NUDGING NEWTS

“I’m a born rescuer type,” says Annabelle Travis. “I’ve always had to rescue animals in need.” She has been known to retrieve stray ducklings from Interstate 80 at rush hour. Ten winters ago, Travis, who lives near the San Pablo Reservoir, noticed that California newts attempting to cross her road on the way to their mating pond were being smashed by motor vehicles. Her immediate impulse was to pick the amphibians up and carry them across to Castro Creek. That first year she logged 137 newt assists, single-handed.

Eventually Travis connected with the San Pablo Watershed Neighbors Education and Restoration Society (SPAWNERS), and volunteers began to join her on the newt patrol. Neighbors got involved. This year she has a roster of 23 helpers. “We have a core of six to eight people who always participate, who’ve been doing it for years,” she says. A lot of them bring children: “It’s a good opportunity for kids to learn about the environment.” One year the Waldorf School adopted the newts as a community project, and home-schooling families have been active participants.

Newt time begins a little before sunset and extends for an hour or two. Activity varies with rainfall (“The newts love the rain”) and season, starting with a few migrants in late January, then building to a peak in March. The biggest year so far was 2006, when the last of 1,200 newts was assisted on Mother’s Day. But the total fell to a mere 35 the following year. Travis reports a slow start to 2008, with only two live and seven road-killed newts as of press time.

Newts are calm animals, not prone to biting. “Their skin is highly toxic,” says Travis. “Most people new to it will wear gloves, but I’ve never been a glove person.” She says washing your hands after touching a newt should suffice. “I’ve always had to rescue animals in need.”

So Boyer was understandably frustrated when his offers to deploy his county’s considerable resources in the first hours and days following the November 7 oil spill appeared to fall upon the deaf ears of those in charge of the cleanup. Boyer says he sent 15 to 20 messages to the Unified Command—U.S. Coast Guard, the California Department of Fish and Game’s Office of Spill Prevention and Response (OSPR), and a firm hired by the ship’s owner, the O’Brien Group—requesting information about the spill in the first hours.

“Physically, we were seated in a room next to the command post, and we got nothing back—not one simple message came back letting us know what’s going on,” Boyer recalls.

More frustrating for Boyer was learning how some of the 58,000 gallons of oil spread to the eastern shoreline, hitting Hoffman Marsh, Meeker Slough, and Brooks Island while he sat. By the third day—with no response from Unified Command—Boyer says the county took matters into its own hands. He sent hazardous materials teams to clean county beaches and got Chevron Corporation to boom off sensitive places like Meeker Slough.

Boyer’s experiences reveal a gaping hole in the emergency response system. Current law requires that the federal government lead response to both oil spills and terrorist attacks in a top-down command system, with local agencies at the bottom. But in the event of any other disaster—fire, earthquake, flood—California has a standardized emergency management system that puts local authorities at the top of the chain of command.

“San Diego was able to move a half a million people on their own authority during the fires last fall,” notes Boyer. “Now we say we need a system of federal response first, but what's the difference? The requirement of local officials sharing their wisdom and frustrations with Sacramento lawmakers as they craft legislation designed to fix the problems—and head off other anticipated needs—that surfaced when the Cosco Busan crashed into the Bay Bridge.

So far, seven bills from five assembly members have been introduced, with Berkeley Assemblywoman Loni Hancock leading the way. “We need to make sure that should this happen again, we can respond more effectively and quickly,” Hancock said when introducing her legislative package in December.
BIRD WATCH

FLOODSONG

Nesting in the floodplain carries obvious risks for riparian songbirds. But flooding may have benefits for them as well as costs. Two presentations at December’s Riparian Habitat Joint Venture conference explored relationships between flood events and the reproductive success and recruitment of two representative riparian birds, the song sparrow and black-headed grosbeak.

PRBO Conservation Science’s Nadav Nur described his research at the Consumnes River Preserve, which has both mature and restored riparian sites and is subject to spring and winter flooding. He used point counts to measure song sparrow abundance and monitored sparrow nests to determine reproductive success.

