

The Runoff Rundown

A NEWSLETTER OF THE WATER EDUCATION FOUNDATION

Flexible Farming: Growers Adapt to Runoff Regulation

BY GLENN TOTTEN

Sources of water pollution in California are many and diverse, and one of the last to be brought under state regulation is runoff from irrigated agricultural lands. Growers in the state's major farming areas are facing, some for

the first time, new requirements to monitor runoff and, when found, to clean it up. The development of "conditional waiver" programs by several regional water boards is challenging growers on millions of acres of irrigated land to adopt new

approaches to controlling runoff to creeks, drains and canals.

Famously independent, California's growers have responded to the challenge to reduce polluted runoff by developing strategic alliances not only among themselves but with watershed groups and others interested in protecting water quality. Singly and in coalitions, growers have started monitoring runoff for pesticide residues, sediment, nutrients, metals and other contaminants that make up nonpoint source pollution.

Different approaches are being tried in different parts of California that are attuned to regional differences in grower communities, climate, irrigation practices, etc. The

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Dear Readers,

Nonpoint source water pollution has emerged as California's and the nation's top water pollution problem. The Water Education Foundation is proud to be at the forefront of this emerging issue with *The Runoff Rundown*, a newsletter that will focus on how stakeholders and regulators are using creative strategies to address the challenges posed by nonpoint source pollution. It is our hope that this newsletter will become a forum for sharing real-world experiences that have contributed to reducing nonpoint source pollution.

This first issue of *The Runoff Rundown* focuses on a very recent effort to control nonpoint source water pollution: the use of conditional waivers in the agricultural sector. Though this effort is still in its infancy, agriculture has formed alliances both within its own ranks and with various watershed groups to address the pollution problems posed by runoff from irrigated lands.

In future issues, we plan to bring you more examples of successful strategies being used across California to keep nonpoint source pollutants out of the waterbodies we all depend on for a host of uses. If you have a story to tell about how to reduce nonpoint source water pollution, we hope you'll share it with your peers through *The Runoff Rundown*. ♦

Email your story ideas to Glenn Totten, gtotten@watereducation.org

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Flexible Farming

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two main models that have emerged for growers to comply with the conditional waivers are watershed-based coalitions involving growers and other organizations or single farmers who hold individual waivers but who may band together to carry out their monitoring responsibilities.

Participants and many observers are encouraged that the response to date from the agricultural community may offer the best hope yet of reducing one of the largest sources of contaminated runoff to California waterbodies. Some obstacles remain, including legal issues, and not all growers have signed up for waiver coverage, but a consensus seems to have emerged that cooperating among themselves and with Regional Boards that have adopted conditional waivers is a better strategy for growers than resistance.

This issue of *The Runoff Rundown* focuses on the different approaches taken by California's agricultural community and regulators to reduce contaminated runoff from irrigated lands.

Central Valley Coalitions

"What's going on on the ground is just amazing. The folks out on the ground have really stepped up and made this happen," enthuses David Guy, general manager of the North-

ern California Water Association (NCWA) and an organizer of the Sacramento Valley Water Quality Coalition, when he talks about the coalition approach that characterizes the Central Valley's approach to runoff control. The coalition is one of nine that have formed in the Central Valley in response to a conditional waiver program for irrigated runoff adopted in July 2003 by the Central Valley Regional Board. Since then, the Central Coast Regional Board has adopted a waiver, and the Los Angeles Regional Board is working on one.

By far the biggest laboratory in which the conditional waiver approach is being used is the vast expanse covered by the Central Valley Regional Board, which extends roughly from Redding to Bakersfield. The region includes most of the acreage supporting California's \$33 billion agricultural industry.

The Central Valley's coalition approach is a byproduct of the generally larger agricultural operations in the region and of the Regional Board's approach to waivers. While the waiver program it adopted in July 2003 allows individual growers to seek coverage, the Central Valley Regional Board encouraged the approximately

25,000 farmers who could come under its terms to join coalitions. Most coalitions report better than 50 percent participation among growers in their areas of coverage.

The Central Valley Regional Board was the first to adopt a waiver program, which was mandated by enactment of legislation in 1999 (SB 390) that ended a voluntary approach to reducing polluted runoff. Although the term "waiver" might imply excusing a party from compliance, in fact the legislation (Water Code Section 13269) had the effect of tightening regulation of polluted runoff from agricultural operations by giving regional boards authority to attach conditions to such discharges. Among the conditions in the Central Valley Regional Board's waiver regulations are requirements that growers monitor runoff, report their findings and clean up sources of discharges when they exceed established standards. The mandate to curb nonpoint runoff stems from the 1987 amendments to the federal Clean Water Act.

Monitoring is to occur in three phases. Phase 1, begun in late 2004 and early 2005, requires sampling of



Stakeholders attend a meeting of the Irrigated Lands Public Advisory Committee.

physical water parameters (such as pH, electrical conductivity and dissolved oxygen), evaluation of pesticide use, drinking water quality (*E. coli* and organic carbon) and toxicity testing. Phase 2, to begin two years after the start of Phase 1, repeats the physical parameters monitoring, but adds monitoring requirements for five classes of pesticides, eight metals and three nutrients. Phase 3, to begin two years after the start of Phase 2, focuses on determining if management practices used by farmers yield statistically significant changes in waste concentrations of runoff. The full text of the monitoring requirements is at www.waterboards.ca.gov/centralvalley/adopted_orders/Waivers/R5-2003-0826-mrp_qapp.pdf.

Any samples that find toxicity must be reported to the regional water board. Sites initially indicating toxicity are resampled. Coalition groups must file annual reports with the regional water board by April 1 summarizing their monitoring activities and findings. At a Feb. 14, 2005, meeting of the Irrigated Lands Public Advisory Committee, representatives of coalition groups reported few samples that indicated toxicity during the Phase 1 monitoring.

The regional water board has not set a numerical or percentage goal for reducing polluted runoff from irrigated lands. Rather, its long-term goal is to promote and protect water quality and improve it where it is

degraded by encouraging growers to take actions that will change agricultural practices to reduce polluted runoff from irrigated lands, said Danny Merkley, agricultural coordinator for the State Water Resources Control Board (State Board).

