining protected wetlands in its next reauthorization of the Clean Water Act, which is long overdue."

Cal Fish and Game's Carl Wilcox, who manages a mitigation bank of seasonal wetlands in Santa Rosa, says that from his agency's perspective, the Corps was a "good net to catch things," and that in the absence of that "net," other regulatory agencies will have to work more diligently with local agencies through the state's environmental impact process to make sure losses are avoided or mitigated. In fact, the State Water Board has just announced that it will step in and regulate filling of isolated wetlands under the Porter-Cologne Act. But if the state is ineffective, there may be other remedies, says Holmes, who hopes that enviros work with their local legislators to take up the challenge. "I'm hoping for a huge backlash like the one that happened when the first Bush Administration tried to change the regulatory definition of wetlands." Contact: Marc Holmes (510) 848-5651; Tim Vendlinski: (415)744-2276; Carl Wilcox (707) 944-5525 **LOW**

SCIENCE

BRAINWORK ON THE DRAIN

A new scientific model forecasts that using a dedicated drain to shunt selenium-laced waters out of the San Joaquin Valley into the Estuary would put sensitive ducks, splittail and sturgeon at grave risk. The model's predictions, released this January (see *Now in Print*), provide sobering new insights into the prospects for solving the valley's salt and selenium build-up problems via some kind of drain extension to the Bay.

"Our model is more specific to this Estuary, and it's most vulnerable food webs, than anything ever done before," says Theresa Presser of the U.S. Geological Survey, who developed the bioaccumulation-focused model with the Survey's Sam Luoma. "In the past we've only studied isolated links, or done toxicity tests, but this approach is outdated for selenium because it passes so efficiently through food. In our model, we plug in pounds of selenium and move it all the way up the food web to effects on predators."

"You can make up any drainage scenario you want and track multiple lines of effects," adds Luoma. "What's exciting is how reliable our estimates are. We've skipped no steps."

U.S. EPA and Contra Costa County, which funded the research, specifically asked the Survey to model various scenarios for taking contaminated drainage "out-of-valley via a drain." Though the political prospects for a completed San Luis Drain, or some reincarnation, remain dim, the Bureau of Reclamation is under a court order to give farmers a drainage solution. The three historic reasons for building a drain were "too much salt, too much selenium and too much irrigation water" in the valley, says Presser. Rain and irrigation transport the selenium, a naturally occurring trace element in the mineral and salt-laden soils of California's Coast Ranges and Western San Joaquin Valley. The valley's arid climate oxidizes the weathered selenium into a highly mobile form.

The big conclusion of the modeling work, says Luoma, is that any attempt to move significant amounts of selenium out of the valley and into the Estuary would take a toll on sensitive wildlife. Researchers plugged in the kind of drainage scenarios, based on current documented loads, which would be necessary to help alleviate the area's enormous groundwater degradation due to selenium and salt build up. "If you started draining the Western San Joaquin Valley," says Presser of their findings, "there is enough of a selenium reservoir to yield discharges of 42,000 pounds of selenium every year for at least a century."

Part of the problem is that the Bay-Delta is such an efficient 'bio-reactor' for selenium, she says. In other words, as selenium is passed from soil and irrigation water to clams, then to fish or birds, its effects may intensify. In the most extreme cases, effects might include the kind of birth deformities and fatalities seen in ducks at the Kesterson National Wildlife Refuge in the 1980s.

"Even when we run the model backwards, starting with low concentrations of selenium in the water, we find that concentrations necessary to protect sensitive species are less than 1 part per billion," says Presser, noting that EPA's current water quality criteria for the protection of aquatic life is 5 ppb. Data from the new model could weigh in on several current regulatory initiatives, among them public review of draft environmental impact reports related to the continued use by local farmers and drainers of a section of the long-closed San Luis Drain called the Grasslands Bypass Channel (see *Now in Print*). EPA is also re-evaluating its 5 ppb national criteria for selenium at the request of U.S. Fish & Wildlife and others.

Also interesting are model predictions for selenium loads from the San Joaquin River, where CALFED and others are focusing a lot of dollars and research on restoring flows for fish. More water, of course, could bring more selenium into the Estuary from a river whose low, or sometimes even reverse flows, have historically imported little selenium downstream.

Researchers modeled load discharges from the river with concentrations capped at 0.5 ppb and 1 ppb, both optimistic scenarios given historic levels. "You don't get rid of a huge amount of salt and selenium this way," says Luoma. "But it's enough to basically put the same selenium loads back into the Bay that we worked so hard to get the oil refineries to take out."

Some of these issues may be tackled at a drainage summit to be held March 27 (see calendar). In the meantime, "It's clear that solving the Western San Joaquin Valley's problems will require a multi-component, rather than a one-drain-only, solution," says Luoma. Contact: Theresa Presser (650)329-4512 **ARO**

ENVIROCLIP

WAIVER CHALLENGED

Sixty-seven groups supported a petition late last year demanding that farms discharging pesticide-laden irrigation water into Central Valley rivers and streams no longer be let off the regulatory hook. This January regulators agreed to consider their petition and research its merits, baby steps toward a possible major shift in direction in how the state holds agriculture accountable for its impacts on water quality.

