

Watershed Coalition

News

INFORMATION FOR CENTRAL VALLEY AGRICULTURE

SUMMER 2006



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Waiver Renewed for Five Years

The Regional Water Board voted 5-2 at its June 22 meeting to extend the Irrigated Lands Program for five years and added a deadline for landowners to join regional coalitions or face requirements to get individual waste discharge permits. The Central Valley Regional Water Quality Control Board rejected arguments by environmental activists to end the waivers despite dozens of persons testifying that discharges by farmers are causing the "crash" of the San Joaquin River and Delta.

In a set back for coalitions, the Board ordered names of coalition members to be turned in to the Water Board annually, with the first list due on September 30, 2006 and on July 31 in subsequent years. Coalitions must provide their landowner lists and identify properties covered by each regional group.

Farmers are being given until the end of December 2006 to join an existing watershed coalition or form their own coalition to comply with conditional waiver requirements. Owners of irrigated land who fail to join and later try to join or are contacted by the Water Board with 13267 letters will have to complete a report of waste discharge for their operation and perform water sampling of discharges from irrigation and storm runoff.

The extended waiver also includes more stringent reporting requirements for coalition monitoring results. It also requires coalitions to write subwatershed management plans when water sampling indicates problems caused by irrigated agriculture. Management plans are detailed reports that are required to describe known or potential sources of a pollutant. The plan must also outline a strategy to work with landowners in the impacted watershed to mitigate the problem through adoption of management practices or other mitigation measures.

At its August 2 meeting, the Regional Water Board gave the executive officer discretion to request single management plans should the same constituent be causing multiple exceedances in a single waterway over an extended period. The change would reduce the amount of redundant paperwork that coalitions need to produce and Water Board staff must review.

Other provisions of the renewed ILP include a detailed list of program definitions such as discharges, exceedances and other technical report requirements. As in the past, all Coalition reports and documents, once submitted to the Water Board, become public record. However, the board will consider requests for keeping information confidential on a case by case basis.

Deadline Set To Join Coalitions

The idea of setting a December 31, 2006 deadline to join watershed coalitions came from Robert Schneider, board chairman of the Central Valley Regional Water Quality Control Board. During final discussions prior to the vote to extend the waiver on June 22, chairman Schneider added the deadline into the motion to renew the waiver.

At its August 2 meeting, the Water Board clarified its motion, leaving the deadline unchanged but adding exemptions if:

- The irrigated lands owner or the property did not originally qualify as a "discharger" prior to December 31, 2006. But due to changes in management practices or physical condition of the property or on properties between the subject property and receiving water where wastewater drains, the owner is now a discharger and qualifies for coalition membership;
- The owner or property was participating in another coalition group or covered under

the individual waiver program prior to December 31, 2006 but are transferring to another coalition group;

- Coalition group boundaries change or a new coalition group is formed in an area not previously covered by a coalition group;
- The owner did not know he or she was a discharger;
- Other situations reviewed and approved by the Executive Officer on a case by case basis.

Many watershed coalitions are hopeful the deadline will motivate landowners who are not participating to sign up. Low participation in several regions of the Central Valley is often cited by critics and activists as a reason for ending the Irrigated Lands Program and requiring individual waste discharge permits. The Regional Board did recognize in its August 2 staff report that low sign-up percentages could be due to farmers having no discharge of wastewater to surface water and "therefore have no need to join a Coalition Group."



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Farmer Survey Highlights Water Quality Issues

A survey of Sacramento River Valley farmers shows coalitions have their work cut out for them in convincing growers to participate in the Irrigated Lands Program. Just over half of 1222 farmers surveyed in nine Sacramento Valley counties say they participate in coalition activities such as reading water quality information, attending meetings or talking with coalition representatives.

The survey, performed by Mark Lubell at the UC Davis Department of Environmental Science and Policy, did show keen interest by farmers in working to solve water quality problems when confirmed by scientific monitoring. Just over 60% of farmers have or would support development and implementation of some type of water quality management plan specific for their operation. There was also substantial willingness to participate in coalition groups. The researchers predict that participation will “very likely” increase over time rather than staying at current levels.

Lubell and co-author Allan Fulton, UC Cooperative Extension, said the survey sample represents the total population of producers in the Sacramento River Watershed, although slightly over representing larger operations. The survey respondents,

65% who only own land, 29% who own and rent, and 5% who rent only, were from Butte, Colusa, Glenn, Shasta, Solano, Sutter, Tehama, Yolo, and Yuba counties.

Perceptions of water quality among farmers were identified as a barrier to coalition group success, the study reported. Producers face many broad issues in the management of their farm operation and place the problems and causes targeted by the Irrigated Lands Program lower in priority than others. They are more concerned with urban sources of pollution and urbanization and do not feel agriculture is causing significant problems. Many also feel that costs of the coalition groups are unjustified and they are being motivated to participate in coalition groups to protect agricultural interest from even more costly regulations.

