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Santa Clara Confronts Urban Runoff

The South Bay's most urbanized county and the region's most impaired water body have one critical thing in common polluted urban runoff. Santa Clara Valley municipalities took a big step forward in their six-year-long fight to reduce urban runoff pollution this December, when their cooperative nonpoint source pollution control program completed a 50-page source identification and control report. The report amounts to a national first in urban runoff and stormwater control, and identifies one of the biggest culprits as cars and transportation.

Urban runoff is one of the largest sources of Estuary pollution, and comes from thousands of points around the South Bay. Runoff occurs over such a wide area that scientists can only guesstimate how many tons of pesticides, oil, grease, heavy metals and sediments are washing off our city streets and yards and into stormdrains, creeks and the Bay. Their best guess for hydrocarbons alone ranges from 3,000 to 30,000 metric tonnes estuarywide every year.

Amendments to the Clean Water Act in 1987 now require municipalities to get permits for stormwater. But Santa Clara Valley municipalities began work on a runoff reduction proposal in response to the S.F. Regional Board's Basin Plan way back in 1986.

Santa Clara Valley's new Source Identification and Control Plan is the latest in a small library of volumes assessing pollutant loads, examining control options, and mapping out implementation challenges. The plan hones in on the sources of toxic heavy metal loads and traces 7,600 pounds of copper and 31,000 pounds of zinc runoff annually back to brake pads, car tires, vehicle exhaust and other automotive sources. "We need to refine and validate all these numbers," notes the Regional Board's Tom Mumley, "before we can challenge the auto industry."

The new report also outlines a plan to reduce vehicle miles travelled, promote cleaner alternative fuels, and lower emission standards for particulates in diesel exhaust. The Program hopes to get help from other county and regional congestion management and air quality agencies in accomplishing these goals.

"It's exciting, but challenging because we're out there blazing the trail," says Keith Whitman of Santa Clara's nonpoint program.

Cities and flood control districts in other counties are now banding together and following in Santa Clara's footsteps — Alameda already has its permit, Contra Costa will soon get one, and San Mateo is just beginning the process. Taken together, these efforts will soon add up to the kind of regionwide pollution prevention, runoff monitoring, public education and urban growth management actions outlined in the Estuary Project's Comprehensive Conservation and Management Plan (CCMP).

CLEAN South Bay activist and Estuary Project committee member Trish Mulvey hopes to see the Santa Clara Valley program flex its permitting muscle to implement their own control plan and parts of the CCMP. Mulvey thinks new planning, land use policy and implementing ordinances will be needed "if we're going to have a reasonable, convenient, affordable alternative to everybody hopping in their vehicles."

Clearly, preserving the health of the Estuary will require some tough choices and new thinking. "To combat urban runoff," Mumley says, "is to get people to change the way they do things."



ENVIRO Clip

RICE FIELD FLOODING

More ducks and less rice straw are the results of a joint Nature Conservancy and California Rice Industry Association pilot project flooding 2,000 acres post-harvest in Butte County. The project arose out of a state law requiring growers to phase out burning rice stubble, which contributes to valley air pollution. By flooding fields, the land becomes a winter haven for migrating waterfowl. The stubble disappears through bacterial action and the constant treading of webbed feet, according to Harvey Carlson of California's Nature Conservancy.

While adding a few acre-feet of water per acre to the pilot plots diverts little from the Sacramento River, the effect of diverting enough to flood the 12,000 acres currently signed up for the project could harm salmon runs. "We need to know how big of a problem it is. I have not been able to find any numbers," said Marc Reisner, author of Cadillac Desert and project advocate. Reisner is currently looking for funds to underwrite needed studies. He lists three ways to avoid drawing too much water out of the Sacramento. First, water can be transferred from the Glenn-Colusa Irrigation District at a fraction of pump capacity to slowly fill up rice fields. Second, an exchange of water can be made from Thermalito Afterbay (Oroville Dam) to the fields for pulse releases at Shasta Dam. Third, farmers can pump groundwater instead.