Nur reported that the timing of floods makes a difference in song sparrow population trends. Spring floods were associated with lower recruitment in the following year. This makes sense for a low-nesting species for which flooding would cause direct mortality. Winter floods had the opposite effect: “The greater the winter flooding, the more recruitment in the year after the flood.” In restored sites, the song sparrow population grew 6.8% between years for each additional 10 days of winter flooding. But there was no comparable increase for mature sites.

Another songbird species, the common yellowthroat, showed population increases the year after winter flooding in both restored and mature sites. A similar but weaker relationship was detected for spotted towhees. For tree swallows, adult abundance increased in the same year as winter floods, with a lag of a few months.

“Winter flooding improves conditions for birds,” concluded Nur. The mechanism is uncertain: there may be effects on vegetation and insects, providing more cover and food for the birds. His data shows the effect varying with site and species: “There’s no single prescription.”

Black-headed grosbeaks, unlike song sparrows, are neotropical migrants nesting and foraging in the riparian canopy. Their nests would seem less likely to be impacted by flooding. However PRBO Conservation Science research associate Stacy Small discovered in her doctoral research at the University of Missouri-Columbia a link between nesting season and the timing of winter floods. “There’s no single prescription.”

There’s no single prescription.

Kelly’s history with the Estuary Project gives her both great appreciation for its past and an insider’s insight into future challenges. “When the program started 15 to 20 years ago, there was no Joint Venture, no South Bay Salt Pond Project—not a load of programs up and running and vibrant. So it’s a challenge to determine the optimal place for the Estuary Project because so many initiatives have either directly or indirectly evolved out of that beginning dialogue. I look at the Estuary Project as the forerunner of what CALFED did, of what Delta Vision is doing. The National Estuary Projects were the first ones out there actually forging consensus on ways of doing business with the larger community. In the past, the [various stakeholders] usually saw each other in courtrooms. That is the great legacy of the Estuary Project, bringing everyone together at the same table. The issue for me now is how does the Project add value over and above what’s been done now by a myriad of other organizations and nonprofits?”

Kelly hopes the Estuary Project can find a role in tackling some of the most pressing environmental issues, including climate change. She agrees with the S.F. Bay Commission’s Will Travis’s thinking about the Estuary—“that we can’t go back. We have to plan for what will be, to create space for essential habitats like wetlands and decide where to shore up functional hardscapes [e.g., airports] that we can’t live without.”

Travis, who has known and worked with Kelly for years, says that if anyone is up for taking on large-scale issues, it is Kelly. “She’s extraordinarily bright, with great strategic vision, and knowledgeable about details. She has great leadership capability and can see way over the mountain range. She’s a driving force—I wouldn’t want to be on the other side of an issue from her—but she’s also the sweetest serious person I’ve ever known.” He thinks she will give the Estuary Project a strong new voice. “When you say ‘San Francisco Estuary Project and CCMP’ to some people, they say, ‘What? She will make it more meaningful.’”

Steve McAdam (just retired from the Bay Commission) is also impressed with Kelly. “She was a great commissioner, very thoughtful, never making knee-jerk decisions but always finding the facts first.” The Coastal Conservancy’s Steve Ritchie, who worked with Kelly both in her first stint with the Estuary Project and at CALFED, says she has “enormous energy, passion, and experience working with large, diverse groups.”

McAdam thinks Kelly is the right person for leading the Estuary Project right now. “We need someone with the diplomacy and respect for the community that Marcia Brockbank instilled. I expect Judy to quickly assume that mantle and run with it.”
Hancock authored two bills that deal with funding and more prompt notification of local agencies. One bill would require the Office of Emergency Services to contact local emergency responders when a spill is reported, allow certified responders to train and certify cleanup volunteers, and require OSPR to pay through grants for certified responders to have supplies on hand, such as boom and other equipment needed for shoreline protection and cleanup. This is intended to remedy the situation that occurred during the Cosco Busan spill when many would-be volunteers could not receive proper training or, when they did, had no equipment to do the job.