Because regulation of polluted runoff is new to many growers, there has been some resistance to the waiver approach. However, the Central Valley coalitions have helped smooth the transition by actively recruiting growers in the Central Valley to seek waiver coverage. Coalitions also have been instrumental in collaborating with other watershed-based groups such as irrigation districts, conservation groups and even environmental organizations.

For their membership in a coalition, growers pay a fee, usually

based on acreage, that finances the group's activities such as preparation of watershed evaluation reports, monitoring and reporting. Fee structures vary with each coalition. Coalitions also represent their members' interests in discussions with the Regional Board.

There has been some confusion over who is considered a discharger of runoff under the Central Valley Regional Board's conditional waiver. The simple answer is that any agricultural operation that irrigates is covered, but to clarify matters, the Regional Board issued fact sheets and a pamphlet called "What is a Discharger" (download the pamphlet at www.waterboards.ca.gov/centralvalley/programs/irrigated_lands/discharger1.pdf).

Sacramento Valley Coalition

One of the largest coalition groups is the Sacramento Valley Water Quality Coalition, covering 1.75 million acres and more than 7,000 participants, most of them farm-related entities. Its regional plan for addressing runoff from irrigated lands was approved in 2004.

The Sacramento Valley comprises 22 percent of California's total farmland, and provides important habitat for migrating waterfowl along the Pacific Flyway as well as for half the species in California

Runoff sampling is required under the conditional waiver.



listed as threatened or endangered under the Endangered Species Act. In addition, several cities along the Sacramento River draw their drinking water from the river or its tributaries.

All of these uses mean the Sacramento Valley coalition must coordinate its activities with many other interests sharing the watershed, including municipalities, Resource Conservation Districts (RCDs) and waterfowl groups such as Ducks Unlimited. But it also means there is much data on the watershed that already has been collected and can be used as a foundation on which to build the monitoring program and management practices.

The Sacramento Valley coalition was formed under auspices of NCWA, which represents more than 70 water suppliers and individual farmers who irrigate about 900,000 acres of farmland. The coalition's roots date back to cooperative efforts in the mid-1980s to limit discharges of rice pesticides and improve habitat for salmon. It has a memorandum of understanding with another coalition, the California Rice Commission, whose members farm 500,000 acres inside the Sacramento Valley coalition's territory. Under the agreement, the two groups meet twice a year, prior to the storm and irrigation sampling seasons, to coordinate their sampling plans.

The Sacramento Valley coalition's organization mimics its regional hydrology with 10 tributary subwatershed groups feeding into a central coalition office in Sacramento. The subwatershed groups work closely with coalition growers on monitoring, management plans and other compliance issues. This "nested" approach allows for expression of local viewpoints within the broader coalition and provides a feedback loop to disseminate information from the coalition leadership to its members, according to Guy. Each subwatershed group has developed its own unique

Central Valley Coalition Groups

California Rice Commission

500,000 acres of rice production in nine counties north of Sacramento

(Contact: Tim Johnson, 916/929-2264; tjohnson@calrice.org)

East San Joaquin Water Quality Coalition

1.2 million acres in the sub-watersheds of the lower Stanislaus, Tuolumne and Merced rivers

(Contacts: Parry Klassen, 559/325-9855; parryk@comcast.net or Wayne Zipser, 209/522-7278, waynez@stanfarmbureau.org)

Goose Lake Regional Resource Conservation District

Modoc County **(Contact:** Kim Wolfe, 530/515-9655, kwolfe7@frontiernet.net)

Root Creek Water District

9,400 acres in Madera County

(Contact: Marc Carpenter, 559/449-2700, mcarpenter@ppeng.com)

Sacramento Valley Water Quality Coalition

1.75 million acres covering 21 counties from Sacramento north to the Oregon border

(Contacts: Aaron Ferguson, NCWA, 916/442-8333; aferguson@norcalwater.org or Olen Zirkle, Ducks Unlimited, 916/851-5346, ozirkle@ducks.org)

San Joaquin County & Delta Water Quality Coalition

500,000 acres in San Joaquin County and the Sacramento-San Joaquin Delta region

(Contact: John Meek, San Joaquin County Resource Conservation District, 209/472-7127, jmeek@jmeek.com)

Southern San Joaquin Valley Water Quality Coalition

4 million acres in the Tulare Lake Basin of Fresno, Kern, Kings and Tulare counties

(Contacts: David Orth, Kings River Conservation District, 559/237-5567, dorth@krcd.org or William Thomas, Livingston & Mattesich, 916/442-1111, wthomas@lmlaw.net)

Westlands Water District

600,000 acres on the west side of Fresno and Kings counties

(Contact: Thaddeus Bettner, 559/241-6215, tbettner@westlandswater.org)

Westside San Joaquin River Watershed Coalition

550,000 acres on the west side of the San Joaquin river in Fresno, Madera, Merced and Stanislaus counties

(Contact: Joseph C. McGahan, Summers Engineering, 209/826-9696, jmcgahan@summerseng.com)

For documents and program information on the Central Valley irrigated lands waiver, call (916) 464-3291 or visit www.waterboards.ca.gov/centralvalley/programs/irrigated_lands/index.html#Contact

The Sacramento Valley Water Quality Coalition Area



The coalition covers 1.75 million acres of irrigated lands. Source: Sacramento Valley Water Quality Coalition

leadership style. In some, the county agricultural commissioner has taken the lead role; in others it is an RCD or the county farm bureau, he said.

The first round of monitoring was completed at the end of January, with three samples in the Sacramento Valley coalition's territory indicating possible toxicity. Sampling sites include agricultural drains, canals, sloughs, creeks and other water courses. Under procedures outlined in the conditional waiver, samples with toxicity hits trigger followup tests to determine the general class of the chemical causing toxicity (metals, pesticides, etc.) and the potential source(s) of the chemical(s) in the watershed.