Rice farmers' enthusiasm for the project signals a political reversal, according to both Reisner and John Roberts of the Rice Growers Association. Growers now find themselves at odds with their peers, like neighboring alfalfa farmers. "They've put their eggs in the environmentalists' basket," said Reisner, and they are benefitting. Since rice fields provide wildlife habitat, for instance, these farmers are exempt from the costs of the Miller-Bradley Central Valley Project reform bill. For every other CVP crop, growers must now begin to pay for long-subsidized water. Contact: Harvey Carlson (41.5) 777-0541 /5

NEWS Round-up

GROUNDWATER GROUP FORMS

Fearing the groundwater table in the Sacramento area will drop from its current 80 feet below sea level (it was once 30 feet above sea level), a group of 15 water purveyors decided January 15 to develop a draft groundwater management plan. The group is concerned about sinking soil, and salt water and toxics intrusion. According to Ed Schnabel of the Sacramento Metropolitan Water Authority, the plan will address riverbed recharge, coordinate toxic cleanup, and look into freshwater injection to prevent salt water intrusion. The group, primarily composed of suburban water companies plus two irrigation districts, will probably not include conservation in their plan. "We've just about squeezed it out of folks," said Schnabel. But he admitted many of the area's customers don't have water meters. JS

LESS POLLUTION MEANS MORE JOBS

Through an innovative agreement signed in late January, the City of Palo Alto will take aggressive steps to reduce copper and nickel pollution in wastewater in exchange for a promise from the environmental coalition CLEAN South Bay not to litigate. The agreement requires audits of and design improvements to industrial facilities with heavy discharges — saving money and therefore jobs. A report entitled *Clean Safe Jobs* predicts that extending such an agreement into Silicon Valley could save up to 5,000 jobs and cut up to 90 percent of the copper and nickel in discharges. *DH*

SHIP-SHAPE SHOPS

Palo Alto's Regional Water Quality Control Plant recently conferred the status of "Clean Bay Business" on 131 environmentally sensitive auto shops in the Santa Clara Valley. Of the 400 facilities visited, plant personnel found that these shops follow "Best Management Practices," that is, they refrain from washing oil, soap, grease or other pollutants into storm drains and sewers. DH

NOVATO WETLANDS DISPUTE

Taking aim at 1,610 acres of wetlands and uplands, developers want to build 1,190 units of "water-oriented" housing, a marina and 18-hole golf course southeast of Novato. The project, called Bell Marin Keys, is next to existing development but the property encompasses diked baylands used to grow hay. The current dispute is over the adequacy of the draft Environmental Impact Report issued in November. According to the Sierra Club's Tott Heffelfinger, proposed mitigation for wetlands ranging from 116 acres (the Army Corps number) to 900 acres (EPA's number) is still being discussed. /S

TANKER PERMIT CAUSES A RIPPLE

Two less oil tankers per month will lumber through San Francisco Bay from now on. This January, the California Coastal Commission granted a permit to the Point Arguello Producers (a consortium of oil companies) to operate tankers between their Santa Barbara wells and their L.A. refineries provided they discontinue tankering in and out of Martinez, said the Commission's Alison Dettmer. In order to show the extra costs of environmental regulation and circumvent regulations requiring them to pipe their oil out of Santa Barbara county, the consortium was pumping the oil all the way to Martinez, then loading it onto tankers and shipping it back to L.A.. The practice was "very distasteful to a lot of people," said Dettmer. Contact: Alison Dettmer (415) 904-5246 DH

EPA IN THE FARMYARD

BIG AG may feel a little under pressure these days, but there's more coming from EPA. The agency recently identified Central Valley agriculture as the most significant source of ecological risk to the region, and launched a fledgling initiative with a \$500,000 price tag to reduce this risk. EPA's goal is to improve water quality and facilitate water conservation and marketing through largely voluntary pollution prevention programs and economic incentives. Work slated for 1993 includes cooperative pesticide and selenium reduction projects. Contact: Palma Risler (415) 744-2009 AR

INSIDE THE AGENCIES

WETLANDS STATESIDE

The State Wetlands Consensus group's environmental and business caucuses finally agreed to disagree this January after years of effort to develop a non-regulatory wetland protection plan for California. Conflicts over the definition of wetlands and permitting, and over private property rights versus the public trust continue to plague wetlands planning at all levels federal, state and local. "The players and problems reflect the same divergence of opinion we had with the Estuary Project's CCMP," says the Bay Planning Coalition's Ellen Johnck.