A second Hancock bill would enhance the Lempert-Keene-Seastrand Oil Spill Prevention and Response Act of 1990, the legislation that created OSPR, by increasing funding from $55 million to $100 million—to keep pace with inflation. The increase would be funded by a temporary reinstatement of the 25-cent-per-barrel tariff on imported oil. At the same time, the Act—originally written in response to an oil tanker spill off the Southern California coast—is to be revamped to give non-tanker vessels like cargo ships a financial incentive to use double hulls.

Another issue arising from the Cosco Busan spill was that the equipment used to clean and contain the spill was not up-to-date and that OSPR and other command agencies wouldn’t deploy newer technologies because they were not commonly in use. San Francisco Assemblyman Mark Leno’s legislation is intended to provide funding—$3 million annually—in grants to spur new cleanup technology. It also requires OSPR to continually evaluate and update cleanup technology and to deploy the best available technology, regardless of whether it is currently in use or not.

The Port of Oakland is the nation’s fourth busiest shipping port, handling about five containerships a day. The cargo aboard these ships ranges from consumer goods to agricultural products to chemicals. And yet, only oil tankers are required to have a tugboat escort through the Bay and other harbors. Legislation proposed by Mountain View Assemblywoman Sally Lieber would expand the requirement for tugboat escorts to include ships carrying pesticides, solvents, explosives, and other hazardous materials as well as to include huge cargo ships like the Cosco Busan, which has a fuel capacity of 1.8 million gallons. The Port of Oakland began a dredging effort five years ago to deepen and widen its shipping lanes, which will likely encourage bigger ships carrying more fuel.

In addition, bills from Marin Assemblyman Jared Huffman and Davis Assemblywoman Lois Wolk seek to establish emergency training protocols to enable volunteers to begin cleanup work after three hours or less of training, and to expand the capacity of the Oiled Wildlife Care Network to better prepare for wildlife rescue efforts—another gap exposed in the November spill. Huffman’s bill also calls for additional response planning and protection for designated ecologically sensitive areas.

Finally, a second bill from Assemblywoman Huffman seeks to address another issue. The Sacramento-San Joaquin Delta is one of only a few inverted river deltas—in which the narrower end emerges at the sea and the wider end is located inland—in the world, and so inland spills pose a particular danger to fish and wildlife and the state’s water supply. Inland spills, such as have occurred on the San Joaquin River near the Port of Stockton, account for more than 75% of the oil spills in the state, yet OSPR responds in less than 20% of those cases. Wolk’s bill would require OSPR to respond to inland spills and aids in that effort by allowing the agency’s funds to be used to prepare and respond.

Hans Hamen, an aid to Hancock, says these bills face a long process of hearings to hammer out the final details. Legislators like Hancock are communicating with federal lawmakers like Senator Barbara Boxer, who has introduced into the U.S. Senate a bill to grant the Coast Guard more authority on the nation’s waterways to order ships to change course or speed. A second bill would raise the liability limits for cargo ships—capped presently at $1950 per gross ton—to $1,900/gross ton for double-hulled tankers and $3,000/gross ton for single-hulled tankers in the hopes of getting cargo shippers to use double-hulled ships.

Hamen says all of this legislation is just a beginning. Hancock and others will hold hearings to probe further ways to prepare the region for a spill and also to prevent it from spreading and happening.

“One could only imagine what could have been with all the tanker ships coming in not only to Oakland but also to Richmond, Martinez, and Stockton,” says Hamen. “This was a warning that we need to do better.”

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TECHNOFIX

FIGHTING FOG

San Francisco is about to become a lot less foggy—not the stuff that shrouds the city, inspiring poets and mystical visions, but the FOG (fats, oils, and grease) that clogs the city’s wastewater system—as part of a program that will re-use “FOG” to fuel some of the city’s public utility vehicles.

