YOUR INDEPENDENT SOURCE FOR BAY-DELTA NEWS & VIEWS

ESTUARY

ESTUARY WATER QUALITY RESEARCH WILL SUFFER under President Bush,s proposed budget, which cuts $10 million from the USGS Toxic Substances Hydrology Program. S.F. Bay is the primary estuarine site studied within the program; the budget cuts will virtually eliminate new research dealing with biogeochemical and contaminant transport processes in the Bay, according to the Survey,s Kathy Kuivila. Upstream, the National Water Quality Assessment Program, which studies the Sacramento and San Joaquin rivers, also faces cuts of approximately $20 million under the president,s budget.

AUCTION JUNKIES can now simultaneously indulge their habit and help the nation,s estuaries. In early May, eBay.com began hosting an online charitable auction benefiting the 28 National Estuary Programs (Including the S.F. Estuary Project) and their Association of National Estuary Programs. Together, the NEPs and ANEP provide local and national efforts to restore estuaries, bays and lagoons. Items donated so far include boat rides, fishing trips, whale watching trips, ski vacations and bed and breakfast weekends. To participate, visit eBay.com and search "ANEP" or click on the blue "Charity" icon. To donate an item or service, contact Dawn Volk, at (703) 333-6150 or drvolk@erols.com.

THE AGENCY THAT REGULATES DEVELOPMENT ALONG CALIFORNIA'S COAST — and protects coastal mountain ranges and wetlands — may be forced to change its structure or even shut down following an April court ruling. A Superior Court judge declared that the make up of the California Coastal Commission — under which two thirds of the members are appointed by the legislature and can be removed at any time — is unconstitutional because it conflicts with the commission,s role as an executive agency. The commission is appealing the decision.

THE PLAN TO TURN TWO DELTA TRACTS into reservoirs is headed for court. San Joaquin County and the Central Delta Water Agency filed suit in March to block the Delta Wetlands project, which would store approximately 800,000 acre-feet of water on two islands while turning two more into wildlife sanctuaries. The plaintiffs, who claim the project could harm water quality and levees, and subject nearby farmland to seepage, challenged the adequacy of Delta Wetlands environmental review.

Big Winter Run Trips EWA

In the wake of this spring's large salmon kills at the State Water Project pumps -- which lead to news headlines proclaiming the abject failure of a new water account meant to protect fish -- CALFED agencies are searching for an explanation.

Approximately 20,000 juvenile endangered winter-run salmon died at the state pumps this spring, far exceeding the 7,404 "red light" limit established for this year by the National Marine Fisheries Service under the Endangered Species Act. The large "take" occurred during the first months of operation of the Environmental Water Account, created by CALFED, the state-federal effort to restore the Delta environment while ensuring water supplies for cities and farms. The account is meant to allow fisheries agencies to reduce water project diversions from the Delta during fish migration periods, replacing curtailed diversions with account reserves set aside in the San Luis Reservoir. Despite the losses EWA managers say the take may have been more of a public relations disaster than an environmental one.

"The salmon densities just kept going up and up and up. After a certain point we couldn't justify spending more water."

"The notion that the EWA resulted in the killing of these fish is a serious misconception," says Jim White of Cal Fish and Game, one of the agencies responsible for determining when and how EWA water is used. "The use of the EWA greatly reduced the number of fish that were lost from what it otherwise would have been."

According to White and others, the crux of the issue is that there were simply many, many more winter-run in the system this year during the crucial period from February to April than anyone had anticipated "None of the monitoring data that we saw suggested that this large number of fish would show up — it looked like an average year," says the Department of Water Resources' Curtis Creel.

The result, says CALFED's Dave Fullerton, is that EWA water budgeted for salmon migration was spent before the unexpectedly high numbers of salmon appeared at the pumps. "When the fish started to come down the river we thought 'here they come,' then spent a fair amount of water," he says. "Then all of a sudden the densities [number of salmon per acre-foot of water pumped] just kept going up and up and up. After a certain point we couldn't justify spending more water." The EWA is authorized to purchase 380,000 acre-feet/year and the agencies felt they had to retain some water in the account to aid other species, such as Delta smelt, later in the year, says Fullerton.

If in fact the agencies grossly underestimated the number of winter-run in the system this year, it's not only good news for the Estuary's most endangered salmon run, it also means that the red-light number (which requires water managers to resume consultations with fisheries agencies, not necessarily to stop pumping) may also have been much too low. "If this is what happened then the high take is totally understandable," says Fullerton. "Of course you are going to have higher losses if you are awash in winter-run." The red-light number is supposed to represent two percent of the young fish entering the system in a given year, calculated from an estimate of spawning adult salmon and other factors. If, as some data indicate, the actual number of winter run salmon spawning last year was in the range of 5-10 times the official estimate, then the actual number of juvenile fish produced would have been proportionately higher. In that case the true red-light number for this year would have been between about 35,000 and 70,000, substantially more

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BUREAUCRACY

YUBA DECISION DELAYED

The conflict between the state's unrelenting demand for power and its threatened fish seemed to reach a head this past March when the State Water Resources Control Board adopted its final decision on Yuba River waters rights. Although the decision would have increased flows for fish, particularly in dry years, the Board postponed implementation until April 21, 2006, citing the need to "provide flexibility during the current power crisis." The Yuba powers several hydroelectric dams.