The consensus group was to provide private sector input to the multi-year comprehensive statewide wetlands planning process initiated by Governor Wilson in 1991 and coordinated by the California Resources Agency. Despite the group's recent standoff, Resources is still hoping to fold the group's recommendations — now to be presented in two separate documents — into the agency's own internal draft plan and place it on the governor's desk this March.

Meanwhile the government's under pressure from business interests to streamline the wetland permitting process. To this end, the Army Corps is now considering fast-tracking "nationwide" wetlands permits, and the state is busy developing a work plan to take over Clean Water Act Section 404 wetlands permitting in the Bay Area from the feds. The S.F. Regional Board believes the takeover, which involves getting a State Program General Permit from the Army Corps, will give it more control over resource management and reduce duplication in the state-federal permitting process. Environmentalists believe it will remove necessary checks and balances protecting wetlands.

How all this ties in with Resources' new plan and interest in wetlands protection is still up in the air. "We don't think achieving better wetlands protection and simplifying the regulatory process are mutually exclusive," says the agency's Will Shafroth.

And how the state plan relates to the CCMP remains the \$64 million question for folks on the Bay-Delta action front.

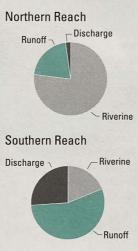
"We need to make sure the two plans don't counter each other in any way," says Shafroth. Contact: Doug Robotham (916) 653-5656

DOWNLOADING COPPER

The S.F. Regional Board's new plan to reduce copper flows into the Estuary represents two firsts in local pollutant regulation — the first wasteload allocation to be developed for a metal in an estuarine environment nationwide and the first quantitative requirement for stormwater.

The Board's goal is to reduce copper loads by up to 24 percent by the year 2003, and the agency has spent the months since it approved an estuarywide

ESTUARY COPPER SOURCES



copper objective of 4.9 ug/liter last October pinpointing exactly who should be able to discharge how much copper. These "wasteload allocations" are site and discharger specific, ranging from Palo Alto's municipal allocation of 400 pounds per year (a 62% reduction from 1991 levels) to C&H sugar's 20pound allocation (no reduction).

Counties are asked to achieve similar-style reductions for stormwater.

"We're trying to balance what's necessary with what's feasible," says the Board's Jessie Lacy. "We're trying to make systemwide loading limits the driving force."

But Greg Karras of Citizens for a Better Environment feels "the 2003 deadline makes the whole thing potentially meaningless. I'll bet everything is changed before it's complied with," says Karras. He also questions the baseline assumptions for the stormwater allocation. Environmental groups, dischargers and others are now preparing comments on the plan, and the Board meets February 17 to consider its adoption. Contact: Jessie Lacy (510) 286-0702

ESTUARY

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HOW I SEE IT



CHARLES BATTS

BAY AREA DISCHARGERS Association

"While any effort to reduce pollutants to the Bay is commendable, I believe that the S.F. Regional Board's water quality objective for copper and "wasteload allocation" strategy for end-of-pipe dischargers has several flaws. The objective cannot be met by most dischargers, and the premise that reducing point discharges will result in significant and cost-effective copper reductions in the Estuary is wrong for several reasons. First, even if the new objectives are met, they will only reduce the total copper sent into the Bay 2-5 percent. Second, while the Board believes the objective can be accomplished through pollution prevention, we believe we'll have to build new treatment processes for metals removal at an inordinant public cost. Most dischargers have already implemented source control measures to lower their copper.

"I'm also concerned that the Board's new policy shifts the focus away from the fact that most of the copper in the Bay comes from sources other than conventional dischargers. The Board should be focusing instead on actions like best management practices for runoff, watershed management and emission credits for clean up of the worst copper sources.

"Once this mass emission strategy becomes law, the chances for mid-course corrections may be slim, and a lot of public resources and time will have been wasted on an approach yeilding no real or cost effective solution. This strategy can only lead to more legal and political division over how best to protect the Bay."