Members of the Sacramento Valley coalition are charged a fee that pays for the group's monitoring activities and representation before the regional water board. Each subwatershed group in the coalition determines its own fee, but they are all based on acreage under cultivation, Guy said. Members of all coalitions likely will face another fee soon because the State Board is considering four options for a fee that would be collected to support conditional waiver program activities such as enforcement, oversight of coalition groups and preparation of a programmatic environmental impact report. More information on these proposals is available from the State Board's Merkley, at (916) 341-5501, or at www.waterboards.ca.gov/centralvalley/programs/irrigated_lands/Presentations/PACFeeProp021405.pdf

Guy said the Sacramento Valley coalition has made great progress to clear formidable organizational hurdles, recruit members and start monitoring. He credited the pre-existing group of rice growers and other stakeholders with helping to spread the coalition concept to other growers in the valley.

One of those stakeholders is Ducks Unlimited, a group dedicated to conserving and restoring wetlands and waterfowl habitat. Ducks

Unlimited has worked closely for many years with rice growers in the Sacramento Valley to protect wetland habitat for migrating waterfowl, said Olen Zirkle of the Ducks Unlimited regional office in Sacramento. This relationship with rice growers and long standing relationships with water districts allowed DU to assume a major role in formation of the Sacramento Valley coalition, he said.

Ducks Unlimited put together the watershed evaluation report for the coalition, a crucial first step toward developing a monitoring plan, Zirkle said. The organization also did mapping for the coalition based on Geographic Information System (GIS) modeling Ducks Unlimited developed earlier with funding from the Packard Foundation.

The data collected for the watershed evaluation report helped coalition leaders identify high priority drainages for monitoring. A total of 28 sites are being monitored in Phase 1. Of the first storm season samples collected in January 2005, toxicity as defined by the regional water board's criteria was exhibited at three sites, said Aaron Ferguson, regulatory affairs specialist for NCWA. None of the three toxicity hits reached the "significant" threshold for which the waiver requires a more rigorous Toxicity Identification Evaluation (TIE), he said, but coalition leaders met with subwatershed groups to discuss the findings.

A Contrast in Styles

Coalition groups emerged as the compliance tool of choice in the Central Valley, but the Central Coast, Region 3, extending from Santa Cruz to northern Ventura County, took a different path. There, growers are required to file individual notices of intent to seek coverage under the Central Coast Region's waiver, but they have the option of joining a cooperative monitoring program. That cooperative monitoring program is being

managed by a nonprofit group – Central Coast Water Quality Preservation, Inc. (CCWQP) – that conducts monitoring but does not represent the growers in their dealings with the regional water board.

About 55 percent of growers in the Central Coast Region submitted notices of intent by a January 1, 2005, deadline, according to Johnny Gonzalez, water resources control engineer for the State Board. He said the target is to have 80 percent enrollment by the end of 2005. He credited a series of outreach workshops and enrollment training sessions conducted by the regional water board prior to the January 1 deadline with raising grower awareness and interest in seeking conditional waiver coverage.

In addition to the outreach to growers, the Central Coast Regional Board required all growers in the region to seek coverage under its conditional waiver, said Dennis Dickerson, executive director of CCWQP. That avoided some of the questions raised in the Central Valley about who needed to seek waiver coverage, he said. Growers in the Central Coast Region can opt to join the cooperative monitoring conducted by CCWQP when they file their notices of intent.

After a grower in the Central Coast Region files a notice of intent, it is placed in one of two regulatory tiers. Growers assigned to Tier 1 qualify for reduced reporting requirements because they have completed a 15-hour farm water-quality education course and a developed a farm plan to manage runoff. Growers in Tier 2 must submit annual reports until they complete the education require-

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*– David Guy,
Northern California
Water Association*

ments and their farm plan.

Whereas Central Valley growers assess themselves to pay for coalition group services, seed money for CCWQP came from funds derived from two enforcement settlement agreements.

These funds, approved for distribution to CCWQP by the regional water board, are directed to CCWQP through two foundations, National Fisheries Wildlife Foundation and the Community Foundation of Monterey County. CCWQP is seeking grants totaling \$2.5 million from state bond funds to conduct monitoring to determine agricultural sources of persistent water quality impairments in the region, to implement agricultural management practices in three specific watersheds and to implement management practices in San Luis Obispo and Santa Barbara counties.

More information about the Central Coast Region's agricultural waiver is available from Alison Jones at (805) 542-4646 or by visiting www.waterboards.ca.gov/centralcoast/AGWaivers/Index.htm

The Los Angeles Regional Board (Region 4), covering mainly the coastal watersheds of Los Angeles and Ventura counties, is working on an approach that blends the coalitions of the Central Valley with the individual waiver coverage of the Central Coast. The Los Angeles Regional Board has yet to propose a conditional waiver, but it is meeting with stakeholders to work out details of its approach, which most likely will include an offer of individual waivers and a waiver for a small coalition group formed by the Ventura County Farm Bureau.

Summary

Different approaches are being taken in different regions around California to reduce contaminated runoff from irrigated lands. In the unique Central Valley, with its typically larger growers, coalition groups have emerged to bring waiver coverage to vast tracts of land, but in the smaller Central Coast Region it is individual farmers who are taking the lead. Region 4's approach so far has been a blend of coalitions and individual growers.

Regulation of runoff discharges to water is new to much of the agricultural community, but Merkley says growers are a resourceful and resilient lot who will come up with creative solutions if given leeway to do so. Guy said growers in the Sacramento Valley coalition have taken a can-do approach to the Central Valley Regional Water Board's waiver. "Never once in our coalition meetings have I heard people say, 'We shouldn't be doing this,'" he said. Likewise, Dickerson credited local growers in Region 3 with taking the initiative to form a voluntary monitoring organization.

"A one-size-fits-all approach won't work in California," says Merkley. A former farmer himself, Merkley notes that the diversity of California's agriculture and its hydrologic regions argues against a uniform approach. All of the waiver programs share the same goal of promoting and protecting water quality, with improvement where water quality is degraded, Merkley said. Within that goal there is room for different approaches that are tailored to variations in regional hydrology, agricultural practices and community organization, he said.