The controversial decision was a long time in the making. Although Cal Fish & Game had prepared a fisheries management plan for the Yuba River in 1991, the state board had taken no real action on it until the South Yuba River Citizens' League threatened to sue. In the meantime, spring-run chinook were listed as a federal and state threatened species, and steelhead were added to the federal threatened list. In November 2000, the state board finally issued a draft decision. While enviros felt it was too weak to help fish, local water agencies claimed it would harm farmers, flood control, and hydropower, and began a campaign of intense opposition, filing suit when the final decision was released in

March. While the the Yuba County Water Agency says the five-year delay is a "step in the right direction," it also claims that after five years, the decision will be disastrous for water supply, water transfers, and power production.

Enviros aren't pleased with the decision—and question the real reason for delay. "All in all, the decision is a great disappointment," says Larry Sanders with the citizens' league. "It lowered the minimum flows even further from those recommended by the experts and provides no temperature criteria whatsoever." Sanders says the result will be flow fluctuations that will cause salmon and steelhead nests to dry out. And, according to the league, increased flows for fish will not decrease power production but will actually have the opposite effect. "Every drop of water in the Yuba (except during floods) goes through at least one, and often two, power plants," explains Sanders. "So increased fish flows actually result in more energy produced." Sanders says the real issue is not power but water sales. "The fish need higher flows in the spring and fall, while demand for water is highest in the summer," says Sanders. "The water agency simply does not want to put water in the river when they can't sell it. This summer they intend to raise flows to well above recommended levels (which may actually harm the fishery) in order to facilitate water sales."

The fight for more—or less—water for fish and other users is far from over. Over 11 groups have filed petitions for reconsideration, which have been rejected by the state board, setting off a 30-day window for the parties to file suit. Although both water agencies and environmental groups are talking about filing more lawsuits, they are also beginning to sit down to try to negotiate a decision that everyone can live with. **LOV**

BULLETINBOARD

AN INVESTIGATION OF RESTORATION MODELS nationwide, conducted by Save the Bay and published this spring, suggests 12 key elements that CALFED should embrace in formalizing the Bay-Delta's ecosystem restoration program. Watchdogs at Save the Bay saw that CALFED is yet to fill in the details of how its restoration program will work, who will have authority and when, and how vague or clear any legislative mandates necessary to begin implementing the program should be. So Save the Bay launched a study of lessons learned from other large scale restoration programs in the Everglades, the Columbia River Basin, the Upper Colorado River, the Great Lakes, Chesapeake Bay, and the Delaware River Basin. The resulting 60-page booklet, entitled *Putting it Back Together: Making Ecosystem Restoration Work*, provides lots of good lessons for CALFED, says Save the Bay's David Lewis (see *Now in Print*). (510)452-9261

THE LONG-AWAITED PLAN to dispose of irrigation drain water from Westlands Water District will apparently be another four years coming. In April, BurRec filed court papers saying the agency would begin an evaluation of "viable drainage alternatives," with a record of decision expected by 2005. Among the alternatives the bureau will consider are the completion of the controverisal San Luis Drain — which would dump highly saline, selenium-tainted water into the Delta — and a series of evaporation ponds. The bureau has been under a court order since September to come up with a disposal plan.

S.F. BAYKEEPER SUED state water quality regulators this spring, charging that state-issued urban runoff permits for Contra Costa and San Mateo counties are not adequate to protect Bay water quality. In its suit, BayKeeper charged that the two permits, which govern urban runoff for 36 towns and cities in the two counties, lacked minimum requirements mandated by the federal Clean Water Act. Deficiencies included a failure to contain specific monitoring provisions; failure to prohibit new sources of pollutants that already impair Bay water quality; and failure to achieve water quality standards, among others. Many Bay Area scientists have documented that urban runoff contributes to water quality violations. A study conducted by the San Francisco Estuary Institute in September, 2000 estimates that runoff contributes 35% to 95% of all cadmium, chromium, copper, nickel and zinc discharged into the Bay, even after including discharges from industrial facilities, atmospheric deposition and releases from dredged material disposal. Contact: Jonathan Kaplan (415) 235-9803