Study recommendations to policy makers include providing evidence for water quality problems to farmers; invest in the capacity of local organizations; acknowledge stewardship motivations of landowners; expand the scope of collaborators; and coordinate more with existing programs. The report is available from Mark Lubell at mnlubell@ucdavis.edu or 530-752-5880 or at <http://www.des.ucdavis.edu/faculty/lubell/Research/SacValleyFinalPolicyReport.pdf>

High Boron in Yolo Prompts Management Plan Request

Yolo County farmers have long known about high boron levels in surface and irrigation well water. Coalition monitoring in 2005 of Tule Canal, Z-Drain, Ulatis Creek and Shag Slough confirm this boron legacy: levels detected exceeded water quality standards for boron and EC.

The Water Board responded to the multiple exceedances in 2005 by requesting a Management Plan be prepared by the Sacramento Valley Water Quality Coalition (SVWQC) and Yolo/Solano Subwatershed group. The management plan request covers boron, EC as well as dissolved oxygen, algae toxicity, and E. coli and fecal coliform, which also had exceedances in 2005. Management plans require identifying known or potential sources and outlining a strategy to work with landowners in the impacted watershed to mitigate the problem through adoption of management practices or other mitigation measures.

SVWQC partners in 2006 will characterize boron and other salt sources to help estimate background levels and determine agricultural contributions and impacts. Elevated EC and boron concentrations at coalition monitoring sites are thought to be

due to natural sources rather than impacts of irrigation return flows. Results from 2005 monitoring show that boron concentrations throughout the Cache Creek system, from Clear Lake to Capay Diversion Dam, are often greater than 700 mg/L, indicating this is a natural condition for this drainage.

If agricultural practices are found to be contributing boron and EC in the Yolo and Solano County receiving waters, the Coalition will evaluate available alternatives to specifically address management of these constituents. If management practices are identified that are economically feasible and effective in mitigating boron and EC, these practices will be promoted through outreach programs ongoing by the Yolo/Solano Subwatershed group and other agricultural entities.

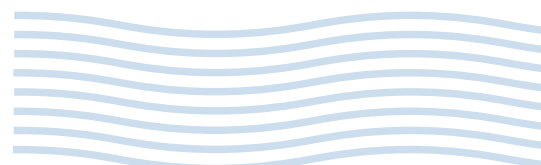
In its management plan submission, the SVWQC asked the Water Board to revisit how it sets numeric limits and determines exceedances of limits for constituents such as boron. The coalition also pointed out that management of salts and boron can be effective only if addressed on a broader geographic scale than encompassed by the coalition plan.

Orchard Sprayer Tune Ups Offered

A high tech instrument to assist orchard growers in improving pesticide application efficiency is being offered for on-farm sprayer tune-ups in Sacramento Valley orchard regions. The orchard sprayer calibration instrument is an Austrian-built device purchased by the Coalition for Urban/Rural Environmental Stewardship (CURES) with funding from a State Water Resources Control Board grant.

Since June 2006, CURES project technician Robert McMurry has transported the calibration instrument, actually three separate devices, to numerous grower meetings and on-farm clinics in the orchard areas of Sacramento Valley. McMurry performs the one-hour tune-up then provides growers with a computer printout indicating total output per acre, individual nozzle output and uniformity across the spray boom. The instrument can also help growers customize the spray pattern based on the tree size and shape, which can vary from orchard to orchard.

CURES is working with numerous collaborators in the Sacramento Valley to organize and hold calibration clinics, including the Butte/Yuba/Sutter Watershed Coalition, the County Agricultural Commissioners in Butte, Yuba and Sutter counties, local University of California farm advisors, Resource Conservation Districts, the Yuba-Sutter Farm Bureau and farm input retailers. For information on participating in future calibration clinics, contact Tamara Taliaferro at 530-271-5822 or go to www.curesworks.org and check under “Orchard Sprayer Calibration Clinics” to sign up for an on-farm tune-up.



Pesticides in Sloughs, Canal Prompt Management Plan Request

Madera and Merced County farmers are the first in the San Joaquin Valley to find out how a Water Board “management plan” request will impact pesticide use in their region. In July, the East San Joaquin Water Quality Coalition (ESJWQC) received a notice from the Water Board that four subwatersheds had multiple toxicity events and exceedances of water quality standards for pesticides in 2004-05. The waterways include Ash Slough, Duck Slough, Highline Canal and Merced River.

The management plan request covers chlorpyrifos (Lorsban or Lock-On) and general toxicity.