“We’re calling it ‘SFgreasecycle,’” says the SFPUC’s Lewis Harrison. “We had a long history of grease problems in the combined sewer system and were hiring people to clean it up. Now we’re focusing on pre-treatment.” At first the city pressured the restaurant industry to engage in best management practices, to divert their cooking grease. But that cost restaurants money, which was a disincentive, says Harrison.

“We started exploring what possible re-uses could be, and of course biodiesel came to mind. We decided to connect the dots and create this waste vegetable oil program for free to restaurants.” Harrison says the best part of the program is that it takes a problem and converts it into a solution. “Biodiesel burns cleaner than regular diesel, so there are less particulates settling back down on the streets and into the sewer system, which means we’re improving both air and water quality.” The program was funded by a California Energy Commission grant and $1.3 million approved by the S.F. Board of Supervisors.

So far, 2,600 restaurants are targeted to take part in the program; the city will build a transfer station where all of the trucks will bring the waste vegetable oil for basic filtering. From there it will be sold to biodiesel manufacturers for converting to biodiesel; the city will then buy the biodiesel back for powering its municipal fleet. Eventually animal fats will be recycled too. The city also hopes to institute a residential grease collection program. “Most people have found that pouring grease down the drain means Rotor Rooter on a regular basis. With this program, everyone participates; everyone benefits.” www.SFgreasecycle.org

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PLANNING

DELTA VISION: TO THE RESCUE OR THE SHELF?

If a plan can save the Delta, the Delta Vision will be the one to do it, say enviros, business leaders, and water districts—with a few dissenters. Hot off the presses in December, the plan, written by the Delta Vision Blue Ribbon Task Force established by Gov. Schwarzenegger’s Executive Order S-17-06, recommends 12 policies for rehabbing the beleaguered nexus of the state’s water supply to be implemented over time, and seven actions to get underway in the “very near future.” Its first policy recommendation is that water supply and a healthy Delta ecosystem be treated as co-equal goals. “That’s a pretty important step in thinking about the Delta,” says the Public Policy Institute’s Ellen Hanak, one of the authors of “Envisioning Futures for the Sacramento-San Joaquin Delta,” published last spring. “It’s still a broad brush approach at this point, but at least they’ve said, ‘OK, here are the main two things we have to deal with.’”

Other key recommendations include managing the state’s water supply more efficiently to support a growing population and economy, and reducing diversions—or changing patterns and timing of diversions upstream, within the Delta, and exported from the Delta—in order to revitalize the ecosystem. Other strategies include building new conveyance and storage facilities and better linking the two, strengthening selected levees, and improving floodplain management and water circulation and quality.

The “near-term actions” recommend that the state begin acquiring title or easements to floodplains and establish flood bypasses, that the governor “immediately issue” an executive order to provide guidance on appropriate land development in the Delta, and that the state set appropriate standards for levees, use available bond funds to address strategic levee and floodplain improvements, and start acting now to prepare for sea level rise and other disasters. Another key recommendation is to establish an “independent body” to approve Delta-related spending, planning, and water export levels.

Skeptics could think they’re experiencing a bit of déjà vu—we’ve had CALFED, X-2, peripheral canals, and endless other proposals and plans.

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**STRATEGIES TO REDUCE DEMAND OR INCREASE SUPPLY OF WATER**

This graph shows the potential range of more water demand reduction and supply augmentation each year for eight resource management strategies. Low estimates are shown in the lower (dark) section of each bar. The water supply benefits of the resource management strategies are not additive. As presented here, urban water use efficiency includes reduction in both consumptive and nonconsumptive uses (or applied water), whereas agricultural water use efficiency only includes reduction in consumptive uses (or net water). (From DeltaVision)
The hopeful thing about Delta Vision, says The Bay Institute’s Gary Bobker, is that the peo-
ple who worked on the Task Force “didn’t really have a dog in the fight. They’re the ‘gray heads’
of the policy world, so I think they were able to
strike a balance between the honest clear vision
that is needed to create new policy on formerly
intractable issues, but they also have the experi-
ence of accomplishing things in the real world. I
know there are going to be some very, very big
tables ahead, but these are people with a track
record of getting things done, and I have great
hope that they won’t just turn out a report and
walk away, that they’ll do what the 9/11
Commission did—work closely with the people
who will be implementing their recommenda-
tions, but also use the bully pulpit to make sure
there is follow-up.”