The petition — filed by DeltaKeeper and CALPIRG — seeks to terminate a waiver granted by the Central Valley Regional Water Quality Control Board in 1982, exempting dischargers of irrigation return waters from meeting state waste discharge reporting requirements.

"Agriculture is responsible for at least half, if not more, of pollutant loads to our waterways, and it's time to regulate them," says DeltaKeeper's Bill Jennings. According to the petition, the regional board, State Board and U.S. EPA identified 480,000 acres of Delta waterways as impaired by chlorpyrifos, DDT, diazinon and other pesticides in 1999. Another 565 miles of rivers, sloughs and creeks in the Central Valley are also identified as impaired by chemicals used to kill crop pests.

According to the Farm Bureau's Tess Dunham, the petition is "frivolous and unnecessary" because Senate Bill 390, passed in

1999, requires the review and renewal by 2003 of all waivers anyway.

Regardless of how it might happen, termination of the waiver would free the Board to apply any number of controls from its regulatory toolbox, ranging from waste discharge permits for irrigators to mandatory BMPs and monitoring.

The Farm Bureau's position is that the waiver should be maintained, and that any control of farm discharges should be done through California's 1999 Non-Point Source Management Plan. "We're not point-source polluters," says Dunham, "we're on the ground, in the rain, in the dirt. Without the waiver, individual farmers could be liable for waste discharge requirements designed for point sources."

"We will examine the whole issue, not just focus on the points of the petition," says the Board's Rudy Schnagl. "If we decide to directly regulate irrigators, this will be a major change in our whole approach from the past."

Removing the waiver would touch on current Board initiatives to curb (through TMDLs) not only pesticides, but also other pollutants found in irrigation water, among them salt, boron, selenium and nutrients contributing to dissolved oxygen problems. Board staff research and public workshops on the waiver are expected to be complete by mid-summer. Contact: Bill Jennings

BUSINESS

NO FILL DRILL

Watchdogs want more proof that San Francisco airport can't solve its delay problems without building a new runway and filling the Bay, and airport officials promised early this year to give it. At a January meeting of the S.F. Bay Conservation and Development Commission (BCDC), which regulates shoreline activities and Bay fill, commissioners requested more research into other ways to improve the airport, saying that all feasible no-fill, no-build alternatives must be exhausted before BCDC will issue a fill permit. Then in early February, an independent consultant to the Commission released a detailed review of airport efforts to explore no-fill alternatives and found them seriously lacking.

"To date, the airport has focused the bulk of its energy and resources on figuring out how to fill the Bay, not how to avoid it," says Save the Bay's David Lewis, whose organization, like BCDC, is worried about irreversible damage to estuarine ecology from the up-to-58 million cubic yards of Bay fill required to support new runways. "They held an international design competition for runway designs. Why didn't they hold it for better regional airport planning and new aviation technologies?"

The airport's Lyn Calerdine says that preliminary data from its massive environmental impacts research effort, due out for public review by fall, suggests that "the runways themselves probably won't do a lot of damage to Bay hydrology." The airport agreed last month, however, to do a more in-depth study of no-build options, following up on \$2 million worth of "demand management" studies Calerdine says the airport has already done.

"We're not convinced that even if they had new runways, it would stop delays, which are not only exacerbated by the weather, but also by labor disputes, outdated computer systems, the pressures of being a United hub, and the overall FAA management system," says BCDC's Will Travis. "We want to see tests of better system management before we give any fill permits."

To this end, Charles River Associates will be looking into everything from strict restrictions on airport access (such as "slot controls" and bad weather capacity limits) and peak-hour pricing (charging airlines more money to use facilities in peak hours) to how to better cooperate with other regional airports on diverting flights in pea-soup conditions.

In the meantime, BCDC's Travis says the amount of information on Bay ecology being pulled together in the forthcoming environmental impact report is "impressive," based on



what he's seen so far. He and Lewis are also happy that the airport has agreed to support reconvening a prestigious independent scientific panel (organized last year by the National Oceanic and Atmospheric Administration to map out airport environmental research goals) to hold a public meeting and comment on the draft EIS/EIR.

One part of the research Calerdine thinks may become useful to the whole region is the airport's data on conceptual designs and hydrology for 35 potential mitigation sites around the Bay (38,000 acres). A fill permit would require any environmental damage to be mitigated with restoration elsewhere. While initial mitigation proposals zeroed in on Cargill's shoreline salt ponds, Calerdine says studies are advancing on all possible projects.

(Cargill's latest offer, which may be taken up by state and federal resource agencies rather than the airport, seems to be the sale of its West Bay ponds and the release of its right to harvest salt in the Don Edwards National Wildlife Refuge for a cool \$300 million). "Our mitigation research created a bit of a land rush," admits Calerdine, "so we'd rather keep all options on the table as long as we can."