Sacramento Valley had the first management plan for pesticides and salts requested of watershed coalitions under the Irrigated Lands Program (ILP). In September 2005, the Sacramento Valley Water Quality Coalition filed a management plan for the Sacramento and Feather Rivers Total Maximum Daily Load (TMDL) for diazinon. In July 2006, a second plan for boron and high EC in Yolo County was filed by the coalition.

Management plans require identifying known or potential sources of specific constituents or physical parameters and outlining a strategy to work with landowners in the impacted watershed to mitigate the problem through adoption of management practices or other mitigation measures. Also required is evaluation of the effectiveness of management practices that are implemented to meet receiving water limitations for runoff.

Handbook Covers Water Quality BMPs

The *Westside San Joaquin Valley BMP Handbook* was sent out to hundreds of growers in western Stanislaus County in Spring 2006. The local watershed coalition is looking to expand its circulation further. The handbook is the culmination of two-year project organized by CURES and funded by CALFED and State Water Resources Control Board.

Contained in *BMP Handbook* is information condensed from technical reports prepared by the California Water Institute and Ducks Unlimited. Included is cost information on BMPs such as sediment basins, PAM, tailwater return systems, vegetative ditches, irrigation scheduling and others. Also in *BMP Handbook* are booklets

Prompting the Water Board to issue the request was the ESJWQC monitoring results showing “water quality exceedances at all sites and multiple exceedances for toxicity and/or chlorpyrifos.” The results from 2004 to the present are: four samples from Duck Slough contained chlorpyrifos in concentrations above water quality standards; Highline Canal exhibited toxicity eight times in nine samples, also two chlorpyrifos exceedances; Merced River had significant toxicity five times in four samples (toxicity to multiple text organisms); three of four samples collected from Ash Slough showed chlorpyrifos exceedances.

The ESJWQC plans to begin contacting individual landowners and Pest Control Operators (PCAs) in the four watersheds in August and September, according to the management plan submitted by the coalition. Initial contact will be by letter followed by local workshops in Fall 2006. Included in the first mailings to landowners will be farm practice surveys designed to identify existing practices that growers are using when applying pesticides. Survey results help guide outreach efforts in the specific watersheds.

In watersheds with chlorpyrifos exceedances, the coalition will be distributing literature on Best Management Practices (BMPs) to follow when using the insecticide in alfalfa and orchards. Chlorpyrifos registrants are working with the coalition to develop programs to ensure products are kept out of waterways.

developed by CURES covering BMPs for commonly used insecticides.

Efforts to broaden distribution of the handbook are underway by the Westside San Joaquin River Watershed Coalition. The coalition plans to continue handing out copies as it did in several grower workshops in Spring and Summer 2006. The handbook is part of a regional program intended to encourage and increase BMP implementation in Westside San Joaquin Valley watersheds. The handbook is available on request by contacting Westside coalition representatives (page four of newsletter) or on the CURES website www.curesworks.org.

Orchard Sprayer Tune Ups Offered

A high tech instrument to assist orchard growers in improving pesticide application efficiency is being offered for on-farm sprayer tune-ups in eastern Stanislaus and Merced counties. The orchard sprayer calibration instrument is an Austrian-built device purchased by the Coalition for Urban/Rural Environmental Stewardship (CURES) with funding from a State Water Resources Control Board grant.

Since June 2006, CURES project technician Robert McMurry has transported the calibration instrument, actually three separate devices, to numerous grower meetings and on-farm clinics in the orchard areas of Sacramento Valley. Support from a grant managed by the San Joaquin River Group Authority will bring McMurry and the CURES instruments to Stanislaus and Merced counties. McMurry performs the one-hour tune-up then provides growers with a computer printout indicating total output per acre, individual nozzle output and uniformity across the spray boom. The instrument can also help growers customize the spray pattern based on the tree size and shape, which can vary from orchard to orchard.

CURES is working with numerous collaborators in the San Joaquin Valley to organize and hold calibration clinics, including the East San Joaquin Water Quality Coalition, the County Agricultural Commissioners in Stanislaus and Merced counties and the Stanislaus and Merced County Farm Bureaus. For information on participating in future calibration clinics, contact the collaborators or Tamara Taliaferro at 530-271-5822 or go to www.curesworks.org under “Orchard Sprayer Calibration Clinics.”

GIS Map of Duck Slough, Ash Slough and Dutchman Creek Monitoring Sites

Order a wall poster of this southern Merced County/northern Madera County region showing GIS coloring of crops, roads, field parcels and water monitoring sites. The 24” x 36” map is available for \$25 by mailing a check or money order to CURES Maps; 531-D North Alta Ave., Dinuba, CA 93618-3203

New Dormant Orchard Spray Regulations

Orchard growers in California have new regulations to follow when applying most types of dormant sprays. More than two years in the making, the new rules from the California Department of Pesticide Regulation went into effect on August 17.

