

IRRIGATED LANDS REGULATORY PROGRAM UPDATE

March 2009

This month's Irrigated Agricultural Lands Regulatory Program (ILRP) report will provide an update on the activities of the Central Coast, Los Angeles, Riverside and San Diego Regional Water Quality Control Board programs. The Colorado River Basin Water Board did not submit an update report for their agricultural program. Future monthly reports will alternate between the status of the ILRP at the Central Valley Water Board for one month, and the status of other Regional Water Boards for the alternate month. English and Spanish translations of current and past ILRP monthly reports can be found on the [State Water Boards Agriculture Program Website](#).

CENTRAL COAST REGION

Irrigated Agricultural Order Renewal:

Staff plans to present a draft Irrigated Agriculture Order (Irrigated Ag Order) to the Central Coast Water Board in July 2009. The draft Order will directly address and resolve (over time) the major water quality issues associated with irrigated agriculture in our Region. Accordingly, the Irrigated Ag Order renewal is a major undertaking that will include revised language and new requirements, including a description of the water quality problems that must be resolved, schedules for achieving compliance, milestones to measure progress, and a tiered monitoring program to verify compliance. We are currently doing outreach to several interest groups. Our approach is based on accountability and achieving tangible results per a defined schedule and is similar to the approach the Water Board has directed on our other programs, such as Timber Harvesting, Stormwater, Core Regulatory Permitting, and Total Maximum Daily Loads.

The draft /irrigated Ag Order will clarify how growers and property owners will comply with existing requirements, and will include new requirements where necessary to achieve and demonstrate compliance with the following:

- Eliminate waste discharges to surface waters (soil, pesticides, nutrients, etc.) that degrade beneficial uses;
- Eliminate waste discharges to groundwater (nutrients, pesticides, etc.) that degrade beneficial uses; and
- Protect aquatic habitat (riparian areas and wetlands) and their buffer zones.

Summary of Water Quality Issues Associated with Irrigated Agriculture:

The draft Irrigated Ag order will include requirements to address pesticide toxicity, nutrient/nitrate, sediment, and habitat degradation.

Pesticide Toxicity

The Cooperative Monitoring Program (CMP) has found the pesticides chlorpyrifos and diazinon at concentrations that exceed water quality objectives and at concentrations known to cause toxicity, and these data and data from several other researchers

indicate that these two chemicals are responsible for much of the widespread surface water toxicity found in watersheds where agriculture is the dominant land use. In addition, the CMP has documented widespread sediment toxicity at many of its sites in our Region. Although the CMP has yet to follow up on this toxicity problem with additional chemical monitoring, related research in the area indicates that pyrethroid and chlorpyrifos pesticides are a significant cause of sediment toxicity. The data show high toxicity in surface waters and sediment, and concurrent impacts on benthic macroinvertebrate communities. The Central Coast Water Quality Control Plan (Basin Plan) specifically prohibits discharges of waste containing substances that cause or contribute to toxicity or which produce detrimental physiological effects in aquatic life.

Nutrient/Nitrate

Groundwater and surface water salt and nitrate pollution is prevalent in many agricultural areas within our region. In addition, constituents such as orthophosphate consistently exceed recommended levels in some areas. The Basin Plan prohibits discharges that could result in groundwater or surface water nitrate concentrations above 45 milligrams per liter (mg/L) as nitrate, or 10 mg/L as nitrogen. Thirty out of the 50 CMP surface water sites throughout the Region consistently exceed water quality standards for nitrate. These data understate the severity of the problem because the nitrate limits necessary to protect aquatic life in surface water are more than an order of magnitude less than the drinking water standard (based on U.S.A. EPA Ambient Water Quality Criteria Recommendations, 2000, which are not yet adopted in California).