Charles Batts is Chairman of the Bay Area Dischargers Association. This column reflects his own personal opinion, not that of the association.

CCMP BRIEF

CONGRESS TO CRUNCH CCMP NUMBERS

Bay Area Congresswoman Nancy Pelosi is now drafting new legislation to support implementation of the Estuary Project's *Comprehensive Conservation and Management Plan* (CCMP) for the Bay and Delta. According to her staff, she plans to introduce this legislation to the 103rd Congress sometime in the very near future.

Others on Capitol Hill feel that all 17 of the nation's estuary projects will face budget crunches, and that financing for implementation needs to be addressed on a nationwide level. On this front, Congresswomen Lowey (NY) and DeLauro (CT) launched legislation (HR5070) last year that proposed a number of changes to the EPA's National Estuary Program designed to develop more flexible funding mechanisms and strengthen the federal government's commitment to follow-up. Lowey staffer Jim Townsend says there's plenty of support for CCMP development, but "After that, it's a cliff. The federal government disappears and leaves the rest to state and local agencies. That's just untenable."

The provisions of the Lowey/DeLauro legislation, whose short title is the "Water Pollution Control and Estuary Restoration and Financing Act", respond to comments collected from estuary projects nationwide. The bill won over 50 co-sponsors and a hearing by the Public Works Committee, but got no further in Congress.

Lowey plans to reintroduce it the first week of February, but thinks it may soon enter a whole new political arena. "It's unlikely that a bill of this magnitude will be passed unless attached to a comprehensive rewrite of the Clean Water Act," says Townsend. In the meantime, he suggests supporters encourage their own Congresspeople to hop on the bandwagon. Contact: Congresswomen Lowey or DeLauro (202)224-3121 AR

PLAN GETS 98% APPROVAL

CCMP authors signed off on 98% of the plan this November, but postponed final approval until March in order to fill in the details. Three major "details" remain to be addressed — who's going to implement the plan, how much will it cost, and what will be the final contents of the Aquatic Resources and regional monitoring strategy sections?

The Project attacked the implementation entity question at a January 13 meeting of the CCMP's Management Committee. Staff proposed a rough implementation structure including a small executive council, two advisory entities (one for public and one for scientific input), and an implementation committee to do all the nitty gritty work (see below).

Things went smoothly until meeting attendees locked horns over how many seats the "public" should be given on the executive and implementation committees. Several government agencies wanted to scale back public representation to smooth and speed decisionmaking, but the "public" disagreed.

"We're inside, not outside the process now," argued Arthur Feinstein of the Citizen's Committee to Complete the Refuge. "We don't want to go back to pleading with agencies from the sidelines."

Smaller agencies such as the State Lands and Bay Commissions were more worried about having the staff time and funds to continue participating. While these issues are being resolved, the Project is busy trying to add up the bill. Agencies are now scrambling to nail down implementation costs, and to evaluate which CCMP actions are already being carried out, which are slated to be carried out (contingent on funding and other factors), and which are so new they'll need special support.

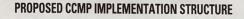
ACTION POINT

SHARE YOUR THOUGHTS

At this critical juncture between planning and practice, Governor Wilson needs to hear how you feel about the CCMP. The CCMP offers the first comprehensive environmental management plan ever proposed for the Estuary, and contains 150 concrete actions that diverse public and private agencies worked cooperatively to develop. The Estuary Project thinks the CCMP will help preserve the Estuary's natural resources, protect the beneficial uses of the Estuary, improve water quality, restore wetlands, increase scientific understanding of estuarine processes, provide an invaluable framework for nonregulatory action including publicprivate partnerships and market incentives, and make our Estuary a model of environmentally-sound management and public stewardship.

What do you think?