But Lewis says "It's still premature to be discussing mitigation. They should stop saying 'the runways are a done deal, don't worry about the environmental damage, here's our checkbook for restoration.' Instead, they need to explore every alternative to filling the Bay." Contact: Lyn Calerdine (650)821-2120; David Lewis (510)452-9261 or Will Travis (415)352-3600 **ARO 2/99 & 12/99**

DREDGESCOOP

PORT PLANS MIRED

The Port of Oakland's plan to dredge 13 million cubic yards of mud from their inner and outer harbor channels to accommodate larger ships has run into a few snags, despite winning approval from the S.F. Bay Regional Board in November and BCDC in December. The dredging project would deepen the channels from 42 to 50 feet, and would use dredge spoils to restore shallow water/eelgrass habitat at Middle Harbor, as well as restore tidal marsh at Hamilton Field and transform seasonal wetlands to tidal marsh in Suisun March (the controversial Montezuma Wetlands project). Environmental groups are continuing to fight the approval over concerns about possible impacts on water quality, and have appealed the Regional Board's decision to the State Board, which is deciding whether or not to hear the appeal, according to the Port's Jody Zaitlin.

Enviros are concerned that the dredge spoils used to restore wetlands will contain contaminants and that the planned restoration projects may fail. "They claim they can recreate eelgrass habitat by burying existing eelgrass under dredge spoils," says Save the Bay's David Lewis. "But other attempts to do so have been pretty unsuccessful so far." Another big worry is that a deeper channel will enable



yet more invasive species to enter the Estuary, via increased ballast water discharges. "I think we'll see bigger boats and faster-traveling ships, which will mean better survival of invasives," says WaterKeeper's Jonathan Kaplan. "The Port is really doing nothing to address the issue. They've offered \$150,000 to study on-ship treatment technologies [via a grant to the State Lands Commission], but they don't have jurisdiction over all of the ships entering the Bay. We need some kind of on-shore treatment technology or a floating treatment system." The Port recently agreed to require ships headed into Oakland to exchange their ballast water at sea. But that alone is inadequate to stem the tide of invasive creatures just waiting to make themselves at home in the Bay, says Kaplan. "In addition to being hard to enforce, ballast water exchange at sea is usually incomplete and sometimes infeasible for safety reasons. All it takes is one or two organisms to start a new invasion." Contacts: Jonathan Kaplan (415)561-2299; Jody Zaitlin (510)627-1179 **LOV 12/97 & 12/00**

ENERGY

CRISIS COULD SHORT RIVERS

"Our heads are kind of spinning," muses Nancy Ryan of Environmental Defense, one of the many groups that have been watching the rapidly unfolding developments in California's energy crisis closely, and evaluating its possible effects on the state's rivers.

It's a situation that has been changing quickly, as one possible solution after another is proposed, examined and then either

rejected or put into the legislative hopper. Early on, Assembly Speaker Robert Hertzberg proposed a state take-over of all or part of PG&E's hydropower-generating dam and facilities system. In exchange, the state would issue revenue bonds which would be used to pay down the company's huge debts. That idea drew cautious interest from environmentalists, who thought there might be a chance to build in safeguards for the rivers under the legislation. However, consumer groups, agriculture and the utilities themselves objected, and while the idea isn't officially dead, it appears to have been



moved off the table for the foreseeable future.

Under deregulation, PG&E had been expected to sell its hydro facilities, and environmental studies had been underway for more than a year. But in January

Governor Davis signed legislation prohibiting any such sale for at least five years. Also, Republicans have pushed for legislation to increase the state's electrical generating capacity, which could include the construction of more dams and hydro facilities. Directing more water through dams' turbines to generate more electricity could damage the downstream ecology, but Ryan worries more about the long term consequences of the energy crunch. She notes that many dams will be due for federal (FERC) relicensing in upcoming decades, and that regulators could be reluctant to impose any conditions on them that might restrict their ability to generate power.

Environmentalists are also concerned about PG&E's 140,000 acres of watershed lands. Before deregulation, the utility generally managed its lands conservatively, at least in part because it could pass along its costs to ratepayers. But starting in the mid 90s, it sold approximately 20,000 acres, some to developers and about 4,000 acres to Sierra Pacific Industries for timber harvesting. Development of about 50,000 acres is restricted by FERC, but Steve Wald of the California Hydropower Reform Coalition points out that cash strapped PG&E will be under increasing pressure to maximize the financial returns on the rest of its watershed lands. That could mean more logging, or construction of new vacation homes along its streams and rivers, which could affect water quality.

Farmers have their own worries. State officials have promised that their water needs won't be sacrificed to those of electricity producers, but Dave Kranz of the California Farm Bureau notes that farmers will have to share the increasingly scarce resource with hydropower, environmental interests and urban users. Above all, says Ryan, legislators should be careful not to rush into a quick fix without considering all the long term implications. "We're looking at the consequences of this crisis stretching out into the middle of the century." **O'B**
8/99, 8/00

WATER WARS

PEACE IN OUR TIME?