But some of the approaches have drawn criticism, especially from the environmental community. DeltaKeeper and others have sued the Central Valley Regional Board, claiming that board's waiver violates California's Porter-Cologne Act by "exempting" thousands of growers from nonpoint source discharge limitations that apply to municipalities and industry (*Deltakeeper et al. v. California Regional Water Quality Control Board*, No. 04CS00235, Sacramento County

Superior Court). The case is working its way through the courts.

Former State Board Member Gary Carlton says the waiver program has made tremendous progress in only two years, moving a largely unregulated industry into position to monitor discharges and develop management practices to reduce runoff. He credits outreach by the Central Valley Regional Board to the grower community for successes that board's program has achieved so far.

Despite outreach from coalitions and the regional water board, some growers have not sought coverage under the waiver, but progress is being noted. "We're starting to reach a level of awareness among growers of their need to file," said Bill Croyle, who heads the Central Valley Region Board's ag waiver program.

Still, a number of issues remain to be addressed, especially in the Central Valley. There is the litigation challenging the validity of the waiver there. Some growers, notably a group in Nevada County, are asking the Central Valley Regional Board to consider a low-impact waiver for irrigated lands with minimal runoff. Croyle said regional staff has studied the issue and expects to issue a proposal in May or June.

Another issue that could come up soon is extension of the Central Valley Regional Board's waiver to groundwater. One coalition leader called that a "hot button" issue for farmers. Croyle said Central Valley Regional Board staff will meet with their State Board counterparts to clarify groundwater issues before proceeding with any extension to groundwater.

Meanwhile, the Central Valley's waiver is scheduled to expire Dec. 31, 2005. Staff has proposed that it be extended to the end of 2006 to allow time to review at least two seasons of data from water quality monitoring and the management plans submitted by coalition groups. ♦

Legislation Targets Conditional Waivers

Two bills that would amend provisions of state law pertaining to conditional waivers have been introduced in the state Legislature. One measure, SB 646 by Sen. Sheila Kuehl, D-Los Angeles, would amend Water Code Section 13269 to prohibit issuance of a conditional waiver for any discharge into a water body that is identified as impaired under Section 303(d) of the Clean Water Act. It also would require payment of an annual fee as a condition of coverage under any conditional waiver issued by the State Board or a regional water board.

The second bill, AB 1271 by Assemblymember Sam Blakeslee, R-San Luis Obispo, specifically targets the Central Coast Regional Board's conditional waiver. It would add Section 13275 to the Water Code to prohibit the Central Coast Regional Board from requiring a person subject to its conditional waiver for irrigated agricultural discharges to monitor the discharges more than once every two years if the regional water board finds that the results of the most recent monitoring indicate only a "minimal amount of waste" in the discharges. To get copies of either bill, visit <http://www.leginfo.ca.gov/bilinfo.html>

Nonpoint Source News

Statewide TMDL Guidance in Preparation

A guidance document to help regional water boards develop and establish Total Maximum Daily Loads (TMDLs) is under development by the State Water Resources Control Board. The guidance is designed to facilitate the development of plans to address impaired waters in over 1,800 waterbody/pollutant combinations in California that currently do not meet the standards necessary to protect beneficial uses, including domestic and municipal supplies, recreational uses, fish, wildlife and aquatic resources and agricultural supply. One waterbody can be listed for numerous pollutants. The State Board was scheduled to vote on the statewide policy at its March 16 meeting, but the vote was deferred.

TMDLs are emerging as the key regulatory tool for measuring pollutant loads and allocating responsibility for improving the quality of the state's waters. A TMDL is the maximum amount of a pollutant that a waterbody can assimilate without exceeding water quality standards. The guidance includes an eight-step recommended process for identifying actions that will lead to restoration of waterbody conditions and ultimate removal of the impaired water designation. The process recognizes that adaptive management actions will be needed as new information emerges. For more information, contact Ken Harris at (916) 341-5500 or kharris@waterboards.ca.gov. ♦

US EPA Issues Pesticide Interpretation

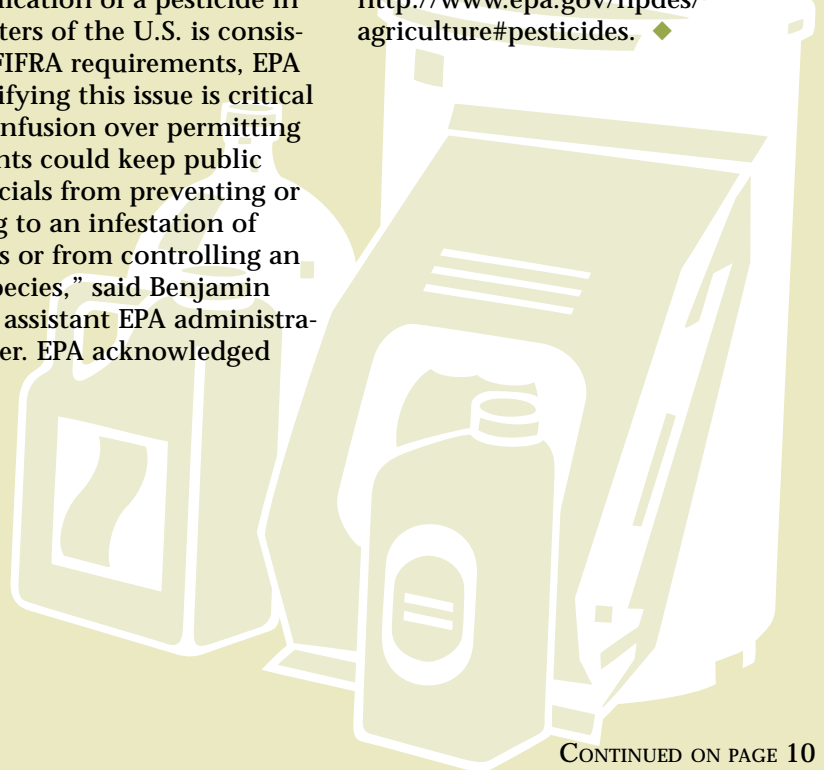
The application of pesticides over, directly to or near waters of the United States does not require a National Pollutant Discharge Elimination System (NPDES) permit if the application is consistent with all relevant requirements (those relevant to protecting water quality) under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), according to an interpretive statement issued in January by the U.S. Environmental Protection Agency. However, the agency said it is still reviewing the circumstances under which a pesticide applied according to FIFRA requirements might later become a waste subject a discharge permit.