The delay is allowing the authors of the CCMP's aquatic resources and regional monitoring strategy sections time to refine and clarify the who, what, how and when parts of their action plans. By the time the next Management Committee meeting rolls around in March, all of these details should be filled in. Contact: Marcia Brockbank (510) 464-7992 AR





HARD SCIENCE

YEARLONG SURVEILLANCE COMPLETE

For the layperson, testing pollution in the Bay may seem as simple as a few test tubes full of water and a pad of PH strips. For the region's professional toxicologists, it's a whole different ballgame — one in which a dynamic and diverse estuarine ecosystem influenced by dozens of interacting natural and human forces must somehow be systematically measured and analyzed to produce a sound basis for regulatory decisionmaking.

Few estuaries worldwide are the focus of a multi-media field testing and monitoring program as complex as the one now being pioneered by the S.F. Bay Regional Board. This Pilot Monitoring Program just released a summary progress report for 1991-1992. The program not only surveyed chemistry and toxicity estuarywide, but also developed a solid monitoring methodology tailored to the unique conditions in the San Francisco Estuary.

Pioneering work was done on ways to measure metals and organics in the water column at low enough detection levels to determine if ambient waters met water quality objectives. To develop this methodology, the program monitored organic contaminants at 14 stations and metals at 27 stations in June 1991 and April 1992, searching for trends over space and time, and for a measure of background conditions in different Estuary basins.

The pilot program also conducted an innovative sediment gradient study at the site of an old oil refinery outfall in Richmond. This study set out to determine which toxicity tests and types of tests distinguished best between highly contaminated, slightly contaminated and uncontaminated sites. What the gradient study found was that some sediment tests could distinguish between stations, but that porewater samples (water squeezed from sediments) were much more sensitive than elutriate samples using the same sediment. In an elutriate test, water and sediments are mixed, then sediments allowed to settle and the remaining solution tested.

The pilot's broader Bay monitoring surveys examined both the toxicity of sediments, and the presence of a suite of metals and organic contaminants at 15 stations during wet and dry seasons, and at 32 areas identified as critical marsh habitats. Among other things, the surveys showed the shrimplike amphipod *Eohaustaurius estuarius* was a good choice for further estuarine monitoring. They also identified which sites were toxic and chemically contaminated.

To measure bioaccumulation, researchers hung shellfish in mesh bags from buoys at eight locations and checked them at 30, 60, 90 and 120 days for accumulation of contaminants in body tissues. Shellfish at South Bay stations accumulated more DDT, PCBs and PAHs, Central and South Bay stations more

THE Monitor

CENTRAL SAN COLLARS FLEA KILLER

The practically undetectable amounts of household pesticides that end up Central Contra Costa Sanitary District wastewater are killing off water fleas like flies.

Central San recently discovered that a mere four ounces (about 1 part per billion) of a common home pesticide, such as diazinon, in the 35 million gallons of wastewater discharged by the district daily can produce what scientists politely call "acute toxicity" (i.e., death) to these aquatic critters.

The discovery came through Central San's participation in the S.F. Regional Board's Effluent Toxicity Characterization Program. This seven-year-old monitoring program asks dischargers to conduct regular testing of the toxicity of their effluent to different organisms.

"We found our effluent was most toxic to water fleas," says Central San's Jim Kelly, "and we went way down the road to discover the source."

Way down the road, in this case, began with hiring AQUA-Science, whose research soon pinpointed the source via what Kelly calls "an experimental versus widely applied silver. There were no major differences between contaminant levels in wet or dry seasons (although the drought may have been a factor), or between mussels placed near the surface or at the bottom. Mussels seemed to reach an equilibrium (when accumulation leveled off) over three or four months for copper, mercury, lead, selenium and chlordane, but not for silver, PCBs and DDT.

5

These are only a few of the goals and findings documented in the Regional Board's 93-page December 1992 summary report. Much data remains to be analyzed, but the testing techniques and protocols evaluated by the one-year pilot will provide a useful framework for an ongoing \$1.15 million baseline monitoring program for the Estuary. Contact: Karen Taberski (510) 286-1346 AR

technique." AQUA-Science added piperonyl butoxide, a compound that reduces the toxicity caused by cholinesterase inhibiting substances, to the effluent. Cholinesterase is an enzyme in insect nervous systems that enables them to move. Common pesticides such as diazinon, malathion and parathion kill insects by inhibiting this essential enzyme.