Future generations aren't likely to find the date highlighted in their textbooks, but January 23, 2001, may have marked the end of one of the longest running water wars in California history. The East Bay Municipal Utilities District board of directors surrendered the agency's rights to the American River, and set up the framework for a Sacramento River diversion project, in conjunction with the city and county of Sacramento.

EBMUD had been squabbling with Sacramento and environmentalists over the issue since 1970, when the district signed a contract with BurRec granting it 150,000 acre feet of water from the American. Lawsuits ensued - environmentalists claimed that the diversion would cause major ecological damage to the lower river, while EBMUD adamantly insisted that it needed the upstream water because it was cleaner, and less expensive to treat, than that from the Sacramento. Efforts to negotiate a compromise repeatedly broke down. Why the sudden turnaround on EBMUD's part? Board Chair John Coleman noted that a district study released late last year found that American River water was no longer as pure as it once was, and that it would need almost as much treatment as water taken from the proposed Sacramento River diversion site, near the town of Freeport. And, he added, it was increasingly clear that the district didn't have political support for its position. Only a few local mayors publicly backed EBMUD, while other elected officials opposed it or remained silent. "The bottom line was that we were not going to prevail," he said somberly, just before the board voted 6-0 to ratify the memorandum of agreement. Under the pact, Sacramento and EBMUD will share the cost of building a diversion structure. The water will be pumped 14 miles through a new pipeline to the Folsom South Canal, then a similar distance to EBMUD's

Mokelumne Aqueduct, which will carry it to the district's 1.2 million customers. EBMUD is currently finalizing an amended contract with BurRec, which is expected to allow it to take up to 133,000 acre feet in any single drought year, or a total of 165,000 acre feet over a three-year period. The district says the water is needed in the dry years, because a severe drought could force rationing by up to 65 percent. With the additional water, those cuts could be reduced to 25 percent.

"Sacramento gets what we've been striving for the last 30 years - protection of the lower American River," says Jim Sequeira, the city's director of utilities. He also notes that the city and county will be able to devote more resources to solving water problems instead of sparring with EBMUD.

There is still a lot of work to be done. The agreement outlines a series of steps and a timetable for working out the final details. If the fine print isn't inked by July 31, 2001, the memorandum expires, and EBMUD would once again be free to try and obtain American River water. In addition, environmental permits have to be obtained by July 31, 2002, and construction is scheduled to begin in 2005. Everyone acknowledges that things could fall apart, but there seem to be plenty of incentives for all sides to work together and get the project done. "It's a big change but a good one," says EBMUD board member Katy Foulkes. Environmentalists also say that the district should try to minimize the amount of water it needs by putting additional emphasis on reclamation and conservation programs. At the meeting however, EBMUD drew rare accolades from a number of environmentalists. Jim Jones, of the Save the American River Association, was one of the parties filing suit against the district in 1972. But on the 23rd he praised the board "for the momentous step you have taken. I know it was a difficult step. Thank you again." **O'B**
8/99, 2/00, 6/00

CALFED

HABITAT SPRAWL FURROWS BROWS

Where some see a restored wetland, others see wanton habitat sprawl. The Farm Bureau Federation sued CALFED agencies last fall to halt all land and water purchases, arguing that plans issued by this state-federal effort to secure water supplies, protect the Delta environment and restore habitat for fish and fowl fail to account for impacts on agriculture. Hearings on the suits kicked off early this year, jumpstarting new dialogues about how much of whose land, and where, should be used to house people, grow food, conserve water and save the ecosystem.

"We think they can restore the environment without taking one million acres of farmland out of production," says the Farm Bureau's David Kranz. "They've already bought thousands acres of land, and there's money in the pipeline to buy more, but there's no real analysis in the CALFED plan of how much land they really need, and no adequate acknowledgement of the environmental impacts on agriculture."

No one seems to know exactly how much farmland already has, or will be, converted to habitat through CALFED. Since 1997, the CALFED Category III grant program for ecosystem restoration has funded and/or approved a total of 35,600 acres in land purchases and easements, not all of which was agricultural. As reported to the U.S. General Accounting Office, between 1997 and 2000 federal agencies acquired about 4,600 acres in conservation easements and 12,000 acres in land purchases, while non-federal entities acquired a total of 4,800 acres. Restoration projects approved in December 2000 add up to another 4,200 acres of conservation easements and 10,000 acres of land.

Zeroing in on the Delta's 487,625-acre-primary zone (which includes land and water), 24,533 acres of fee title acquisitions (12 percent of the total zone) by public agencies and nonprofits have appeared on the local ledgers since January 1993. Acreage in such ownership jumped from 35,291 to 59,824 acres in that time period, according to staff report of the Delta Protection Commission.

Neither of these numbers seem to add up to a big grab for farms and private lands, compared to California's 27.8 million acres of farms, cow pasture and range.