The statement clarifies a longstanding policy that a Clean Water Act permit is not required where application of a pesticide in or near waters of the U.S. is consistent with FIFRA requirements, EPA said. "Clarifying this issue is critical because confusion over permitting requirements could keep public health officials from preventing or responding to an infestation of mosquitoes or from controlling an invasive species," said Benjamin Grumbles, assistant EPA administrator for water. EPA acknowledged

that its interpretation is controversial and said it expects to be sued on the issue.

In California, discharges of pesticides in waters of the U.S. are governed by several statewide general NPDES permits issued by the State Board after a March 2001 decision by the U.S. Court of Appeals for the Ninth Circuit in *Headwaters, Inc. v. Talent Irrigation District* (243 F.3d 526). Currently there are two such permits, one for aquatic weed control and one for aquatic vector control. California's general NPDES permits for discharges of aquatic pesticides are available at: <http://www.waterboards.ca.gov/aquatic/index.html>.

The EPA interpretive statement and proposed rule are available at: <http://www.epa.gov/npdes/agriculture#pesticides>. ♦



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Relief Ordered for Boat Sewage

The State Board has issued a general order requiring additional facilities to be installed in Huntington Harbour and Newport Bay to collect sewage from boats. The order requires three additional pumpout facilities and three dump stations to be installed in Huntington Harbour and five additional pumpout facilities and three dump stations for Newport Bay. The additional facilities are needed, according to the State Board, to reduce discharges of sewage from recreational boats that have affected beneficial uses such as shellfish harvesting and water contact recreation.

Twelve marinas at the two water bodies are required to complete construction of the new facilities this year. Existing pumpout facilities and dump stations at Huntington Harbour and Newport Bay were found by the Santa Ana Regional Water Board to be inadequately

maintained and of insufficient number to service the growing number of recreational boats using those water bodies. The State Board said the additional facilities are necessary for both water bodies to comply with a federal prohibition on discharges of treated or untreated sewage to environmentally sensitive areas such as shellfish

beds, coral reefs, fish spawning areas, and drinking water sources. A copy of the State Board's order is at <http://www.waterboards.ca.gov/resdec/wqorders/2004/wqo/wqo2004-0017.pdf>.

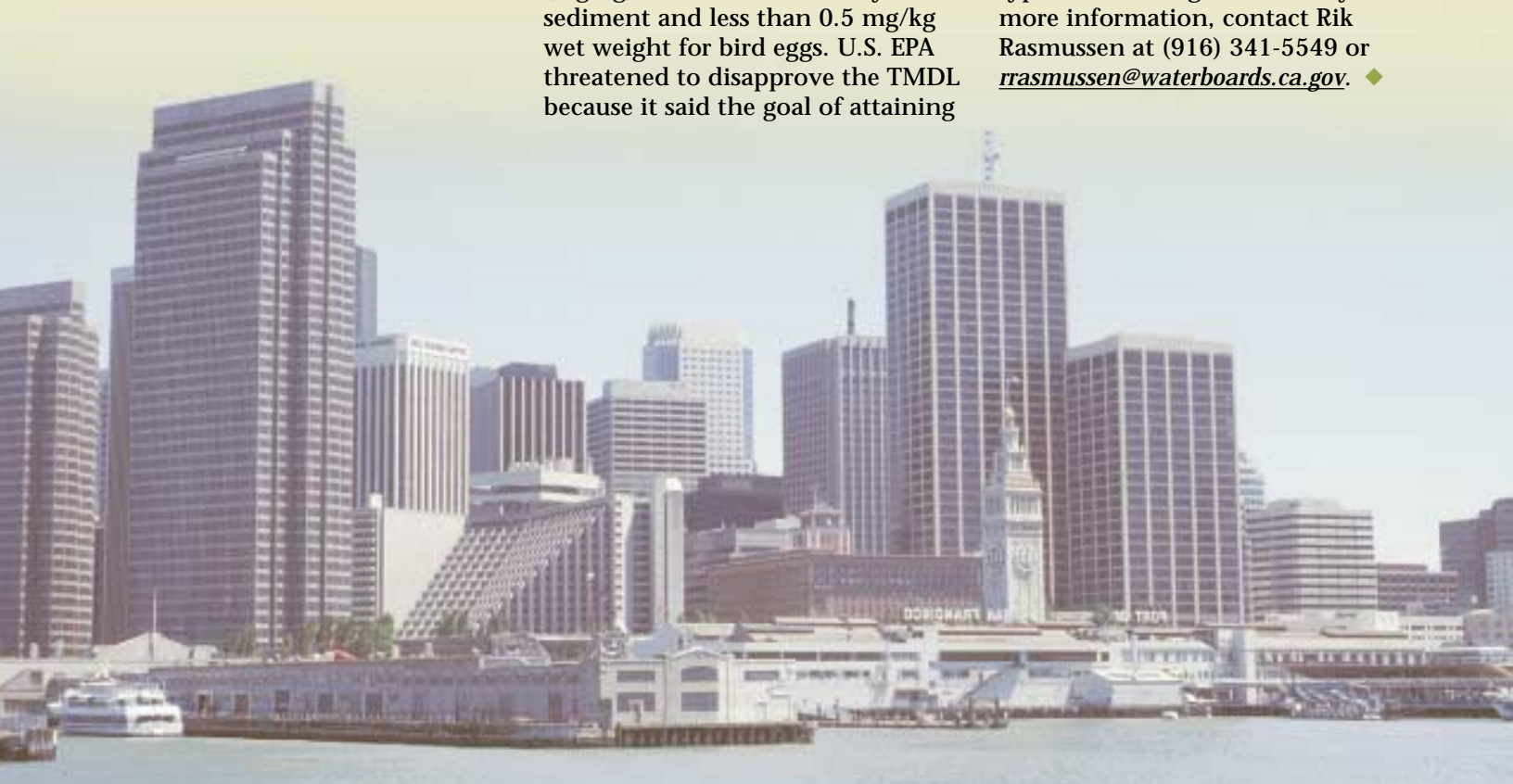
For more information on the order, contact Diane Edwards at (916) 341-5908 or dedwards@waterboards.ca.gov. ♦