Jim Levine, the Bay Area Council’s representa-
tive in the stakeholder group that advised the
Task Force, says Delta Vision process was dif-
f erent because “there was an almost unanimous
belief that the current system was not workable,
the recognition that if we just keep going the
way we’ve been going for another five years,
who knows what will be left, which fish, if any,
in the Delta.” This time the process was not
agency dominated, says Levine. “It was stake-
holder grassroots in some ways—people who
have been working in this area for a long time
gathering together to find a way to improve the
situation. CALFED came up with ideas, but never
really tackled the hard questions. We have a dif-
ferent kind of governor now; just sitting and
doing nothing is not an option.”

Bobker says the main virtue of Delta Vision is
its recognition that the Delta’s problems cannot
be solved just by building new infrastructure,
but that root causes need to be addressed. “It
recognizes that we can’t solve all of the prob-
lems of Southern California or the Bay Area on
the back of the Delta, so if you proceed with a
comprehensive approach that looks at the whole
panoply of resource management tools—like
conservation and markets and new infrastruc-
ture—that can send you in a direction where
decisions about new conveyance can be made,
but it’s the last piece of the puzzle rather than
the first.”

Westlands Water District’s Tom Birmingham
says he thinks the people who developed the
vision “worked hard to identify all of the issues”
and that there was definitely a recognition that
the Delta in its current state is not sustainable
and action needs to be taken to fix it. Yet he
questions the Delta Vision’s conclusion that
reliance on water from the Delta may need to
be reduced. “First, I don’t have any idea what
that means,” says Birmingham. “Reduced
reliance compared to what? In addition, what
do we hope to accomplish through reduced
reliance on water from the Delta, and what is
the basis for concluding that we need to reduce
our reliance on water from the Delta? Neither
the objective to be achieved nor the basis for
that conclusion is stated anywhere in the vision.
The reality is that the demand for water in this
state is going to grow, and we need to employ
every tool available to meet that demand, in-
cluding continued reliance on the consumptive
use of water tributary to the Delta.” Westlands
also takes exception to the idea of a new gov-
erning body for the Delta. “We don’t know
what this new super bureaucracy is going to
look like. We don’t know where this type of
governmental mechanism has served compet-
ing interests well. There’s a lot of ambiguity
about this new authority.”

Levine says what needs to happen now is for
“lofty plans to become specific projects. I think
the biggest problem is that there are a whole
variety of studies and entities doing different
parts of studies, but there doesn’t seem to be a
mechanism for all the interest groups to get
involved in the studies, review them, or have
third-party technical assistance to help review
them. Without that and perhaps even before the
studies are done, there’s an impatience by every-
one involved to propose solutions before the
data are really out there. In the business com-
mittee, we’re used to making decisions with the
facts and the technical and economic data and
some peer review and third-party objectivity. If
that is done with Delta Vision, we’re hopeful the
process the governor initiated will lead to some-
thing remarkable decided by the parties, not a
judge, and that it will make it through the legis-
lature and get built.”

While enviros seem generally pleased with
Delta Vision, they are hardly complacent. Says
Bobker, “The big worry is that here we have the
first real attempt at an enlightened policy for
the Delta, and yet we could have the rug swept out
from underneath us because of a bond that dic-
tates spending money on solutions that have
been chosen because of a particular constituency.”

