

WATER QUALITY AND NEW REGULATIONS FOR IRRIGATED AGRICULTURE IN THE CENTRAL COAST OF CALIFORNIA

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On July 9, 2004, the Central Coast Regional Water Quality Control Board adopted new water quality regulations for irrigated lands. The new regulations replace old “blanket” type waivers of Waste Discharge Requirements that were adopted in 1983. The goal of the waiver program is to manage discharges from irrigated lands to ensure that such discharges do not cause or contribute to conditions of pollution or nuisance as defined in Section 13050 of the California Water Code (CWC) and do not cause or contribute to exceedances of any Regional, State, or Federal numeric or narrative water quality standard.

Under the California Water Code, Regional Boards regulate discharges of waste that could affect water quality through issuance of permits called “Waste Discharge Requirements”. CWC Section 13269 authorizes Regional Boards to waive Waste Discharge Requirements for a specific discharge or specific type of discharge if the waiver is in the public interest. Section 13269 was amended in 1999, causing all old waivers to expire. All waivers must now be reviewed and renewed or revised at least every five years, must be conditional, and must include monitoring.

The new conditional waiver applies to irrigated crop lands throughout the Central Coast Region. The Central Coast Region encompasses all or part of the counties along the Central Coast from San Mateo to Ventura, and includes all of Santa Cruz, Monterey, San Luis Obispo and Santa Barbara counties, as well as part of Santa Clara and most of San Benito and small portions of San Mateo and Ventura counties.

The conditions of the waiver require all owners and operators of irrigated lands in the Central Coast Region to: 1) enroll with the Regional Board by submitting a Notice of Intent and a checklist of currently implemented and planned management practices, 2) complete fifteen hours of water quality education, 3) develop a farm water quality management plan that addresses, at a minimum, erosion control, irrigation management, nutrient management and pesticide management, 4) implement management practices in accordance with the farm plan, and 5) conduct individual monitoring or participate in a cooperative monitoring program.

The waiver sets forth two categories of waiver. One category (Tier 1) applies to farmers who have already completed the education and farm plan development requirements and have begun to implement management practices for their operations. The other category (Tier 2) applies to those who have not yet completed all the requirements for a Tier 1 waiver. Tier 2 waivers are renewable annually for up to three years, giving farmers time to meet the waiver requirements.

Irrigation Agriculture in the Central Coast

Irrigated agriculture in the Central Coast Region comprises approximately 435,000 acres and more than 100 different crops. There are about 2500 agricultural operations in the region that are required to enroll under this program. Operations range in size from less than ten acres to more than 2000; however, approximately two-thirds of all operations are less than fifty acres. About one-third are less than ten acres. Fewer than 200 operations (less than 8%) exceed 2000 acres. Major crops include vegetable crops (such as lettuce, broccoli, cauliflower, celery, cabbage and spinach), fruits (such as strawberries and wine grapes), cut flowers, and potted plants. Other crops include mushrooms, artichokes, raspberries, asparagus, carrots, onions, snap peas, and many more. Agriculture is concentrated in several major drainages, including the Salinas Valley and upper Salinas watershed, the Pajaro Valley, the lower Santa Maria River, the Santa Ynez Valley and the Santa Barbara coastal area, as well as in numerous small drainages throughout the region.

A number of factors make agriculture in the Central Coast region unique. In general, farming is on a smaller scale than in the Central or Imperial Valleys. The Central Coast climate is unique in California and comprises a “niche” in the agricultural industry that distinguishes Central Coast farm products from other areas. The majority of operations are less than 50 acres. There are no large irrigation districts since most operations use groundwater as their water source. Many properties have been held in families for generations and are leased out rather than sold. The area is considered highly desirable, and growth pressures drive up the price of agricultural rents. There is a mixture of owned and leased lands and many operators own some ranches and lease others. Leases can be either short or long term (one year or more than five years), resulting in varying incentive by lease-holders to implement water quality protection.

Crop prices are primarily controlled by the existing market structure. Consolidation in the food industry has resulted in a smaller group of buyers, giving corporate retailers more bargaining power. In addition, local farmers often compete with products from other countries, where the costs of production may be substantially less. The result is that growers often have little control over the price they are paid even though the costs of producing and delivering products continues to rise. Additionally, issues of food safety are increasingly dictating practices growers must use in order to sell crops, and some recommended food safety practices may run counter to water quality protection practices. Because of these and other factors, the agricultural industry is extremely sensitive to cost increases and management practice requirements.

Existing Water Quality in Agricultural Areas

Information available to the Regional Board, including information used in identifying impaired water bodies within the Region in accordance with Clean Water Act section 303(d), indicates that irrigation return water and storm water runoff from irrigated lands contains waste that has impacted water quality in the waters of the State within the Region.

Over the past five years, the Regional Board’s Central Coast Ambient Monitoring Program (CCAMP) has provided information to characterize water quality, support waterbody beneficial use determinations, support waterbody listings for impairment, and to evaluate regional priorities. Under CCAMP, the Region has been divided into five rotational monitoring areas, based on hydrologic units such as the Pajaro River, Salinas River and Santa Maria River. Each rotational area is monitored once every five years. CCAMP performs tributary-based, in-stream monitoring at fixed sites throughout the rotational area on a monthly basis. The same sites are monitored again during the next rotational cycle.