State Board Defers San Francisco Bay Mercury TMDL

The State Board has deferred approval of a TMDL for mercury in San Francisco Bay adopted in 2004 by the San Francisco Regional Water Board. After considering adjustments to the TMDL, the State Board opted to disapprove the TMDL. That action will give the Regional Board and stakeholders a year or more to discuss changes. The disapproved TMDL for San Francisco Bay included numeric targets of 0.2 milligrams of mercury per kilogram (mg/kg) of fish tissue and dry sediment and less than 0.5 mg/kg wet weight for bird eggs. U.S. EPA threatened to disapprove the TMDL because it said the goal of attaining

a four-day numeric average mercury water quality objective of 0.025 micrograms per liter would take more than 120 years to achieve.

Much of the mercury contamination of the Bay dates back to the Gold Rush era, when runoff from mercury mining operations settled in sediments. Mercury bioaccumulates in fish, a process that makes it available to humans who consume the fish. Several state health advisories have been issued cautioning against eating many types of fish caught in the Bay. For more information, contact Rik Rasmussen at (916) 341-5549 or rrasmussen@waterboards.ca.gov. ♦



Nonpoint Source Funding

Opportunities

Need funding for a project to reduce or eliminate nonpoint source discharges? Several funding opportunities currently are available from state and federal sources, including:

Integrated Regional Water Management Grant Program provides grants from Proposition 50 for development and implementation of Integrated Regional Watershed Management Plans. These grants are for projects to protect communities from drought, protect and improve water quality, and improve local water security by reducing dependence on imported water. Funding for this grant program is split between the Department of Water Resources and the State Board. The agencies will utilize a joint application process for awarding grants. Planning grant applications are due May 12, 2005, and implementation grant applications are due July 14, 2005. For more information please check <http://www.grantsloans.water.ca.gov/grants/integregio.cfm> and <http://www.waterboards.ca.gov/funding/irwmgp/index.html>.

Dairy Water Quality Improvement Grant Program provides funding from Proposition 50 bond funds for regional and on-farm dairy projects to address water quality impacts from dairies. Guidelines for the program will be completed by June 2005 after consultation with all affected parties and the public. Draft guidelines are available for public review until April 15, 2005. Applications for grant funds will then be requested and spending may begin by early 2006. For further information see <http://www.waterboards.ca.gov/funding/dairy.html>.

The Agricultural Drainage Loan Program was created by the

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TMDL Roundup

Total Maximum Daily Load (TMDL) standards establish the allowable amount of a specific pollutant that a waterbody can absorb. TMDLs establish numeric indicators of water quality and assign proportional responsibility among discharge sources for controlling the pollutant. An update on recent TMDL activity by California Regional Water Quality Control Boards:

San Francisco Bay (Region 2) – Hearings scheduled for April 20 and June 15 on TMDL for **pathogens in Tomales Bay Watershed**
Contact: Farhad Ghodrati, 510/622-2331; documents available at www.waterboards.ca.gov/sanfranciscobay/TMDL/Tomales%20Bay%20Pathogens/tomalesbaypathogens_basin_plan.pdf

Los Angeles (Region 4) – Public hearing scheduled for June 2 on TMDLs for **metals and toxic pollutants** (PCBs, metals, polyaromatic hydrocarbons, historic pesticides) in **Ballona Creek**
Contact: Rebecca Christman, 213/576-6757, or visit www.waterboards.ca.gov/losangeles/html/meetings/tmdl/tmdl_ws_ballona_creek.html#05_0328

Colorado River (Region 7) – Adopted TMDL Jan. 19, 2005, of 200 mg/L for **sedimentation/siltation in three Imperial Valley agricultural drainage systems** that empty into the Salton Sea (to view staff reports, visit www.waterboards.ca.gov/coloradoriver/tmdl/TMDL_Status.htm)

Santa Ana (Region 8) – Adopted TMDL for **bacterial indicators** for primary recreational uses in the **Middle Santa Ana River Watershed**
Contact: Hope Smythe, 951-782-4493; staff report available at <http://www.waterboards.ca.gov/santaana/pdf/02-03-05/18.pdf>
www.waterboards.ca.gov/santaana/pdf/02-03-05/18.pdf

San Diego (Region 9) – Adopted **dissolved copper TMDL for Shelter Island Yacht Basin** Feb. 9, 2004
Contact: Lesley Dobalian, 858/637-7139, or ldobalian@waterboards.ca.gov; documents available at www.waterboards.ca.gov/sandiego/tmdls/shelter%20island.html#SIYB_TMDL

Adopted **total nitrogen and total phosphorus TMDLs for Rainbow Creek** 2/9/2005
Contact: Benjamin Tobler, 858/467-2736 btobler@waterboards.ca.gov; documents available at www.waterboards.ca.gov/sandiego/tmdls/rainbow%20creek.html#TMDL_Rainbow

Hearing scheduled for April 28, 2005, on **TMDL for copper, lead and zinc in Chollas Creek**
Contact: James Smith, 858/467-2732 or jsmith@waterboards.ca.gov; documents available at www.waterboards.ca.gov/sandiego/tmdls/chollas%20creek%20metals.html#cc_metals

Water Conservation and Water Quality Bond Act of 1986 to address treatment, storage, conveyance or disposal of agricultural drainage water that threatens California waters. There is a funding cap of \$20 million for implementation projects and \$100,000 for feasibility studies. See more information at <http://www.waterboards.ca.gov/funding/agdrain-index.html>.