Nutrient discharges cause chronic water quality degradation and contribute to algal blooms in both fresh and saltwater environments. These nutrient induced algal blooms are a major impact to aquatic life over large geographic areas and are becoming more intense and more prevalent in some areas. The groundwater nitrate problem in our Region is widespread and severe. The physical size of the groundwater nitrate problem in our Region is large and municipalities and water districts are faced with the cost of removing nitrate from groundwater or finding alternative water supplies. Groundwater contamination on this scale requires a solution on the same scale. Irrigated agriculture is the solution because it is a potential large-scale "pump and treat" system. To deal with this groundwater problem, growers must implement management practices that reduce the concentration of nitrate in groundwater. This means using the nitrogen already in groundwater to reduce the amount of fertilizer applied, so that the groundwater contaminant trend is reversed over time.

Sediment

Sediment eroding off bare ditch banks and farm fields contributes directly to water quality impairment, through the sediment itself and by carrying attached pesticides and other chemicals. Minimizing sediment movement from farm fields and ditches is a critical requirement for protecting water quality.

Habitat Degradation

Land use management activities have significantly degraded aquatic habitat (riparian

areas and wetlands) throughout the Central Coast and California. For example, over 90% of wetlands have been lost in California over the past 100 years. Healthy riparian habitat and wetlands, including buffer zones, are critical to protect the beneficial uses of our waters and to maintain the biological and physical integrity of our watersheds. They help to reduce flood impacts by helping to attenuate peak flood flows, recharge groundwater, stabilize stream banks, provide critical habitat for a wide diversity of wildlife, and filter nutrients and pathogens, among many other benefits. The Basin Plan requires the protection of riparian habitat and the maintenance of adequate buffer zones. The food safety issue has resulted in some growers removing riparian habitat and buffer zones on and around irrigated agricultural fields, which is a direct violation of the Basin Plan.

The Draft irrigated Ag Order:

The draft Irrigated Ag Order will address each of the water quality and aquatic habitat issues above, as required by law, the Basin Plan, and the State and Regional Boards' 2004 Policy for Implementation and Enforcement of the Nonpoint Source Pollution Control Program. This Policy requires that the Irrigated Ag Order include several key elements, as follows:

- Achieve and maintain water quality objectives and beneficial uses, and comply with antidegradation requirements;
- Define management practices necessary to meet requirements, the process to select the management practices, and the process to verify proper implementation;
- Where time is needed to comply, define specific schedules and corresponding quantifiable milestones to measure progress toward reaching the requirements;
- Include feedback mechanisms (e.g., reporting, inspection, monitoring, etc.) so that the Regional Board, dischargers, and the public can determine whether the program is achieving its stated purpose(s), or whether additional or different management practices or other actions are required; and
- Define enforcement consequences for non-compliance.

The [2004 Policy for Implementation and Enforcement of the Nonpoint Source Pollution Control Program](#) can be reviewed online.

Public Outreach:

As during the development of the existing Irrigated Ag Order, staff has convened an advisory panel to draft recommendations to the staff and the Water Board. The Agricultural Advisory Panel includes representatives from agricultural organizations and environmental groups from across the region.

In addition, staff is sending letters to other interested parties and organizations, such as municipalities, water districts, other agencies, environmental groups, and environmental justice organizations. While we have data indicating significant problems with urban runoff in many areas, stakeholder comments remind us of other perspectives in the watersheds. While we are requiring our municipalities to clean-up

their runoff, some municipalities receive surface water discharges from agricultural areas, and both municipalities and water districts have to deal directly with the groundwater pollution problem, and the associated liability and costs. Several of our watersheds are significantly affected by discharges from both agriculture and urban runoff, and the most effective methods to solve these problems will include some cooperation. For example, with the City of Salinas stormwater monitoring program, we designated monitoring points in cooperation with the ag monitoring program so that these two programs complement one another.

We also need to address environmental justice issues. Small communities and rural homes that use groundwater wells contaminated with nitrate are not typically represented or heard, and their health threats and impacts are typically not addressed. Wells with very few connections (as well as some wells that have bootlegged connections to more residences) are not regulated or protected by any agency. Also, people who catch and consume fish from places like Oso Flaco Lake and the lower Salinas watershed areas are exposed to health risks due to the accumulation of agricultural pollutants in those areas and their migration up the food chain. We are seeking out environmental justice organizations in our Region to inform them of the Irrigated Ag Order renewal process and how they can participate. We are also providing the same information to county environmental health directors and the Department of Public Health. We are explaining the Irrigated Ag Order renewal process and how they can participate.