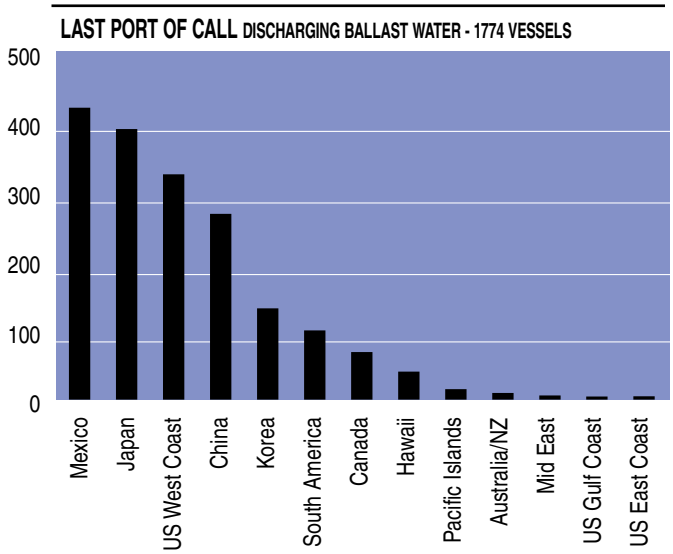
INVASIONS

BALLAST WATER CHECK UPS

Ninety percent of vessels entering California ports complied with the state's new ballast water management laws, according to an annual review. The new state law, which went into effect January 2000, requires ships to conduct a mid-ocean exchange of ballast water before entering a California port, or else to keep their ballast on board, in order to prevent invasions of clams, worms and other aquatic troublemakers into California waters. Vessels must also fill out the right paperwork and pay a $400 per voyage fee to support the state's new 4-year, $6.7 million dollar compliance program.

"The shipping industry is really supportive and proactive now, a big change from the anger and frustration we were seeing back in 1999," says Maurya Falkner of the State Lands Commission, which is in charge of compliance. She says some shippers are even picking up ballast water after leaving, rather than while within, Asian ports, and cleaning tanks and chains more often.

According to the annual review, ships discharged a total of 7.8 million metric tons of ballast water in California ports in 2000 (3.7 million came from bulk ships, 2.4 from container ships, and 1.1 million from tankers).



Two field offices succeeded in inspecting 26% of all visiting vessels. North coast inspectors discovered a total of 83 violations out of 330 inspections, 71 of which were paperwork related and 12 of which were exchange violations. South coast inspectors tallied 200 violations out of 1,400 inspections, also almost all problems with paperwork. The Bay-Delta level of compliance ranged from highs of 90% in Stockton and 89% in Richmond to a low of 72% in Redwood City.

One hole in the rosy picture is the cruise trade to Mexico, because most ships cruising the coast between Mexico and California don't travel far enough out to conduct what qualifies as a mid-ocean exchange (200 miles offshore). A group of affected cruise line companies has failed to meet California's deadline for researching an adequate alternative exchange site, possibly just 60 miles offshore near Baja, "It's ten months late, so we'll be moving forward with enforcement actions soon," says Falkner.

Hope may lie with an on-board water treatment system to be installed on Princess Cruise's *Regal Sea Princess* this June and sent out for test voyages, accompanied by state biologists, this fall. The treatment system

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RESOURCE REVIEW

BAY SPECIES IN A NUTSHELL

Did you know that one Bay species of harvest mouse can drink salt water? Or that a male threespine stickleback tears apart his nest of eggs just before they hatch to increase their survival? Or that beetles live in the Bay's salt ponds and snowy plovers eat inchworm moths?

These are only a few of the details readers will find in the newly published *Baylands Ecosystem Species and Community Profiles* – a 400-page companion document to the Habitat Goals report released last year. This one-of-a-kind local reference book on the plants, fish, insects, amphibians, birds and mammals that live in the Baylands profiles 94 species, from river otters to ruddy ducks, from brine flies to mudsuckers, giving information about their reproductive habits, growth and development, food, distribution in the region (maps), population status and habitat needs, among other things.

"No other document has all these species in one place," says native plant expert Phyllis Faber, one of 52 local scientists who wrote the profiles. "The Goals report provides a sense of place about our wetlands, their history and restoration. The Profiles report fills in the details of the picture, providing the facts, not just romantic ideas, about how our ecosystem works and who lives in it. Every library in California should have two copies."

The report is one of the first comprehensive, S.F. Bay-region-specific, technical works on this subject written by locally recognized experts. "Regional information is often hidden in scientific reports," says waterfowl expert John Takekawa, also a contributor. "This report summarizes many sources of information, including some that are unpublished or not readily available, making it an invaluable guide to the Estuary." For the layperson or student or reporter, it is a fast, close up view of local wildlife. For the expert, it's helpful as a link to species outside their own fields, and as a reference list for original research. For the planner, it provides distribution maps and habitat information for species that may be present in shoreline developments.

The S.F. Regional Board's Peggy Olofson, who edited the report, says it is full of special things. Among her personal favorites are: complete localized histories of plant communities in salt marshes, diked baylands, salt ponds etc; details on proximal species (predator/prey/competitors/hosts); fifteen chapters on bugs; and unique web diagrams of organisms associated with various habitats.