Driving the new regulations is the long recognized problem of dormant sprays being washed from orchards during winter rains. Runoff from two insecticides used in dormant sprays, diazinon and chlorpyrifos, prompted adoption of Total Maximum Daily Loads (TMDLs) for the Sacramento, Feather and San Joaquin Rivers. The new label restrictions apply to all organophosphate, pyrethroid and carbamate insecticides. Exempt are dormant oil only applications or biocontrol agents such as spinosad or Bt or if the orchard is in a “hydrologically isolated site.” This site is “any treated area that does not produce runoff capable of entering any irrigation or drainage ditch, canal, or other body of water.”

Key to the new DPR regulations, called “Dormant Insecticide Contamination Prevention,” are new requirements for use of conventional insecticides when runoff cannot be contained:

- A written recommendation from a PCA is needed prior to the application;

- The application can't be made within 100 feet of any sensitive aquatic site;
- Wind speed must be 3-10 miles per hour (mph) at the perimeter of the application site as measured by an anemometer on the upwind side.

Dormant insecticide applications are prohibited under two scenarios:

- Soil moisture is at field capacity and a storm event is forecasted within 48 hours following the application or;
- A storm event likely to produce runoff from the treated area is forecasted within 48 hours following the application.

Aerial applications will only be allowed if soil conditions do not allow field entry, or approaching bloom conditions necessitate aerial application. The three restrictions above also apply to aerial applications. If storm runoff from an orchard can reach a waterway, growers are required to divert any runoff with an on-farm recirculating system and/or hold any runoff for 72 hours before releasing into a sensitive aquatic site. A sensitive aquatic site is any irrigation or drainage ditch, canal, or other body of water in which the presence of dormant insecticides could adversely impact any of the beneficial uses of the water way.

Waiver Renewal Challenged

Watershed coalitions and activist groups filed challenges against the Water Board's five year renewal of the Irrigated Lands Program (ILP), albeit for very different reasons. Appeals were filed with the State Water Resources Control Board which first must decide if it will hear the petitions then set a hearing date, possibly later this year.

The activists are seeking to end the Irrigated Lands Program and mandate Reports of Waste Discharge permits for agricultural discharges. A similar appeal filed against the 2003 Conditional Waiver was rejected by the State Board and a Superior Court judge.

Petitions from the watershed coalitions focus on three points: opposition to the Water Board accepting only membership lists (and not maps as a substitute); challenging the decision to not accept non responder lists; opposing the December 31 cutoff date to sign up for a coalition. All coalitions filing petitions supported the five year renewal of the ILP.

Farmer on State Water Board

In November 2005, Paul Betancourt of Kerman was the first full time farmer in years appointed to the Central Valley Regional Water Quality Control Board. Now Gov. Schwarzenegger appointed a farmer to the State Water Resources Control Board. Charles Hopkin, a diversified farmer from Yuba City will add this position to an already distinguished career in agriculture. His appointment requires State Senate confirmation.

In *Watershed Coalition News*, we ask experts to answer Frequently Asked Questions related to agricultural water quality. This issue features Dr. Karl Longley, an engineer at Fresno State's California Water Institute. He is also a member of the Central Valley Regional Water Quality Control Board.

What are key sources of high salts in Central Valley waters?

Important salinity sources include wastewater discharges, dairies, food processors and to a lesser degree, waterfowl refuges. Another important source is salts naturally occurring in soil or introduced by irrigation water and transported to groundwater. They impact the quality of pumped water, or are part of subsurface flows recharging streams and rivers during periods of lower flow.

How serious is the salt problem in the San Joaquin Valley?

It is very serious. Its impact is now being seen in the Delta and elsewhere in the Valley. Rising salt concentrations in ground and surface waters will eventually severely depress economic activity in the Valley. Throughout history entire regions have succumbed to salting of the land and water. If the problem isn't addressed, the San Joaquin Valley will be unable to provide jobs and a quality life for its residents in the future.

How do you prioritize actions in such an enormous undertaking?

First, we must gather the scientific data on the chemistry of soil and groundwater in the San Joaquin Valley necessary to develop reliable, predictive models of groundwater movement and salt transport. Then develop a salt management plan with rational alternatives for addressing the salinity problem. After agreeing on the best alternative a program is implemented. To accomplish this and to protect the economic and environmental future of the San Joaquin Valley is going to take time and money.

Are there success stories dealing with salt?

Yes, right here in California. The Santa Ana Watersheds Project Authority tackled its salt disposal problems (generated by municipalities, agriculture and industry) by cooperatively building a “brine line” that transports salt waste to an offshore disposal site. It is operating successfully and its operation is paid for by those who use it.

Watershed Coalition

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