Central San's laboratory followed up with sophisticated selective ion monitoring with a gas chromatograph mass spectrometer to find out which pesticides in what quantity were present in the effluent. "Getting down to the sub-part per billion range is really quite a feat// says Kelly.

But what really matters, according to Kelly, is what Central San is going to do about it. Kelly says that among other things they II be sampling their effluent more often, educating the public about careful home pesticide use and teaching the 500 licensed applicators listed in Central San's service area about how to improve their equipment handling and rinsing procedures. Contact: Bhupinder Dhaliwal (510) 689-3890 AR STUAR

NATURAL Ventures

TARNISHED MARSH GETS CASH

Big money is flowing to a 145-acre marsh in Hayward to clean up ammonia that has accumulated from the area's use for wastewater treatment. The \$750,000 EPA grant will help pay the East Bay Regional Park District and the Union Sanitary District to carry out a revegetation project and construct a dechlorination facility in the area to reduce ammonia. Ammonia kills fish by damaging their gills, making it impossible for them to pick up oxygen from the water. Estimated cost of the entire plan is \$2-3 million.

The project will reduce ammonia by promoting the growth of a bacteria that converts the ammonia to a harmless nitrate. To encourage the bacteria, bands of native California hardstem and alkali bullrush are being planted in the marsh's freshwater sections. "The plants are necessary in order for bacteria to attach," explains Rich Cortez of Union Sanitary District. To accomplish this, the marsh has been "closed" since November, that is, no effluent is flowing through it.

Later this year a dechlorination facility will be built, designed to reduce ammonia by evaporating off chlorine from the effluent. Chlorine inhibits bacterial growth. The facility will include a berm protection device and a state-of-the-art baffle system to keep vegetation in place and prevent erosion. This structure will force wastewater to curve around a makeshift maze of redwood slabs and concrete piers. To further promote chlorine evaporation, project managers expect to reduce flow to the marsh from 10 to 5 million gallons/day.

Despite the fish problems, "Waterfowl and shorebirds have increased just phenomenally," says Mark Taylor of the Park District. The project has transformed the area from a degraded shoreline to a productive wetland with 170 bird species including Canada geese, American avocets, white pelicans, and a pair of peregrine falcons. "If we can just solve some of these nagging problems with ammonia," he says, "we'll be all set."Contact: Mark Taylor (510) 783-1066 DH

DREDGE SCOOP

LTMS MANAGERS GO FOR EIS

A cooperative effort to break the region's dredging and dredged material disposal mudlock advanced on January 22 when its leaders voted to do an Environmental Impact Statement for LTMS. LTMS stands for the Long Term Management Strategy that 30 diverse port, government and environmental interests have been working to develop for Bay dredging. The decision to do an EIS elevates the original goal of the effort — to provide an array of agreed-upon disposal options — to a new level. Through the EIS, LTMS developers will now lay out these options and their trade offs for the public. "We have to face the fact that there's no option that won't kill a single fish or lose a single job," says Tom Wakeman of the Corps. "The EIS gives the public a chance to respond to LTMS' effort to decide how port economics and environmental health will weigh in their grandchildren's future."

STRICTER ALCATRAZ MANAGEMENT

The Corps' new Public Notice #93-3, now up for public review, seeks to protect the capacity of the region's primary disposal site. The notice would limit disposal off Alcatraz to 400,000 cubic yards per month, no more that 150,000 of which to be dumped by clamshell rigs. Comments on #93-3 are due by March 1. Contact: Wade Eackle (415) 744-3325

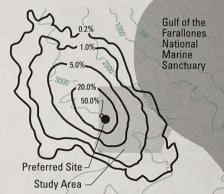
CORPS REORGANIZES

In November 1992, the Corps launched its first major national reorganization plan since 1942. Under the first FY 1993 phase of the plan, the functions of the South Pacific Division here in San Francisco will be transferred to the North Pacific Division in Portland. The Portland office will be renamed the Western Division, and become responsible for the entire Pacific Coast. District offices like San Francisco's will remain as they are at the moment, but second phase reorganization scheduled for FY 1994 may involve changes at this level.