"These two documents provide a future model for the Bay ecosystem as a whole, a new paradigm based on a vision of restoration and species recovery to replace the old one of degradation and decline," sums up contributor and bird expert Jules Evens. Contact: Peggy Olofson (510) 622-2402 **ARO**

BALLAST CONTINUED

improves on a previous test conducted on the *Regal Sea Princess* last year, and basically creates a cyclone in the ballast water so the heavier organisms separate out, and then uses ultra violet light to neutralize the remaining smaller particles. Princess Cruises hopes to retrofit all its vessels once these tests are complete. Matson Navigation Corporation, meanwhile, is conducting a similar retrofit and test on a container vessel.

Since the state is already monitoring discharges of foreign waters, the Port of Oakland has been looking into more local origins. According to the Port's Jody Zaitlin, monitoring indicates that 10-15% of ships calling at the port in 2000 discharged ballast water taken on in foreign ports, and 8% discharged water picked up on the West Coast — 95% of which came from Long Beach or Los Angeles. (There may be some overlap between foreign and coastal data sets).

In related news, insufficient attention to potential ballast water introductions of non-natives in two Port of Oakland improvement projects was the reason S.F. BayKeeper and the Center for Marine Conservation sued three federal agencies early this year. They brought the suit against the Army Corps, U.S. Fish & Wildlife and the National Marine Fisheries Service more than a year after these agencies signed off on the two port projects. This spring, the Port of Oakland filed a motion to intervene in the suit, saying they wanted to be part of any discussions and dispute resolution, according to Zaitlin.

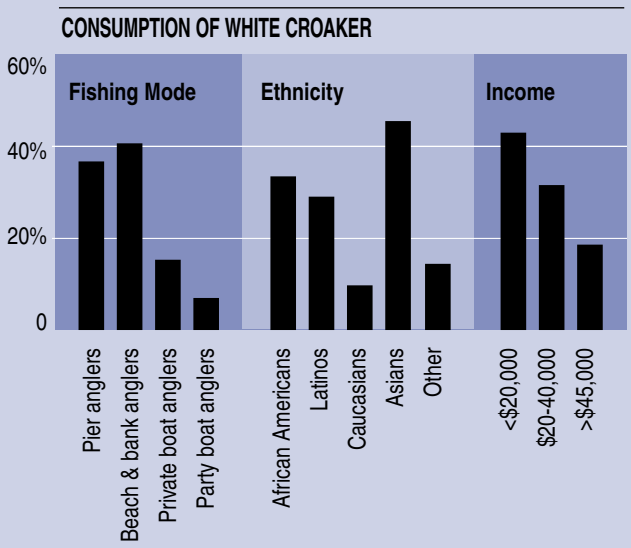
Ballast water management is now mandatory in Washington and California, with Oregon and Hawaii considering getting into the mix — uniform standards for the entire West Coast would make things easier for the shipping lines. On the federal level, meanwhile, the U.S. Coast Guard released public input requests this May on four approaches to setting ballast water treatment standards and ways to provide incentives for treatment. Contact: Maurya Falkner (562)499- 6312 or for federal initiatives (202)366-9329 or http://dms.dot.gov. **ARO**

THE MONITOR

ANGLERS AT RISK

Interviewers for a survey of seafood consumption published this March stood on public piers, beaches and boat ramps and, in five languages, asked 1,300 anglers how much Bay fish they ate. They showed them pictures of 16 different types of fish and shellfish, queried them about cooking methods, ethnicity, income, education and households, even pulled out a plastic model of an eight ounce fish fillet to help them estimate meal size. What they found was about one in ten anglers was eating more Bay fish than was good for them and more than a third had never heard or seen warnings regarding the consumption of Bay fish.

"It's kind of depressing to see no measurable increase in awareness since the last study was conducted by Save the Bay in 1995," says state Department of Health Service's Alyce Ujihara.



In 1994, state health officials issued an advisory recommending that individuals limit their Bay fish consumption due to high levels of mercury and PCBs in the fish. The survey, undertaken by Health Services and the S.F. Estuary Institute, sought to identify anglers who are at risk due to their consumption habits, as well as to characterize the fishing population and provide information for education (see *Now In Print*).

"It surprised me that so few were eating above the advisory, what with all the anecdotal evidence we had of a large poor welfare population subsisting on Bay fish," says the Institute's Rainer Hoenecke. "What also jumped out was that people with higher incomes and education were eating just as much Bay fish as people without." (See graph). Ujihara says that comparable numbers of people at both income extremes were eating above the advisory – perhaps the well-to-do have more leisure time to fish.

The survey suggests that cultural factors have more to do with risk than other factors. Asians (particularly Filipinos) and African Americans were most at risk, being more likely than other ethnic groups to eat above the limit and to eat white croaker, the most contaminated species. More Asian anglers also ate fish skins and cooking juices, or raw fish, practices which increase contaminant exposure.