"Most of the land being bought is still being farmed, and will continue to be farmed," says CALFED's new chief Patrick Wright. "If we hadn't bought it, it might have been sold to developers."

Perhaps it's what's planned, more than what's been accomplished, that has farmers worried. According to Kranz, the CALFED documents call for purchasing rights or buying 830,000-871,000

acres for the ecosystem restoration program, and 1.2-1.3 million for multi-species conservation. "So with some overlap, we think that's about a million for us to worry about, or about one eighth of California's irrigated farmland," says Kranz. CALFED says such numbers are overblown. "The number issue is really at the heart of the disagreement," says Dennis O'Bryant of the State Department of Conservation, who worked on the CALFED agricultural land losses mitigation package along with experts from the State Department of Food and Agriculture. "It's nowhere near a million acres, even in the worst, worst case. The range, for farmlands permanently converted to non-agricultural CALFED uses, is 180,000-243,000 acres, and it's unlikely the high end would ever happen." Any land affected by CALFED above and beyond this range will likely retain some or all agricultural values while serving other restoration goals.



In terms of mitigating for permanent losses, CALFED points to the 24 measures listed in its 2000 EIS/EIR. These measures are more general than the kind of eye-for-an-eye, acre-for-acre, mitigation that everyone's used to, largely because so many specifics on what the mitigation is needed for were, and still are, unknown. Mitigation measures now on paper include support for farmer-initiated restoration projects and locally held agricultural conservation easements, and the use of wildlife-friendly farming methods instead of conversion to habitat. Measures also place a priority on restoring degraded public lands, or public lands with remaining potential for wildlife habitat development, first, before setting foot on any cropland.

"If the program in the next 2-3 years starts to ramp up on acquisitions, it won't be effective unless we stick to our principles of easements and public lands first," says CALFED's Wright.

"If it's a choice between restoring underused grazing land and prime farmland, CALFED would try to always take the former first," says O'Bryant. "They can't fully mitigate, but this is better than anything else yet on paper."

Though CALFED is quick to argue that it's acquiring land from those who want to sell it, according to Kranz, willing sellers can be made. "It's analogous to urban sprawl. If my neighbors don't like to see the tractor out there, or the dust I stir up, or the noise I make, and they complain enough, eventually I won't want to fight them anymore, I'll become a willing seller. The same is true for being next to a wildlife refuge. Once creatures wander across the road enough, agencies will begin imposing restrictions on their neighbors, and they'll get more willing sellers, especially if they buy up enough land in concentrated areas," he says.

Of course buying up farms isn't the only way to accomplish restoration goals. Everyone seems to agree on a partnership approach whenever possible, where farmers and conservationists work together to create and maintain habitat.

BURNING ISSUE

TRINITY TO RETURN?

A bitter feud between remote, sparsely populated Trinity County and the nation's largest irrigation district intensified this winter when the U.S. Interior Department released its long-overdue plan to restore fisheries to the mainstem of the Trinity River. For nearly forty years, more than three-quarters of the Klamath River tributary's flow has been diverted to the Central Valley Project, decimating its fish populations and violating the federally protected fisheries rights of the Hoopa and Yurok Indian Tribes.

Trinity County launched the first volley back in 1998 when it moved to restore some of the diverted flows by asking the State Board to declare that CVP deliveries to Westlands Water District constituted a "wasteful and unreasonable use" of water, in violation of the state constitution. The county argued that irrigating Westland's selenium-laden soils created toxic runoff and damaged the Bay-Delta ecosystem.

In 1999 the board rejected the county's argument, but Interior's new plan would achieve many of the same ends. The plan — which is mandated by several federal laws, including the Central Valley Project Improvement Act — establishes a new instream flow regime that provides for flow volume releases according to hydrologic year type. It would nearly double the river's minimum flow and cut flow to the CVP by approximately one-third, to an average of 52 percent of the rivers flow.

In addition to restoring flows, the plan would also provide for channel rehabilitation of 47 sites, sediment management and gravel placement, bridge replacement and infrastructure modification to accommodate higher flows, watershed restoration and adaptive management.

The new flow regime will begin in April, unless legal challenges delay it. Westlands, Sacramento Municipal Utilities District and the Northern California Power Agency have all filed suit, claiming that required environmental reviews were flawed and that the plan would damage water quality and harm listed species in the Delta, and cut the CVP's power generating capacity. While acknowledging that "no document is perfect," Trinity County's Tom Stokely says he believes the environmental reviews are sound. "The real issue is whether the judge views this as simply a NEPA case or takes into account protection of tribal fishing rights." Contact: Tom Stokely (530) 628-5949. **CH 12/98**



CALFED CONTINUED

Dozens of existing programs already promote such partnerships through resource conservation districts, joint ventures, duck clubs and the like.

"As long as our restoration projects are viewed as either ecological, on the one side, or agricultural, on the other, there won't be success," says Wright. "Seeing the multiple benefits in every project is the ticket to making this work."