The Agricultural Drainage Management Loan Program provides loan and grant funding for Drainage Water Management Units. Drainage Water Management Units are land and facilities for the treatment, storage, conveyance, reduction or disposal of agricultural drainage water that, if discharged untreated, would pollute or threaten to pollute California waters. This program is available to any city, county, district, joint power authority, or other political subdivision of the state involved with water management. For more information, check out: <http://www.waterboards.ca.gov/funding/agdrain-manage.html>.

Federal Clean Water Act Section 319(h) NPS Grant Program is a federally funded program that provides grants to limit pollutant effects caused by nonpoint source activities. For more information, contact Lauma Jurkevics at (916) 341-5498 or ljurkevics@waterboardsca.gov.

For additional information on the State Board's funding programs please visit <http://www.waterboards.ca.gov/funding/index.html>. Also, subscribe to the State Board's electronic mail list servers at http://www.waterboards.ca.gov/lyrisforms/swrcb_subscribe.html to get updates on upcoming grant solicitations. Other grant resources include the Department of Water Resources (<http://www.grantsloans.water.ca.gov/>), California Bay Delta Authority (<http://calwater.ca.gov/GrantOpportunities/GrantInformation.shtml>) and two California funding databases (<http://getgrants.ca.gov/>, <http://www.calwatershedfunds.org/>). ♦



2005 Biennial Nonpoint Source Conference

The theme of this year's biennial nonpoint source conference, to be held in Sacramento November 7-9 is "Measuring Water Quality Improvements." The conference will highlight specific projects and practices that successfully address California's leading cause of water quality impairments – nonpoint source pollution.

The focus of the conference will be on the importance of designing projects to achieve measurable water quality improvements and on techniques for monitoring improvements. Proposals for oral or poster presentations are solicited. Potential topics including:

- implementing agricultural, urban and other pollution-control measures;
- assessing and evaluating project success;
- integrating state, federal and local funding;
- TMDL implementation and restoration of impaired waterbodies;
- developing and implementing watershed plans;
- protecting coastal resources; and
- water quality monitoring and data management.

The event will offer an opportunity to examine and learn from the numerous NPS pollution control projects that have been supported by state and federal funds, espe-

cially Clean Water Act (CWA) Section 319 and Bond Propositions 13, 40 and 50. It will promote technology transfer by examining on-the-ground examples related to agriculture, forestry, urban development, marinas and boating, hydromodification and habitat alteration, abandoned mines and other land use activities that affect water quality. The 2005 conference will include plenary sessions, concurrent sessions, a poster reception, a field trip, training workshops and plenty of networking opportunities.

To propose a presentation or poster, send e-mail by May 20 to Jamie Mallen at Jamie.mallen@tetrattech-ffx.com with your presentation or poster title; the title of the federal or state-funded project to be featured in the presentation; the presenter's name, address, telephone number, fax number and e-mail address; and a presentation abstract (brief description of presentation highlights and lessons learned).

More information on the conference is available from Kim Wittorff of the State Water Resources Control Board at (916) 327-9117 or kwittorff@waterboards.ca.gov, or from Tina Yin of U.S. EPA at (415) 972-3879 or Yin.Christina@epa.gov. You also can get more information at www.waterboards.ca.gov/nps/fall2005.html. ♦

Urban Runoff News

High Court Upholds San Diego Municipal Stormwater Permit

BY GARY PITZER

Editor's Note: California's Urban Nonpoint Source and Stormwater programs are intricately linked in that both address aspects of urban runoff pollution. The state and regional water boards address urban runoff primarily through the NPDES permitting program as a point source discharge, although the State Board nonpoint source program applies where the runoff is not regulated as a permitted point source discharge.

Phase I of the Stormwater Program, defined in federal regulations in 1990, includes stormwater discharges associated with "industrial" activities (as defined by the regulations), construction activities that disturb 5 acres of land or more and discharges from municipal separate storm sewer systems (MS4s) serving populations of 100,000 or more. Phase II of the program, defined in federal regulations in 1999, expanded the program to require NPDES permits for discharges from construction sites disturbing 1 to 5 acres, from small MS4s serving populations less than 100,000, from some governmental facilities and from industrial facilities owned by small municipalities. The expansion of the Stormwater programs through Phase II means a greater number of communities, businesses, government facilities and industries that generate urban runoff are subject to NPDES permits.

The state Supreme Court has declined to hear a legal challenge to the San Diego Regional Water Board's municipal stormwater permit, considered one of the toughest regulatory controls in the nation. The court's decision paves the way for other regional boards to adopt similarly tough stormwater controls.

The case against the state sprung from the Regional Board's 2001 issuance of a comprehensive, municipal separate storm sewer systems permit (MS4) for San Diego County, 18 cities and the San Diego Unified Port District. The strict permit conditions were approved by the regional water board to control the flow of non-stormwater discharges to MS4s.

Stormwater runoff is regulated by the State Board through its general permit for discharges from construc-

tion sites and through the municipal stormwater permits issued by regional water boards to cities, counties and other jurisdictions. Those local entities also pursue local ordinances that address the issue.

Stacey Baczkowski, senior environmental scientist with the regional water board, said the municipal permit issued to cities and counties requires inspections to ensure compliance with the MS4 permit conditions. There is "some overlap" between the municipal permit and the State Board's stormwater permit for construction sites, but that's intended under the federal Clean Water Act, she said, noting that the federal rule calls for a dual system of regulation to ensure the most effective oversight of construction site discharges. Unlike the state permit, which is limited to disturbed sites of one acre or more, the municipal permit has no such limitations and could be applied to sites as small as two-tenths of an acre.

Unlike past permit conditions, the stormwater permit specifies more detailed steps to achieve

Straw mats, blankets and gravel bags effectively control runoff.



compliance. Noting that any runoff is prohibited that causes a water body to exceed state water quality standards established to protect wildlife and human contact, the permit states that projects must do whatever is necessary to achieve results. The permit allows certain non-stormwater discharges and spells out the type of effort required to reduce pollutants at the source, which is described as “maximum extent practicable,” a “very controversial term that is not defined in federal regulation,” Baczkowski said.