The next challenge, says Ujihara, is to find better ways to educate these at-risk groups, probably more through their communities than signs on fishing piers. "If someone they trust from their own community gives them advice, it's more believable," she says. "Our message needs to not only be literally, but also culturally, translated in terms of what to do with Bay fish."

Ujihara is also worried about the "disconnect" between the men who fish and see the advisory signs and the women at home cooking, eating and serving the fish to their children (new national advisories for pregnant and nursing women and young children were released by the EPA and FDA early in 2001; current Bay advisories are even more restrictive). According to the survey, 45-50% of anglers had women of childbearing age in the household who ate fish.

More state money for more seafood consumption education is now being championed by Assemblywoman Dion Aroner. Ujihara says only half the known fishing sites around the Bay have warning signs. "People have a right to know and make choices. We need to work on how to make our message more specific and useful," she says. Contact: Alyce Ujihara (510)622-4500. See also www.sfei.org and www.epa.gov/ost/fish. **ARO**

LAW

EAGLE EYE ON PONDS

John Eft has a message for any landowners who think a recent Supreme Court ruling on isolated wetlands means they no longer need to consult the Army Corps of Engineers before filling ponds and puddles on their property: Think again.

In January the Court ruled that the Corps could no longer use the "Migratory Bird Rule" to extend its regulation over "waters of the United States" to include isolated, nonnavigable, intrastate ponds. Under the bird rule, the Corps had asserted that through the Clean Water Act, which is based on the Interstate Commerce Clause of the U.S. Constitution, it had jurisdiction over ponds that are used — or could be used — by migratory birds that cross state lines in their travels. The Court held that such use alone does not provide sufficient grounds for federal jurisdiction.

The ruling created more questions than it answered, say attorneys. Chief among these is "whether the court was setting forth a broad rule that applies to all nonnavigable waters or does it apply only to isolated waters," according to the Environmental Protection Agency's Hugh Barroll. EPA has issued a legal interpretation memo (also signed by Corps attorneys), which relies on the narrower reading of the court's ruling. Under this interpretation, the Corps continues to have jurisdiction over wetlands that ultimately drain into tributaries of navigable waterways, and waters that appear to be isolated are to be scrutinized more carefully before jurisdiction is determined.

Lawyers say that although the Corps has used the bird rule since 1986 to regulate the filling of wetlands, it is only one type of connection to interstate commerce that could provide a foundation for federal jurisdiction. "Since we can no longer rely on the bird rule to determine jurisdiction, we are again looking at the criteria we used before," says Eft. Such criteria include whether or not the water in question is a tributary of a navigable waterway or adjacent to such a waterway or tributary — which of course raises questions about how to define "tributary" and "adjacent." For example, the Corps defines a tributary as an identifiable stream, with a bed and a bank, so swale systems would not be covered despite the fact that they may drain into tributaries during storms. However, says Eft, the question of whether small streams that drain into storm drains are really creeks, and therefore subject to jurisdiction, is an open one.

The court did not address several other provisions of the bird rule, including one that gives the Corp jurisdiction over waters that are or could be used as habitat for endangered species. According to Eft, "reasonable people could differ on what the court meant," regarding this provision.

The interpretation memo is currently the only official guidance on the court's ruling. According to Barroll, the Corps is considering developing formal "programmatic guidance" that would clarify some of the issues raised by the decision. However, he also notes that "there is some question as to whether the new administration will even want to develop such guidance." In the meantime, the issues will be decided on a case-by-case basis.

Eft says that in California's Region 9 at least, one result of the decision has been that the Corps is coordinating more closely with EPA than in the past. "We are letting them look at marginal cases, and holding regular meetings to make sure that our approaches are consistent," he says. Overall, he emphasizes that the agencies are keeping a sharp eye on waters that may be affected by the decision. "We want to dispel any feeling on the part of landowners that they do not need to talk to us before they fill."

Contact: John Eft (415) 977-8646 **CH**

DETOX

SMALL STREAMS BIG ON CLEANUP

Creek advocates have argued for years that putting even the tiniest creek underground is a bad idea. Now there is new science to back up their voices. A National Science Foundation study just published in the journal *Science* reports that small streams do more than their fair share of work when it comes to filtering pollutants.

Researchers found that small streams can remove significant amounts of nitrogen. Nitrogen — in runoff from fertilizers or byproducts of car exhaust — can cause algal blooms and eutrophication in estuaries or other large bodies of water. "Small streams get first crack at most non-point-source pollution because there are so many miles of small stream for each mile of large stream or river," explains Bruce Peterson, one of the researchers. "In addition, small streams remove nitrogen much more quickly because they are shallow. Most biological removal in small streams is by the stream bottom organisms. Where the water is shallow, these organisms have ready access to the nutrients in the water; where the water is deep, as in larger rivers, the nutrients must travel much farther before they are taken up."