"As we move forward with CALFED implementation, I see greater opportunities for partnerships with agriculture," says State Food & Ag's Steve Shaffer, who is also on CALFED's selection committee for restoration projects. Shaffer notes that the governor's current budget for CALFED programs would fund five new positions in his department: one will make sure "there's a voice for production agriculture at the inter-agency policy level" he says, and one will assist with environmental analysis and mitigation for specific projects affecting agriculture. (The three others will be technical support staff skilled in water efficiency, wildlife-friendly farming and watersheds.)

"The Farm Bureau has a right to have concerns about the cumulative and redirected impacts on agriculture," says Shaffer, "But there'll be a

chance to address them during CALFED implementation. The devil is in the details."

"I think the agricultural community has a tremendous opportunity with CALFED to protect thousands of acres of farmland forever, through the restoration program, through mitigation, and through beefing up many existing agricultural preservation programs," says Tim Ramirez of the office of the State Secretary for Resources. "We know we need to spell these details out more clearly, and we will."

Details may not provide what water war veterans say the Farm Bureau Federation is really after with its lawsuit: more water for ag than is currently in the CALFED package. Insiders say faced with less water than they were looking for, environmental impacts on farmland, which must be considered under CEQA and NEPA, are as good a lever as any for the Farm Bureau to grab.

"Nobody expects there to be much dam building, we know it won't fly," says Kranz. "But we're only just getting by, after six straight wet years. If we get five dry ones, along with 21 million new souls, we'll be in a world of hurt."

The hurt for ag land, at least to the naked eye, has as much to do with urban as habitat sprawl. According to the state's Farmland Mapping and Monitoring program, the amount of agricultural land converted to urban uses since 1984 is about the equivalent of a city the size of Fresno (312,306 acres, or 40,170 acres per year), while conversion to "Other" uses (a category that includes not only wildlife habitat, but also new ranchettes, feedlots, mines and land left idle for six years) is not even in the same ballpark, according to O'Bryant. More recent mapping zeroing in on irrigated farmland, in particular, shows that 21,664 acres were converted to urban uses between 1996 to 1998 in California, while conversion to the "other uses" category totaled 18,809 acres. One-third of this amount was due to the idling of farmlands, either in anticipation of development into urban uses or for reasons concerning the market, water supply or salinity.

With all this urban conversion going on, not to mention substantial acquisitions for habitat restoration, it's no wonder the Farm Bureau is concerned about whether all the agencies have any idea how much land is being moved around, and for what.

"The lawsuit reflects the frustration farming interests have about not being heard during CALFED's planning process, more than the merits of the suit itself," says Wright. "We hope to change that by encouraging the development of regional forums where local interests can play a more active role in shaping the program."

One of those regional forums may be the Delta Protection Commission, part of the CALFED family. "As CALFED shifts into implementation gear, it needs to commit to a better monitoring strategy for cumulative impacts to agriculture," says the Commission's Margit Aramburu. "We need to identify exactly what is the baseline, what are the impacts, what the need is for mitigation, and how to match that with some kind of ag land protection program for the Delta. It's time to move this onto the front burner." Contact: CALFED (916) 654-1334; David Kranz (916) 561-5550; Dennis O'Bryant (916) 322-5954 or Steve Shaffer (916) 654-1765 **ARO 2/98**

SPECIESPOT

SAVINGS ACCOUNT FOR FISH

This winter, the federal and state agencies responsible for protecting wildlife took on a new role — water manager — as CALFED's Environmental Water Account became operational.

In January, the agencies that manage the account — Cal Fish & Game, U.S. Fish & Wildlife and the National Marine Fisheries Service — provided commitments assuring water users that the EWA would provide any water needed to protect fish above the baseline levels required by the biological opinions on endangered Delta smelt and winter-run chinook, the 1995 Delta Water Quality Control Plan and the Central Valley Project Improvement Act. When the fishery agencies determine that the baseline is not sufficient to protect fish, they can require that pumping at the state and federal water projects be slowed or halted, and deliver EWA water instead. Later in the same month, when monitoring showed large numbers of salmon migrating through the Delta, the agencies did just that, curtailing pumping at the State Water project for about a week and spending between 60,000 and 80,000 acre-feet of EWA water, according to the State Water Resource's Dave Fullerton.

By the end of January, the EWA had reached agreements to purchase more than 100,000 acre-feet of water from various water districts around the state. The account is authorized to purchase approximately 385,000 acre-feet per year. In addition, the account has entered into a source shifting agreement with Southern California's Metropolitan Water District whereby MWD agrees to delay taking some of its State Water Project allotment.

"So far, so good," says Fullerton, "we're buying water and we're saving fish. The main problem we see is that not knowing how the hydrology is going to go makes it hard to know how to spend the water."