“It means doing everything you can to the point where it’s a limited return if you do more,” she said. “It’s not just putting in one [BMP] and calling it quits.”

In the lawsuit, *Building Industry Association of San Diego County, et al v. State Water Resources Control Board*, the Fourth District Appellate Court upheld the judgment of a superior court, which among other things ruled the federal Clean Water Act provides regulatory agencies with “broad authority” to impose stricter standards, noting that Congress “did not intend to substantively bar” the U.S. EPA or states from imposing stricter standards if they are deemed as a “necessary and workable enforcement mechanism” for achieving the goals of the CWA.

Jerry Livingston, staff counsel for BIA, disagrees that the CWA allows limitless municipal stormwater permits and that the regional board’s, trial and appellate court’s reading of the permit leaves out MEP entirely. Training programs are being conducted with BIA members in conjunction with city and county inspectors on the proper means to stay in compliance, he said.

“We’re telling [members] to apply best available technology (BAT) on sites,” he said, noting that maintaining compliance with the permit is not always directly tied to the avoidance of circumstances that cause or contribute to the exceedance of water quality standards.



San Diego’s permit specifies more detailed steps to achieve compliance.

The appellate court addressed the matter of cost through its reference to “livable” control measures approved by the regional water board in its intent to consider the economic impact of its water quality rules. This is described as part of the iterative process by which the state and local governments identify potential trouble spots and the appropriate response of BAT. According to the regional water board, the law, as written, provides time for permitted entities to reach compliance.

One of the primary challenges in complying with the conditions of the permit has been keeping costs at a manageable level, said Scott Lyle, an associate at Nolte Engineering who works with contractors to maintain permit requirements. Sediment control is more strictly regulated now, he said, noting that it was not uncommon for crews in the past to wash excess soil directly into storm drains.

Sediment control violations were at the heart of a record \$1.26

million fine levied by the Regional Board in March against the developer of a new 186-acre business park in Escondido. The city was fined \$129,000 for the same violations because it is responsible for overseeing the construction site. The Regional Board claims JRMC Real Estate, the developer of the site, allowed sediment to flow into Escondido Creek directly or through storm drains for at least 82 days. It is also alleged that an adequate Storm Water Pollution Prevention Plan (SWPPP) was not in place for at least 166 days.

Permit holders are required to employ temporary and permanent sediment and erosion controls. Temporary measures are more labor-intensive and include frequent water quality tests and inspections. “The labor hours really build up,” Lyle said.

While sediment control is a “big issue,” other activities of concern included the washing out of concrete residue, rinsing of portable toilets and onsite litter control, Baczkowski said.

“The biggest thing is to catch it during the planning stage and incorporate water quality features into the design.”

*– Scott Lyle,
Nolte Engineering*

Permanent features can include items such as the “Stormceptor,” a \$10,000-per-unit runoff management system that captures and treats oils and grease flowing from impervious surfaces. Other technologies emphasize a natural

approach that incorporates strips of vegetative growth to contain runoff. Lyle said builders can reduce their costs by thinking about stormwater runoff before ground is broken on a project.

“The biggest thing is to catch it during the planning stage and incorporate water quality features into the design,” he said, noting that grass swales and bioretention basins are commonly used. Also known as “rain gardens,” bioretention basins filter stormwater through a vegetated surface layer, planting soil and sand bed.

The surge of storms that brought unprecedented amounts of rain to

the region in many cases was too much for some construction sites to handle. SWPPPs are designed to accommodate the runoff from so-called

“first flush” storm events and not flooding, Lyle said. According to Baczkowski, sites that were in good standing prior to the storms did “pretty well” in keeping with compliance while the problem areas were likely not helped by the onslaught of runoff.

“It’s case by case,” she said. “There’s not a wholesale failure throughout the region.”

Regulators do not make exceptions for extraordinary storm events but are willing to work with permit holders to avoid potentially costly violations. “If [permittees] show an effort and are trying to do a good job ... they [regulators] are reason-

able to a certain extent,” Lyle said.

Livingston said industry members are spending most of their time simply trying to keep in compliance with the permit and have not probed the depths of the relative benefit of certain control strategies or technologies.

“The truth is, rainstorms blow out everybody’s BMPs,” he said, adding that it’s been an “absolute struggle” for sites to keep in compliance during a winter that has seen the San Diego region receive eight inches more than average rainfall. He said he is unaware of permittees ever being granted exceptions due to extreme rainfall and that state inspectors never fail to issue citations during site visits, even for the “smallest, inconsequential” conditions.

Local jurisdictions help permittees maintain compliance “where they have the staffing,” Livingston said. “They are involved in our training programs and trying to keep everybody on the same page.”

Maintaining compliance with the regulations does cost money, including the hiring of personnel to develop a SWPPP and prepare a notice of intent to comply. Depending on the size of the development, it has been estimated that compliance costs add 5 to 10 percent to the overall cost of housing. Baczkowski said many builders are unsure of what is required for compliance and either do nothing or much more than is required.

“They don’t want an enforcement action, so they do a lot,” she said, noting that “a lot of BMPs are done incorrectly.”

Straw mats, blankets and gravel bags are effective methods to control runoff, although applicators have to ensure proper techniques are followed to prevent sediment from being funneled the wrong way, Baczkowski said. They also need to be aware that a construction site “changes quite a bit” as a project moves forward, and that BMPs have to be adapted to reflect that. ♦

Sediment control is strictly regulated under the permit.



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Share Your Success

Have an interesting story to tell about your nonpoint source pollution control or stormwater program? Why not share your experience with others through *The Runoff Rundown*? One of the goals of *The Runoff Rundown* is to be a forum for sharing ideas that have successfully reduced nonpoint source or urban runoff. These can be programs or policies initiated by cities, local and regional agencies, regional water boards, or in the private sector. To share your story, contact Glenn Totten, Water Education Foundation, at (916) 444-6240, or send e-mail to gtotten@watereducation.org.



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