Creek advocates aren't surprised by the findings. Says the Urban Creeks Council's Carole Schemmerling, "We've been pointing this out for a long time. About a year ago, a *New York Times* article reported that the Mississippi River is so heavily polluted that it can only be cleaned by restoring the smaller tributaries. Those smaller streams—if preserved and restored—can clean up the inorganic and organic pollutants that flow into the river. Saving these small streams is the only way to approach cleanup of a large body of water."

Peterson says land-use policies need to reflect the important role of small streams. "Remember that streams should function as part of an integrated landscape. If you put nitrogen fertilizer on a lawn or field, most of it should be retained in the crops or grass and soils, if you don't add too much or at the wrong time. Then the nutrients encounter a riparian zone of dense vegetation, and this zone also retains nutrient. Finally, the remainder enters the small streams, which in their natural or restored condition continue the removal process. If we neglect restoration and good management of the land and riparian zones, it is unlikely that the streams can do the whole job."

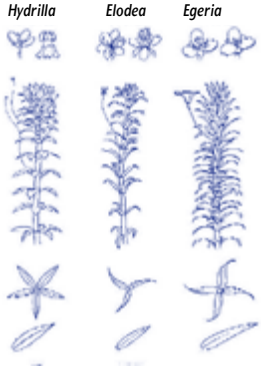
Contacts: Bruce Peterson: (508) 289-7484; Carole Schemmerling: (510) 540-6669 **LOV**

POLLUTION

POISON FOR ESCAPED AQUARIUM PLANT

Though they may appear to be winning the weed war in the Delta, two invasive, non-native plants — water hyacinth and *Egeria densa* (aka Brazilian elodea or common waterweed) — may soon come under serious attack from the Department of Boating and Waterways. In April, the Regional Water Quality Control Board issued an NPDES permit, that will allow DBW to start applying herbicides, as soon as U.S. Fish & Wildlife and the National Marine Fisheries Service finish their review of the permit. Last year, Waterkeeper sued to stop the department from spraying water hyacinth without a permit. Pesticide industry and invasive plant experts opposed the need for a permit, on the grounds that the EPA had already approved the herbicides. But after the 9th Circuit Court of Appeals ruled in March that anyone spraying pesticides into a waterway needs a permit under the Clean Water Act, the State Water Board decided to follow suit, and required the department to apply for a permit to kill the weeds. Once the federal agencies issue their opinions, says the department's Pat Thalken, the agency hopes to begin its eradication efforts.

Unlike water hyacinth, which floats on the surface and can be killed by having its giant leaves sprayed with herbicide, *Egeria densa*, a lush, fernlike, common aquarium plant, roots at the bottom of waterways and can only be eradicated if herbicides are put directly into the water. The plant, probably introduced some decades ago when someone dumped an unwanted aquarium, grows to 12 feet tall and forms a dense canopy in the water column, making some Delta waterways impassable. *Egeria* is almost impossible to remove by hand because broken-off clumps can fall to the bottom and root, allowing the plant to persist and spread. Wave action from boats has a similar effect, according to UC Davis *Egeria* expert Lars Anderson.



While enviros are concerned that dumping herbicides into the water will also harm sensitive fish, native plants and invertebrates, Anderson argues that *Egeria* itself is seriously impacting Delta ecology. "*Egeria* interferes with waterfowl and their ability to get at their normal food base. It affects water temperatures and dissolved oxygen and forms an insulating blanket in the water. It changes the entire habitat structure and outcompetes the native pondweeds."

Will water quality improve as a result of the new permit rules? Waterkeeper's Jonathan Kaplan admits that in the short term, things may just be "business as usual" but says that in the long run, he expects to see a significant difference. "For the first time ever, the ag and vector control industries are accountable. Basically, they've been operating in the dark. For the first time, the public will see exactly what they are doing and the impacts they're having."

Kaplan says that under the conditions of the permits, anyone discharging pesticides into the state's waterways will have to monitor water quality to find out how much toxicity and contamination a specific pesticide causes. Depending on the results, says Kaplan, permits could become increasingly stringent. The other milestone, he adds, is that dischargers will have to examine all alternatives to chemical control. "Some people are out there spraying just because they don't want to see green stuff in the water. Having to get a permit adds another level of burden. So far, we've had special rules for special people. Those days are gone." Kaplan admits that in some cases — i.e. *Egeria* — there may not be alternatives to chemical eradication. "But even if we find alternatives to some, we'll be better off."

Contacts: Waterkeeper (415) 461-2299; Pat Thalken: (916) 255-3103; Lars Anderson: (530) 752-6260 **LOV**

REHAB

NEW NATIVE NURSERY

Later this summer, the Friends of Sausal Creek is hoping to put some native plants into a weed-filled meadow in Oakland's Joaquin Miller Park — about twenty thousand of them. If things go as planned, the seedlings and sprouts (all growing in pots) will become a new nursery that will help to supply local restoration efforts.