Costs:

The Water Board is required to consider several factors, including economics. Our evaluation may include the following types of costs:

- Costs to growers for meeting the Water Board's requirements;
- Costs to municipalities and water districts to deal with groundwater pollution and treatment;
- Costs to municipalities to deal with surface water pollution;
- Costs to society for providing irrigated agricultural grant funds; and
- Costs to society for lost or degraded natural resources, such as riparian habitat, wetlands, groundwater as a drinking water source, etc.

Conclusion:

The water quality and aquatic habitat issues associated with irrigated agriculture are some of the most significant problems we face in the Central Coast Region. The Irrigated Ag Order is the primary mechanism for the Water Board to address and resolve these issues. Staff will periodically update the Water Board on our progress for bringing a draft Irrigated Ag order to the Board in July 2009.

LOS ANGELES REGION

Discharger groups in Ventura and Los Angeles Counties, enrolled in the Los Angeles Region Conditional Waiver for Irrigated Lands, submitted Water Quality Management

Plans (WQMPs) to the Regional Board for review and approval. The WQMPs describe the strategy that will be used by discharger groups to address exceedances of water quality benchmarks in the Conditional Waiver. Regional Board staff met with discharger groups and provided comments, and both discharger groups submitted revised WQMPs. Staff has approved the Ventura County Agriculture Irrigated Lands Group (VCAILG) WQMP and is currently working with the Nursery Growers Association - Los Angeles County Irrigated Lands Group to finalize their WQMP. The agriculture WQMPs identify specific BMPs to address exceedances and provide a timeline for BMP implementation. BMPs will be prioritized in drainage areas with multiply water quality benchmark exceedances and TMDLs. For example, under the approved VCAILG WQMP, BMPs will be installed in priority areas beginning in 2009 and 2010. BMP effectiveness will begin to be demonstrated in the 3rd and 4th annual monitoring reports (for years 2009 and 2010).

Additionally, the Los Angeles Regional Board hosted the Irrigated Agricultural Lands Regulatory Program Roundtable on January 8 - 9, 2009. This roundtable event was a joint meeting between the State Water Resources Control Board, Regional Water Quality Control Boards, Department of Pesticide Regulation, California Department of Food and Agriculture, and US EPA Region 9. The meeting included field tours by local agriculturalists; attendees toured Bordier's Nursery located in Somis and Limoneira Company located in Santa Paula. Additionally, leaders of the Ventura County agriculture community provided presentations focused on local agriculture issues and water quality. The Executive Director of the Ventura County Farm Bureau, John Krist, discussed the efforts of the agriculture community to comply with the Los Angeles Region Conditional Waiver for Irrigated Lands (Order No. R4-2005-0080) and TMDLs. Dan Detmer of the United Water Conservation District presented research on the effectiveness of Best Management Practices (BMPs) to protect water quality. This roundtable meeting provided an interagency forum to discuss agriculture issues in the Los Angeles Region and generated positive feedback from both attendees and the stakeholder community.

Los Angeles Regional Board staff has also continued outreach efforts to enroll growers under the waiver. Staff followed up with hundreds of phone calls to growers in Los Angeles County who were sent NOV's for failing to enroll in the waiver. As a result, enrollment in the Los Angeles discharger group has increased and staff was able update their database based on corrected land use information provided by property owners. Regional Board staff continues to participate in meetings and workshops to update the agriculture community on the progress and requirements of the Conditional Waiver program.

COLORADO RIVER BASIN REGION

No information submitted.