Says Phil Isenberg, who chaired the Task
Force, “All the governor asked us to do is give
our best recommendations. I don’t have any
idea whether Delta Vision will be adopted.
Everybody wants to see their own preferred ver-
sion of the vision, but everyone’s uncomfortable
with the status quo. No one wants to see any
reduction of water supply for themselves, but a
lot are in favor of reducing someone else’s. We
have said: People have to rely on the Delta less.
The details will be worked out in the strategic
plan, we hope.”

See: www.deltavision.ca.gov

BLUEGREEN BLUES

Not all the troublemakers in the Estuary
are newcomers. Case in point: the toxic
cyanobacterium Microcystis aeruginosa
(cyanobacteria are a group of microorgan-
isms formerly known as bluegreen algae.)
Common in freshwater and brackish
ecosystems, Microcystis has been historically
present in the Delta. But only since 1999
has it produced seasonal blooms, with single
bacteria grouping into colonies that can
look like coats of green paint on the water’s
surface. The blooms, first observed in the
south Delta and the lower San Joaquin
River, can reduce dissolved oxygen concen-
trations and taint drinking water.

Of greater concern, some strains of
Microcystis produce a toxin, microcystin,
that is released into the water when cells
die. Symptoms of microcystin toxicity in
humans include nausea, vomiting, and
cramps; long-term exposure can cause liver
damage, including cancer. In 2003, a survey
in the upper Estuary led by P. W. Lehman of
the California Department of Water
Resources found hepatotoxic microcystins at
every station sampled. The toxin has the
potential to enter the food web.

To identify patterns of seasonal variation
in toxicity, Lehman and associates con-
ducted further sampling in the summer and
fall of 2004 and 2005. They also analyzed
potential Microcystis consumers for traces
of the toxin. In the first year, microcystin levels
peaked in August and September when streamflow
was low, water was warm, and
total phytoplankton biomass was high.

In earlier laboratory tests the copepod
Eurytemora affinis, a major food source for
estuarine fish, did not feed on Microcystis.
But the 2004-05 study found toxic micro-
cystin throughout the Delta’s food web: in
zooplankton, amphipods, clams, worms,
and juvenile fish. The highest levels were
observed in August 2004 during the peak of
the bloom.

Although there’s been speculation that
the Microcystis blooms might be associated
with the recent Pelagic Organism Decline
(POD), hard evidence appears to be lacking.
Even so, the prevalence of toxic microcystin
in the tissues of estuarine organisms sounds
another alarm for the health of the Delta,
including its recreational users.

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PEAT SPEAKS

Unlike the peat bogs of Northern Europe, the peatlands of the Sacramento-San Joaquin Delta have not yielded archaeological treasures or the bodies of sacrificial victims. But California’s peat has its own story to tell. Pollen grains preserved in peat are helping researchers reconstruct the Delta’s prehistoric ecosystems and climate.

Judith Drexler and her US Geological Service colleagues have teamed with scientists at UC Davis in the Rates and Evolution of Peat Accretion through Time (REPEAT) project, examining the peat archive to help guide future restoration efforts. Cores were taken from four pairs of Delta islands, each composed of a farmed island and a less disturbed marsh island. They used radiocarbon analysis to date the oldest deposits, on the Webb Tract and Venice Island, to 7,000 years before present. Peat deposits on the farmed islands were older than those on the marsh islands. Both accretion rates and organic matter measurements showed high variability through that slice of time.

The pollen content of the cores indicates shifts between meadow and freshwater marsh habitats, with some episodes of forested wetlands. A peat core from the Webb Tract revealed two points at which Delta plant communities underwent dramatic change. Around 5,000 years ago, the proportion of pollen from open-land plant communities dropped sharply, and pollen from forest and wetland communities and broad-ranging plant communities spiked. At the same time, pollen productivity fell to its lowest level in the core. A similar event occurred at about 4,200 years ago, although with a weaker signal. Both events were associated with drought conditions in the Pyramid Lake basin.

This valuable record of prehistoric changes is at risk: Delta agriculture has disturbed much of the peat column, not just the surface layers. On some islands, as little as 20% of the original peat deposit remains. The REPEAT researchers say losses, mainly through oxidation, will continue as long as present farming practices are maintained.