The group is waiting to find out if the Oakland City Council allocates $75,000 toward construction costs for the new facility. It wants to regrade and irrigate the site, and construct a 3,000-square-foot lath house for shade-loving plants, along with buildings for storage and plant propagation. In addition, it plans to put in an outdoor education area for youth groups and other folks who want to learn about native plants. The Friends have been operating a nursery in San Leandro, but the move will allow for expansion and much easier access. The new nursery site is actually in the Sausal Creek basin, and commands a magnificent view of the watershed, which runs from the hills through the flatlands of East Oakland.

"We'll be able to show people and say, 'This is what you're working toward,' " says the Friends' Stuart Richardson. Many of the plants will be used in a major restoration of Sausal Creek, which is set to get underway later this summer. Workers will remove a series of crumbling, WPA-era concrete structures from the creek itself, allowing the water to meander more freely and provide better habitat for steelhead and other aquatic creatures. Much of the undergrowth and overstory will be torn out, and replaced with willows, oaks, mugwort, dogwoods, lupine and more, including a number of plants rarely if ever grown in commercial nurseries, such as bedstraw (*Galium aparine*), fringe cups (*Tellima grandiflora*), and solanum (*Solanum americanum*).

Most of the seeds for the new nursery have been gathered from the remaining native plants growing in the Sausal Creek watershed. Michael Thilgen, a landscape architect and Friends volunteer, says that the growers will carefully track what works and what doesn't. "We'll be learning to grow species that haven't been grown before." Even though the nursery won't sell directly to the public, it will host education groups and, since it is in a city park, draw people's attention. Anne Hayes of the Aquatic Outreach Institute says the facility will help feed the growing interest in indigenous fauna. "People want to learn about native plants. They want access to them," she says. Contact: Anne Hayes (510) 231-9566 **O'B**

PLACES TO GO & THINGS TO DO

WORKSHOPS & SEMINARS

JULY THURS-FRI 19 20

WATER LAW & POLICY BRIEFING

Topics: Chromium 6, hydropower and the energy crisis, the role of science in water policy California's Colorado River water diet.
Sponsor: Water Education Foundation
Location: San Diego
(916) 444-6240 or
www.watereducation.org

JULY MON-THURS 30 THRU AUG 2

RIVER CONFERENCE

Topic: Managing River Flows for Biodiversity: A Conference on Science, Policy and Conservation Action
Location: Ft. Collins, Colorado
Sponsor: American Rivers, The Nature Conservancy, others
www.freshwaters.org/conference

AUG FRI 3

CCMP WORKSHOP

Topic: Evaluate progress on implementation of the *Comprehensive Conservation and Management Plan* and revisit priorities established in 1999.
10:00 AM — 3:00 PM
Location: Oakland
Sponsor: S.F. Estuary Project
(510) 622-2465

OCT TUES—THURS 9 THRU 11

STATE OF THE ESTUARY CONFERENCE

Topics: The latest information about the Estuary's watersheds, impacts from major stressors, recovery programs for species and habitats, and emerging issues. Poster session receptions offer and opportunity to talk informally with those involved in current research and restoration activities.
Sponsors: S.F. Estuary Project, CALFED
Location: San Francisco
(510) 622-2465

NOV WED—THURS 14 15

SALMON AND STEELHEAD SYMPOSIUM

Topic: Restoration and Management of Anadromous Fish in Bay Area Watersheds. Progress of restoration activities in Bay Area watersheds; regulatory agency perspectives on local fish populations; restoration funding opportunities; resource agency recovery plans; restoration programs in local watersheds; successful strategies for restoring anadromous fish in urbanized regions.
Sponsor: Center for Ecosystem Management and Restoration
Location: Oakland Museum
www.cemar.org/symposium/symposium.html or (510) 420-1570

MEETINGS & HEARINGS

SEPT WED 12

ACWA'S FALL BRIEFING

Sponsor: ACWA
Location: San Diego
(888) 666-2292

HANDS ON

JUNE SAT 23

WATERSHED/CREEK WALK

Topics: Creek channel formation, riparian and fish habitat; slope and storm water runoff processes, soil erosion and invasive species issues.
Sponsor: Watershed Assessment Resource Center
Location: Redwood Park, Oakland
(510) 832-3101 or laurelm@ix.netcom.com

JUNE WED—FRI 27 THRU 29

BAY-DELTA TOUR

Topic: The Delta and San Francisco Bay, with a houseboat ride on Delta waterways and visits to Delta farms, Harvey O. Banks Pumping Plant, the Skinner Fish Collecting facility, the Delta Cross Channel, the Bay-Delta model in Sausalito, Los Vaqueros Reservoir in Contra Costa County and Suisun Marsh. Issues discussed include project operations, fish entrainment, endangered species, ecosystem restoration, levees and flood management, Delta agriculture, drinking water quality and water supply reliability.
Sponsor: Water Education Foundation
Location: Bay and Delta
(916) 444-6240