SANTA ANA REGION

Board staff is proposing that all operators of irrigated or dry farmed land, and of other agricultural operations not already regulated by the Regional Board, enroll in a conditional waiver of waste discharge requirements. Board staff is calling this the Conditional Waiver (of waste discharge requirements) for Agricultural Discharges (CWAD). The Regional Board staff proposes that the CWAD program will be developed and implemented on a watershed-based, phased approach. The first phase of this program is being developed for waste discharges from agricultural operations in the Lake Elsinore / San Jacinto Watershed. The Regional Board adopted separate nutrient Total Maximum Daily Loads (TMDLs) for Canyon Lake and Lake Elsinore which are the CWAD program is being designed to be part of implementation program for these TMDLs.

In order to formulate a strategy to develop a CWAD program, the Regional Board staff has been conducting meetings with key stakeholders, including the Western Riverside County Agricultural Coalition (WRCAC), a NGO, and the Lake Elsinore San Jacinto Watershed Authority (LESJWA), a joint powers authority that includes the Cities of Canyon Lake and Lake Elsinore, Riverside County Flood Control and Water Conservation District, the County of Riverside, and the Santa Ana Watershed Project Authority.

During the last few months, the Regional Board staff have also met with other potential stakeholders and related agencies, including the Riverside County Farm Bureau and Riverside County Agricultural Commissioner's office. Board staff is coordinating with representatives of WRCAC and LESJWA and the Southern California Coastal Water Research Project (SCCWRP) establish a CWAD monitoring for the San Jacinto River watershed. This coordination will take a step forward when these representatives present and discuss their concepts for a watershed monitoring program at WRCAC's March 23, 2009.

Over the next several months, Regional Board staff will continue meeting with key stakeholders, and conducting semi-formal public workshops to get ideas about how best to put the CWAD program in place. Possible topics for workshop discussions will include:

- Are all farming operations going to be covered, or are there exemptions from the program?
- Is there a minimum acreage for the program?
- Have "third party representatives" been formed? Will there be a cost to be represented?
- How is the Regional Board identifying operators who will be required to enroll in the CWAD program? And
- What's the schedule for putting the CWAD program in place?

Workshops will be publicized on the Regional Board's website and through stakeholders' communications throughout the watershed.

SAN DIEGO WATER REGION

San Diego County Farm Bureau (SDCFB) adopted a workplan to form a region-wide monitoring group. The Executive Director of the SDCFB, reported that the SDCFB's Board of Directors recently adopted a detailed workplan for putting in place a region-wide agricultural monitoring group in time to submit a Notice of Intent (NOI) to the San Diego Water Board by the deadline of December 31, 2010. Submittal of an NOI, either as part of a monitoring group or as an individual grower, is required of growers by a condition of the new waiver for irrigated agricultural discharges. All growers who elect to join the monitoring group would be covered by the SDCFB's NOI. The SDCFB has also communicated with the Riverside and Orange County Farm Bureaus to inform them that there will be growers in those counties who may wish to be included in the SDCFB NOI. Mr. Larson stated that, to date, the Riverside and Orange County Farm Bureaus are supporting the SDCFB's work on this issue. In brief, the year by year workplan tasks are as follows:

2008:

- Study existing monitoring group structures in California;
- Choose best case models;
- Select legal and professional consultants for recommendations on group structure;
- Submit organizational alternatives to SDCFB board for consideration; and
- Select organizational structure.

2009:

- Create monitoring group as a legal entity and organize;
- Begin first phase of education for grower community;
- Solicit RFP's from firms qualified to do monitoring and reporting;
- Select firm;
- Set fee structure for participants; and
- Develop recruitment material.

2010:

- Recruit monitoring group participants; and
- Submit NOI to San Diego Water Board.

In addition to the workplan for the monitoring group NOI, Regional Board staff has been conducting public outreach and stakeholder meetings. Also, the SDCFB has talked to the University of California Cooperative Extension Service about how SDCFB can help growers meet the waiver's educational land record keeping requirements this year. Although San Diego Water Board staff has not reviewed the workplan, we appreciate and commend the SDCFB for its proactive work on timely compliance with the conditions of the new waiver for irrigated agricultural discharges.