That hydrological uncertainty may be the fly in the ointment, says the Bay Institute's Christina Swanson. "It's too early to tell how well the account will work if things get serious and the need for fish protection actions interferes with the need of the projects to pump," she says, adding that it is still unclear whether EWA actions will be enough to promote fish population recovery rather than merely prevent losses. Meanwhile, the state's Legislative Analyst's Office has issued a report suggesting that implementation of the EWA is premature in light of policy and management issues that remain unresolved. Contact: Dave Fullerton (916) 653-4539 **CH**

PLACES TO GO & THINGS TO DO



WORKSHOPS & SEMINARS

MAR
THUR - SUN
1
THRU
4

SALMONID RESTORATION CONFERENCE

Topic: workshops and panel discussions focused on improving the effectiveness of California's salmonid restoration efforts.

Sponsor: Salmonid Restoration Fed.
Location: Chico
(707) 268-8182 or srf@northcoastweb.com

MAR
THUR
8

STORMWATER CONFERENCE

Topic: New Challenges for Bay Area Stormwater: TMDLs and Development Standards

Sponsor: Assoc. of Bay Area Gov.
Location: Oakland
(510) 464-7977

MAR
MON - THUR
12
THRU
15

RIPARIAN HABITAT AND FLOODPLAINS CONFERENCE

Topic: Integrating California riparian and floodplain restoration, research, conservation, partnerships, education, policy and biota.

Sponsor: The Wildlife Society, Riparian Habitat Joint Venture
Location: Sacramento
tina_chouinard@fws.gov

MAR
THUR
15

EXECUTIVE BRIEFING; NEW LEADERS AND NEW CHALLENGES

Topics: The new federal administration, implementation of the CALFED Bay-Delta plan and the Colorado River/Mexican Delta.

Sponsor: Water Education Foundation
(916)444-6240 or www.water-ed.org

MAR
TUE
27

AGRICULTURAL DRAINAGE CONFERENCE

Topic: Beyond the Drain: Sustaining Agriculture and Improving Water Quality in California's San Joaquin Valley.

Sponsors: S.F. Estuary Project, others.
8:30 AM — 4:30 PM
Location: Sacramento
(510) 622-2465

MAR
THUR
29

CAL. WATERSHEDS CONF. 2001

Topic: The Challenge of Collaborative Management. Conference highlights, compares, and evaluates various efforts statewide to manage watersheds using collaborative stakeholder processes.

8:30 AM — 4:30 PM
Cost: \$225
Sponsor: U.C. Davis, others.
Location: Sacramento
(530) 757-8878 or lunrinfo@unexmail.ucdavis.edu

MAR
THUR
29

LAND USE AND WATER SUMMIT

Topic: The impact of local land use decisions on flood protection and water quality in the Santa Clara Valley.

9:00 AM — 1:00 PM
Sponsor: Santa Clara Valley Water District
Location: TBA
(408) 265-2600 ext. 2200 or pubinfo@scvwd.dst.ca.us

APR
THUR - FRI
19
THRU
20

HABITAT RESTORATION WORKSHOP

Cost: \$240
Sponsor: U.C. Davis Extension
Location: Sacramento
(800) 752-0881



MEETINGS & HEARINGS

MAR
WED
7

SAN PABLO WATERSHED NEIGHBORS EDUCATION AND RESTORATION SOCIETY

Topic: How to identify and survey local frog populations in order to determine habitat and environmental problems.

7:00 — 9:00 PM
Location: El Sobrante
Sponsor: Contra Costa Co., City of San Pablo (510) 231-5704

MAR
FRI
9

REGIONAL MONITORING PROGRAM FOR TRACE SUBSTANCES

Topics: Fish Contaminations Study Results and Implications; Air as a Contaminant Transport Pathway; PCBs in the Estuary Food Web.

Sponsor: S.F. Estuary Institute
Location: Oakland
(510) 231-9429 or linda@sfci.org

APR
TUES
10

LAKE MERRITT INSTITUTE

Topic: Status of Lake Merritt Projects — Wetlands, Walls, Docks and the Master Plan.

7:30 PM
Location: Oakland
Imi@netwiz.net or www.lakemerrittinstitute.org



HANDS ON

APR
TUES - FRI
24
THRU
27

WETLAND RESTORATION COURSE

Topic: Wetland Restoration: Practical Design and Application

Cost: \$550
Sponsor: The Restoration Trust
Location: Richmond
(510) 596-2690 or carissaw@zentner.com

NOW IN PRINT & ON LINE

Atmospheric Nitrogen Flux From the Watersheds of Major Estuaries of the United States: An Application of the SPARROW Watershed Model
USGS
water.usgs.gov/nawqa/sparrow/coast/agu_sparrow.html

California Delta Chambers and Visitors Bureau
www.californiadelta.org

California's Wetlands: A Briefing
Water Education Foundation
Copies from (916)444-6240 or www.water-ed.org

Conserve Water Educators' Guide and Conserve Water Student Booklet
Water Education Foundation
Copies from (916)444-6240 or www.water-ed.org