JUNE SAT 30

TREKKING THE MODEL

Topic: A tour of the Bay Model, from the Golden Gate Bridge to Stockton. Learn about California water issues and how the Bay model is used as a tool.
Sponsor: The Bay Model
Location: Sausalito
1:00 — 2:30 PM
(415) 332-3871

JULY SAT 14

CHILDREN'S BIRD WALK

Topic: Kids create their personal field guide, then head onto S.F Bay National Wildlife Refuge trails, learning about salt marsh habitat along the way. Recommended for ages 5 to 10. Reservations required.
Sponsor: S.F Bay National Wildlife Refuge
Location: Fremont
10:00 AM — 12:00 PM
(510) 792-0222

NOW IN PRINT & ON LINE

ACWA's Summary of Legislation
Association of California Water Agencies
copies from (9160 441-4545 or www.acwanet.com

Baylands Ecosystem Species and Community Profiles
S.F. Bay Area Wetlands Ecosystem Goals Project
Copies from (510)622-2402

Influence of salinity, bottom topography, and tides on locations of estuarine turbidity maxima in northern San Francisco Bay
D. H. Schoellhamer
http://ca.water.usgs.gov/abstract/sfbay/elsevier0102.pdf

Putting it Back Together: Making Ecosystem Restoration Work
Save The Bay
Copies from (510)452-9261

Rivers of Power — A Citizens Guide to Hydropower and River Restoration
Friends of the River
Copies from (916) 442-3155

San Francisco Bay Seafood Consumption Study
S.F. Estuary Institute & California Department of Health Services.
Public summary from (510)231-9539. Full technical

EWA CONTINUED

These issues, says Fullerton, are among the kinks that will be worked out as the EWA matures. "It's very unfortunate that we got hit with an extremely difficult year four months after we hit the ground," he says "If this had happened in three or four years when we were fully functioning we could have done more in a year like this, even if nothing else were different." Nevertheless, he notes that the EWA probably saved 20 to 25 percent of the fish that would otherwise have been lost. "It did make a dent in the take, we just were not able to hold the levels that we would have liked to." He defends CALFED's decision to go ahead with the EWA this year, despite the fact that not every i has been dotted. "This is how you learn." The EWA agencies will continue to review the spring's actions throughout the summer; a workshop on their findings is planned for the fall. Contact: Dave Fullerton (916) 653-4539; Tina Swanson (415) 721-7680 CH

continued back page

EWA CONTINUED

than the winter run loss at the pumps.

The apparent undercount has prompted deep soul searching among those responsible for the juvenile production estimate and is likely to bring changes in the way future estimates are made, says National Marine Fisheries Services biologist Bruce Oppenheim. The juvenile production estimate is based on an estimate of the number of adults spawning, which is based on a count of adults salmon at Red Bluff Diversion Dam. "We will be looking at how can we narrow uncertainty on that estimate, what's the best data to use," says Oppenheim.

This year's unusual hydrology may also have contributed to the high take. "Whereas in higher flow years the fish move through more quickly and are less vulnerable to the pumps, what may have occurred this year is that as flows dropped, the fish slowed their migration and got more vulnerable," says Creel. "That's merely a theory, but there is some evidence to support it."

Regardless of how many fish there were, or what may have brought them to the pumps, some EWA watchdogs contend that more could have been done to save them. The Bay Institute's Tina Swanson blames an inherent contradiction between the EWA implementation structure and the tiered fish protection scheme outlined in the CALFED Record of Decision is to blame. Under the ROD, three tiers of assets are supposed to be available to meet endangered species requirements. Tier 1 consists of baseline protections such as those set forth in the state water quality control plan. Tier 2 is the EWA and CALFED's Ecosystem Restoration Program. Tier 3 is the commitment of CALFED agencies to make additional water available if it is needed to meet endangered species requirements. Swanson says that although she suggested that the managing agencies invoke Tier 3 protections after the EWA water budgeted for winter-run salmon was exhausted, they did not do so because the EWA still had water that it was saving for other species. "It's a real Catch-22," she says. "CALFED needs to clarify the conditions under which Tier 3 can be requested and implemented."

Swanson and the EWA managers seem to agree on the need to establish Tier 3 and that more operational flexibility would also have been helpful. "When we got to the point where we couldn't use any more EWA water we looked at other actions we could use, one of them being the joint point of diversion," says Oppenheim. "We thought we could divert pumping from the state side to the federal side decrease take." Although the ROD identifies the joint point as a tool that EWA mangers can use to protect fish, regulations such as surface water elevation requirements constrained its use this year, as did the fact that certain state and federal environmental permissions have not yet been obtained. Work is already underway to eliminate these obstacles for the future.

YOUR INDEPENDENT SOURCE FOR BAY-DELTA NEWS & VIEWS

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CHANGE SERVICE REQUESTED