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HOW I SEE IT

ANOTHER LEVEE CYCLE

I’ve been following with some amusement and trepidation the recent controversy about vegetation on the U.S. Army Corps’ Sacramento River Bank Protection Project (“Debunking Levee Lore,” ESTUARY, October 2007).

I worked for Cal Fish & Game on this problem in the 1970s. I recognize the contributions of others to this issue, including Felix Smith (“Toxic Trespass, ESTUARY, October 2007) and A.L. Riley, then of the Department of Water Resources. Interestingly, at that time, conservation groups were mostly not involved. From time to time, I suggested that the Corps’ maintenance manual be changed to formalize, and institutionalize, the somewhat permissive attitude about vegetation the State Reclamation Board was adopting. I knew at that time that without formal changes, we could lose this vegetation. So now what’s happened? Back to the old manual rules, still in existence.

Something that’s been missing in the current discussion is the Endangered Species Act. I believe the act was the trigger for the relaxed standards. The act will come into play again, and may be a driving force in the current discussion. Bank swallows need dirt banks, and salmon need irregular banks and snags in the water. Elderberry beetles need a riparian ecosystem. This ecosystem approach is what we biologists argued for to mostly deaf ears in the 1970s. Are we going to strip the levees again in the name of public safety?

What we needed then, and still need, is to restore the river’s edge. Most of us know that the river was intentionally made narrow to scour out mining tailings from the Sierra. We advocated setback levees and “attached berms” to provide the space the vegetation needs along the river, but outside the levee cross-section. The engineers wouldn’t care if we plant trees outside the levee section. But that costs a lot of money, and land. The money was always just enough for emergencies, and adjacent landowners were seldom interested in selling any more land. And even in the environmental days of Gov. Jerry Brown, with a mostly environmentally friendly Reclamation Board, the Board would not condemn “environmental easements” for mitigation purposes. Without those, and a lot of money, we could not protect the old land surfaces, the “berms” along the river, a vegetated surface outside the levee section that no engineer would be worried about. Setback levees, except on the un-leveled Chico Landing to Red Bluff section of the river, were so radical that we could barely propose them.

Contrast the Sacramento-San Joaquin Delta levees. I was the first full-time project manager for the Fish & Game side of the Delta Levees Program in 1991. After the 1986 Delta levee breaks, the Federal Emergency Management Agency wouldn’t give the private levee districts money to repair their levees.

FEMA said the levees had been substandard, and uninsurable. The State of California felt it was important to restore and improve the Delta’s levees, and stepped in with the subventions and special projects funding programs authorized by SB 34, SB 1065, and AB 360.

This legislation was passed with provisions that levee work would not result in habitat degradation—and that mitigation is a project purpose and to be funded as part of levee rehabilitation. Fish & Game was given oversight on the disbursement of all funds, not merely a token review provision, which is all Fish & Game and U.S. Fish & Wildlife had on the Corps’ Sacramento River bank projects between Chico Landing and Red Bluff. Under AB 360, the standard was actually made stronger, to provide net habitat improvements concurrent with levee improvements.

I thank all who negotiated these provisions. And because of these provisions, we have seen net habitat improvement in the Delta. The Delta Levees Program has been brought into CALFED, and is one of the successful programs within the bigger picture of Delta fish and wildlife improvement. We now have attached berms, setback levees, and many habitat improvements. Thanks go to Department of Water Resources engineers and biologists who have been thinking broadly, and have embraced, proposed, and built habitat improvement projects. We have been sensitive to the concerns of the engineers, and with their help and lots of money and authority, we have not had the problems the managers of the Sacramento River and other rivers have had maintaining riparian ecosystems.