Creek & Watershed Map of Oakland & Berkeley, Third Edition
Copies from www.museumca.org/creeks/oakmap.html

Critical Water Shortage Contingency Plan
Governor's Advisory Drought Planning Panel
http://www.dwr.water.ca.gov/dir-Drought_Panel/Default.html

Daylighting: New Life for Buried Streams
Rocky Mountain Institute
Copies from: 800-333-5903 or www.rmi.org/sitepages/pid172.asp

Forecasting Selenium Discharges to the San Francisco Bay-Delta Estuary: Ecological Effects of a Proposed San Luis Drain Extension
U.S. Geological Survey, Open File report 00-416
Available from (303)202-4200

Grasslands Bypass Project EIS/EIR
Prepared by URS for BurRec & San Luis Delta Mendota Water Authority
Available from (559)487-5039

On Tap: California Water Market Information
CALFED
<http://ontap.ca.gov>

The Potential Consequences of Climate Variability and Change for the Water Resources of the US
Pacific Institute for Studies in Development
Copies from (510) 251-1600 or www.pacinst.org/naw.html

Putting the Pieces Together: State Nonpoint Source Enforceable Mechanisms in Context
Environmental Law Institute
www.eli.org

Record of Decision & Final Central Valley Project Improvement Act Programmatic EIS
U.S. Fish & Wildlife
<http://pacific.fws.gov/news/2001-10.htm>

Water Conditions Update
California Department of Water Resources
<http://cdec.water.ca.gov/cgj-progs/current/EXECSUM>

Watershed Ecological Risk Assessment (training module)
EPA Watershed Academy
www.epa.gov/owow/watershed/wacademy/acad2000/ecorisk

BULLETIN BOARD CONTINUED

A SEARCHABLE ONLINE DATABASE of California's water-related educational resources and programs, volunteer opportunities and internship possibilities is scheduled to be up and running in March. The Coastal Commission is seeking information on organizations and programs to include in the 2001 Coastal, Marine and Watershed Resources Directory. Interested organizations can complete a survey at www.coastal.ca.gov/publiced/directory/dirndx.html

Contact: Sarah Borchelt (415) 597-5888 or sborchelt@coastal.ca.gov

THE STALEMATE OVER WATER HYACINTH spraying is still going on and the weeds are winning. Last March DeltaKeeper sued the state's Department of Boating & Waterways, saying it needed a permit and a hearing to continue its 16-year-old war against this waterway-clogging South American plant, and also that it should reexamine the merits of mechanical controls. Boating & Waterways followed up on the lawsuit this October, applying for a permit (NPDES) to spray herbicides from the Central Valley Board, who promptly tabled it. To keep things rolling — they've got to be able to spray by late spring — Boating & Waterways appealed the permit issue up to the State Water Resources Control Board.

The appeal is scheduled to heard on March 7. In the meantime, a judge denied DeltaKeeper's request for a summary judgement, and dismissed its complaint this January, lobbing the ball squarely back in the water board's court. (916)263-0780

THE DISCOVERY OF HALF A DOZEN ENDANGERED RED-LEGGED FROGS in a freeway cloverleaf near Hercules has stopped construction of a luxury hotel in its tracks—for now. The frogs were found in a small perennial wetland created by the discharge of a culvert between two freeways (possibly a man-made rerouting of a branch of Refugio Creek). According to Fish & Wildlife's Don Hankins, the developer must develop a mitigation plan, but the future for the frogs doesn't look good, with sprawl taking place throughout the area, including upstream, where there is a breeding population. The developer has proposed moving the frogs to another site or performing unspecified offsite mitigation. A golf course here, a luxury hotel there, the net result is that the frogs always lose, says Jeff Miller with the Center for Biological Diversity. "To say we can always deal with the frogs by moving them — that's a horrible precedent," says Miller.

EXPANSION AND REPAIR OF A LEAKY, RUSTED PIPELINE carrying treated sewage from the Livermore-Amador Valley to the Bay will go

forward with the understanding that cities served by the Valley's Wastewater Management Agency — Pleasanton, Dublin, Livermore, and part of San Ramon — come up with a Habitat Conservation Plan that would set aside critical habitat for the red-legged frog, the Alameda whipsnake and the San Joaquin kit fox. Concerns about the project's impacts were raised when regulators reviewed the project's CEQA documents, and found that one purpose of the pipe was to accommodate planned growth. To make sure new development doesn't take place at the expense of endangered species, Fish and Wildlife suggested that the cities prepare an HCP. The wastewater agency has committed \$245,000 toward the HCP, although it contends that it could choose to ignore Fish and Wildlife's request for an HCP, since it has changed its original plan, which would have affected salt marsh harvest mouse habitat.

LOAN AND GRANT FUNDING FOR LOCAL STUDIES, PROGRAMS AND PROJECTS that will enhance water supply reliability and increase the beneficial use of existing supplies is now available through CALFED and Proposition 13. Applications are available online at www.dwr.water.ca.gov/grants-loans/default.html



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