OCEAN DISPOSAL SITE REVIEWED

EPA received over 35 letters of comment on its recently released Draft Environmental Impact Statement on ocean disposal alternatives. Most commended the effort and agreed that of the five alternative disposal sites presented, the one preferred by the EPA and the LTMS Ocean Studies Work Group offered the least impact on fisheries, adjacent sanctuaries and other marine resources.

PROBABILITY OF SUSPENDED PARTICLES EXCEEDING BACKGROUND LEVELS



Computer predicted probability that concentrations of suspended sediments will exceed a conservative estimate of background concentration (assumed to be 1 mg/liter) in the vicinity of the preferred ocean disposal site during a one year period. According to this model, areas within the national marine sanctuary could experience concentrations higher than this, but still within the range of ambient concentrations, during 0.2 to 1 percent of disposal events over a one year period (between 2 and 10 events in every 1000).

> Ports asked for more details on how site use, material transport to and from the site, and impacts on marine life would be monitored, as well as who would pay for the monitoring. Others questioned the use of computer modeling to predict sediment movement and suspension (see map), and suggested tracking the effects of upcoming Navy dumping at the site for comparison. The Coastal Commission expressed concerns about impacts on California gray whales and Northern fur seals. Surfrider Foundation adamantly opposed dumping Bay spoils in the Pacific until land disposal alternatives had been thoroughly investigated. In fact, the proposed ocean site will soon be folded into the carefully-coordinated regional package of upland, in-Bay and ocean disposal options that is the LTMS. EPA plans to incorporate responses to comments in the final EIS. Contact: Shelley Clarke (415) 744-1162

PLACES TO GO & THINGS TO DO



MEETINGS & HEARINGS

SF Regional Board WEDS • 2/17 • 9:30 AM Topics: Copper wasteload allocation, selenium mass emission strategy, South Bay NPDES permits, and more.

BART Board Room, 800 Madison St., Oakland (510) 286-1255

Bay Commission Board

THURS • 2/18 & 3/18 • 1 PM 455 Golden Gate Avenue, Room 1194, S.F. (415) 557-3686

Contra Costa RCD

WEDS • 2/17 • 3/17 • 5 PM Farm Bureau Building, 5554 Clayton Road, Concord, (510) 672-6522

Central Valley Regional Board

FRIS • 2/26 • 3/26 State Capital, Rm 444, Sacramento (916)255-3000

State Coastal Conservancy Board

THU-FRI • 2/25-2/26 • 10 AM San Francisco (510) 286-1015

Water Resources Control Board

MON • 3/1 • 9 AM Topic: Draft Water Rights Decision 1630 1416 Ninth St., Sacramento (916) 657-0990

Coastal Commission Board

TUE-FRI • 3/16-3/19 Cathedral Hill Hotel, San Francisco (415) 904-5200

SFEP Management Committee

WED • 3/31 • 9:30 AM Topics: Final approval CCMP including Aquatic Resources and the regional monitoring strategy, costs and implementation.

101 Eighth Street, Oakland (510) 464-7992



SFEP Educators Workshops

2/10 • 2/20 • 3/15 Topic: How to teach the ecology of the Estuary; introduction to SFEP's elementary and secondary school curriculum guides. Assorted Bay Area locations. Cost: \$10/person (510) 464-7916

1993 Outlook Conference

THU • 2/11 • 8:45 AM Topic: "Clintonomics: The First 100 Days and Beyond" Sponsors: League of Women Voters & Bay Area Council San Francisco Marriott Hotel, Reservations required. Cost: \$200 (415) 981-6600

Waterfowl Convention & Exposition

FRI-SUN • 2/19-2/21 Topics: Workshops on pintails, wood ducks, hunting, etc.; exhibits, photo contests and waterfowl cooking classes.

Holiday Inn Northeast, Sacramento Registration required. Cost: \$5 - \$195 (800) 927-DUCK

Interagency Ecological Studies Workshop WED-FRI • 3/3-3/5

Topic: Over 25 different sessions on hydrodynamics, endangered species, policy issues and other subjects.