I’m suggesting that a similar program be developed upstream in the Sacramento River and its tributaries. Funding for mitigation has to be concurrent with levee engineering, and money provided for ongoing maintenance of habitat associated with levees. Perhaps the levee districts could find a source of money for habitat maintenance, along with levee maintenance. Apparently mitigation is not included as a project purpose on the Sacramento River, as the Sacramento River Bank Protection Project was authorized before current environmental laws went into effect. When the project was authorized, some money was set aside for “environmental features,” but it wasn’t well spent. Aesthetics also was not on the table at that time.

I wish every success to my successors who have taken on these battles. But history repeats itself.

–Ed Littrell is retired from Cal Fish & Game.

Delta habitat sites can be seen at http://www.dfm.water.ca.gov/dsmo/levees/projects.html
CONFERENCES & WORKSHOPS

MAR 13-14
THURS-FRI
ARUNDO/PHRAGMITES SYMPOSIUM
TOPIC: Current knowledge on the biology, ecology, impacts, and management of both species
LOCATION: Hyatt Regency Orange County, Anaheim, CA
SPONSOR: Western Society of Weed Science
http://www.wsweedscience.org

MAR 25
TUESDAY
DELTA NUTRIENT WATER QUALITY PROBLEMS
TOPIC: Nutrient loading & water quality impact modeling
LOCATION: Sacramento
SPONSOR: California Water & Environmental Modeling Forum
http://cwemf.org/
To register: technicalworkshop@cwemf.org

FEB
EVENINGS THROUGH FEBRUARY
HELP NEWS CROSS THE ROAD
TOPIC: Help volunteers carry California newts across Hillside Drive.
LOCATION: El Sobrante
SPONSOR: SPAWNERS, The Watershed Project
(510) 665-3538

MAR 8
SATURDAY
STEWARDSHIP WORK DAY
TOPIC: Help plant, mulch, and weed demonstration native plant gardens.
LOCATION: El Sobrante
SPONSOR: The Watershed Project
(510) 665-3538

EDITOR’S NOTE: In our December Conference Wrapup story, Oakland City Councilmember Jean Quan was mistakenly referred to as Jean Fong. Ariel Rubissow-Okamoto was inadvertently omitted as a contributing writer on the back page.

JOBS!

SENIOR WATER RESOURCES EXPERT
The Natural Heritage Institute seeks to hire a full-time senior water resources specialist to assume major responsibilities for existing projects and help build new projects. The initial projects involve physical ecosystem restoration projects in California, developing management plans for California watersheds, and may include substantial responsibility for development and propagation of a toolkit of water management innovations in the transboundary and global context. This position could be in either NHI’s headquarters office in San Francisco or in a reopened office in Sacramento. Serious candidates should respond with a letter of interest and qualifications, C.V., and a representative writing sample to:
Ms. Jessica Peyla Nagtalon
Natural Heritage Institute
jobs@n-h-i.org
Please indicate “Applicant” in the subject line. We would prefer to hear from you initially in writing rather than by phone.

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BOTTLED WATER AND ENERGY: GETTING TO 17 MILLION BARRELS.
http://www.pacificinst.org/

BREEDING BIRD ATLAS OF SANTA CLARA COUNTY, CALIFORNIA.

FLOODSONG CONTINUED
between spring flooding and grosbeak nest survival along the Sacramento River.

Small found nest predation to be the most important factor in nest failure, far outweighing weather or human disturbance. Although the specific culprits were not identified, spotted towhees in riparian habitats lose eggs and nestlings to western scrub jays, red-shouldered hawks, brown-headed cowbirds, raccoons, brown and black rats, and western yellow-bellied racers.

She looked at several variables that could explain predation rates, including proximity to farmland that might host cowbirds and rats.

“Flood timing was the only variable that showed any effect on nest survival and predation,” she reported. “Floods close to the breeding season may depress nest predator populations, particularly rodents, resulting in higher nest survival for this canopy-nesting species.” Even arboreal black rats may be driven to upland sites by flooding, giving nesting grosbeaks a break.

Small found similar nest survival rates and flood effects in both mature and restored riparian habitats. She cautions that her findings are specific to one bird species and one river, and shouldn’t be extrapolated too far.

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