Asilomar Conference Center, Monterey Accomodations full; call to register. Cost: \$20/person (209) 948-7800



Urban Stream Restoration Training Workshops

MON • 3/1 • 10 AM Sponsors: Golden State Wildlife Federation and Urban Creeks Council

Topics: Technical field tour of seven East Bay restoration projects to see innovative flood control designs, soil bioengineering, wetland restoration, unusual gabion bank stabilization, criball designs, riparian vegetation options, and stream channel recreation.

Cost: \$130 (510) 848-2211



NOW IN PRINT

Managing Freshwater Discharge to the S.F. Bay/Sacramento-San Joaquin Delta Estuary; The Scientific Basis for an Estuarine Standard SFEP: Publication slated for March. Copies from (415) 744-1989

Response of Zooplankton and Bacterioplankton Populations to the 1991 South San Francisco Bay Spring Phytoplankton Bloom Hollibaugh; Romberg Tiburon Center Copies from (415) 435-7141

Characterizing the San Francisco Estuary; A Case Study of Science Management in the National Estuary Program Bill Tuohy; SFEP. Copies from (510) 464-7996

State Wetlands Strategies: A Guide for Protecting and Managing the Resource Island Press, World Wildlife Fund, 1992 Copies from (800) 828-1302

Source Identification and Control Report Santa Clara Valley Nonpoint Source Pollution Control Program Copies from (408) 927-2710

Estuarywise; 100 tips on how you can prevent pollution of our Bay and Delta SFEP. Copies from (510) 464-7996

Damon Marsh Clean-ups

SATS • 2/27 & 3/13 • 10 AM-1 PM Sponsors: Restoring the Bay Campaign and the East Bay Regional Park District Meet at the Oakland Sports Complex parking lot, 1/4 mile north of 66th Avenue exit of 880. (510) 452-9261

Sacramento River Wetlands Birdwatch SAT • 2/20 • 8:30 AM

Sponsor: Marin Audubon Society Topic: A trip to farm country and wetlands full of raptors and other open-country birds. (415) 383-1770

BURNING ISSUE

FLOWS DECISION UNDER FIRE

Water purveyors and users statewide are zeroing in on the State Water Board's Draft Decision 1630 like gulls in a fishing boat's wake. The decision, issued December 10 and now going through public review and comment, sets forth an interim 5-year plan for improving the Delta environment and leaves long-term planning to a new statewide task force.

Decision 1630 would require cities and farms to give up water and money to stabilize fisheries. It would reduce Delta water exports by about 800,000 acre feet per year, establish a \$60 million annual mitigation fund (supported by a \$10 per acre-foot fee for Delta exporters and a \$5 per acre-foot fee for inbasin diverters), require pulse flows to aid fish migration, and mandate best management practices for 100 urban water agencies. At press time, only a few comments were available for review.

The EPA, in its final comments, said the draft decision "neither meets the procedural nor the substantive requirements of the [Clean Water] Act." EPA went on to recommend that management of 1630's restoration fund be "closely coordinated" with both the Estuary Project's CCMP and the new Miller-Bradley Central Valley Project reform bill. EPA also picked up on concerns expressed informally by many groups over the State Board's attempt to use the 800,000 acre feet Miller-Bradley dedicates to environmental purposes to satisfy its own goals. EPA stated that the water, according to Miller-Bradley, is to be dedicated to U.S. Fish and Wildlife, not the State Board, and that meeting Bay/ Delta standards "is only one of the three Congressionally mandated purposes" for the water.

Southern California's Metropolitan Water District commented that unless 1630 is modified to use some mitigation fund money to buy additional environmental water and provide "virtually automatic" approvals of water transfers, the District will take "all necessary action to protect its interests." Several local water districts pointed out in comment letters that their pre-1914 water rights or minor water diversions (less than 100 cfs) should exempt them from 1630's provisions. Other letters questioned the ban on water softeners.

A draft critique from Natural Heritage (representing major environmental interests) lauded 1630 as a "significant step forward," but took the agency to task over inadequate protection for aquatic species and inaction on steadily increasing salinity. Natural Heritage beseeched the Board to put in place much of the interim management while parties fight over specifics. To view or make comments (due by February 16) call (916) 657-2187.



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