CCAMP data, as well as other data sources, have shown that waterbodies in areas of intensive agriculture often have high levels of nutrients. For example, nitrate in some surface waters is present at levels far in excess of the drinking water standard of 10 mg/L as N (nitrogen). Persistent toxicity has also been documented in some areas of intensive agricultural operations, with its cause being traced to currently applied pesticides. Many surface waterbodies are on the Clean Water Act Section 303(d) list of impaired waters for pollutants associated with agricultural activities, and are scheduled for development of Total Maximum Daily Loads. Of the region’s 178 currently listed waterbodies, about 75 designate agriculture as a potential source. In addition, many groundwater basins underlying agricultural areas in the Central Coast Region show elevated nitrate concentrations, in some cases well over the drinking water standard.

Existing Efforts by the Agricultural Industry to Address Water Quality Issues

The Central Coast Region has benefited from the proactive approach taken by several segments of the agricultural industry. Notable examples include the Agricultural Water Quality Program of the Coalition of Central Coast County Farm Bureaus (Farm Bureau Coalition) and efforts to promote sustainable wine growing practices by the Central Coast Vineyard Team and the Central Coast Winegrowers Association. Efforts are also underway to promote sustainable

practices by Spanish-speaking farmers through the Rural Development Center and the Agricultural Land-Based Training Association (ALBA) in Monterey County.

The Farm Bureau Coalition has been working to address agricultural water quality impacts in areas that drain to the Monterey Bay National Marine Sanctuary, which represents approximately two-thirds of the region. This is a broadly supported cooperative effort that is implementing the Sanctuary's Plan for Agriculture and Rural Lands. The Sanctuary Plan was developed in cooperation with the California State Farm Bureau Federation and the Coalition of Central Coast County Farm Bureaus, the Regional Board and numerous other partners, including University of California Cooperative Extension, the Natural Resource Conservation Service and local Resource Conservation Districts.

Key components of the Sanctuary Plan implementation strategy include formation of grower working groups, and development and implementation of farm water quality management plans. Technical assistance is provided by Farm Bureau watershed coordinators active in each county, as well as all of the other partners listed above. Farm Bureau watershed coordinators provide the Regional Board with annual reports summarizing practice implementation and self-monitoring results by grower watershed working groups.

A small but significant (and increasing) percentage of growers on the Central Coast are participating in the Farm Bureau Coalition's program. As of late 2004, there were 17 active grower watershed working groups and another 17 in the process of organizing. The Regional Board estimates that active participants represent approximately 10-15% of operations in the region. Participants are often industry leaders who have chosen to be proactive in addressing water quality concerns.

In 1999, the University of California Cooperative Education and the Natural Resources Conservation Service developed and piloted a Farm Water Quality Planning short course in the Central Coast, to provide farmers with the information and resources needed to address water quality issues on their farms. The course provides farmers with information on water quality management practices for irrigation, pesticides, nutrients, and erosion control. Course participants are able to complete a farm water quality management plan by the end of the 15-hour course. In 2001, UC Cooperative Extension and the Farm Bureau Coalition teamed up to offer the short course to members of grower working groups that are implementing the Sanctuary Plan for Agriculture. As of December 2004, more than 600 Central Coast farmers have completed the course. Funding to support farm water quality planning has come from a variety of sources, including a current Clean Water Act Section 319(h) grant from the Regional Board. The Regional Board has been closely involved in the development of the short course. Regional Board staff, along with UC Cooperative Extension, NRCS, local Resource Conservation Districts, California Department of Fish and Game and others, participate in teaching the classes.

Another industry-led effort has been underway for several years to promote sustainable practices by wine grape growers. There are approximately 100,000 acres of grapes in the Central Coast, representing about 16% of the irrigated croplands in the region. Many of the growers have undertaken an evaluation process to assess irrigation, nutrient management, pest management, and erosion control practices through the Positive Point System developed by the Central Coast Vineyard Team (CCVT). CCVT estimates that approximately 75-100 operations have completed the Positive Point System evaluations and are using them to evaluate management practices and identify opportunities for improvement.

Developing New Regulation: Using a Collaborative Approach

In beginning to develop a replacement for the old waivers, Regional Board staff held a number of informal discussions with several agricultural and environmental groups throughout the Region. After hearing comments during several such meetings, staff concluded that the interests of all concerned would be best served by face-to-face meetings among all parties. The Central Coast Region is relatively small, at least compared to the Central Valley Region, California's other major agricultural Region. This feature made it feasible to convene an

advisory group of agricultural and environmental representatives from across the Region. Participants included the Ocean Conservancy, the Central Coast Coalition of County Farm Bureaus, Monterey County Farm Bureau, Jefferson Farms, Santa Cruz County Farm Bureau, San Benito County Farm Bureau, the Environmental Center of San Luis Obispo (ECOSLO), the Environmental Defense Center, Monterey Bay National Marine Sanctuary, the Agricultural Land-Based Training Association (ALBA), the Central Coast Winegrowers Association, San Luis Obispo County Farm Bureau and Cattlemen's Association, Santa Barbara County Farm Bureau, Grower Shipper Vegetable Association of Santa Barbara, and Santa Barbara Channel Keeper. Several other organizations that were contacted felt that their interests were adequately represented but expressed a desire to be kept informed.

Panel meetings were conducted as facilitated discussion sessions. The group adopted ground rules and spent time hearing about the interests and concerns of each of the participants. In this way, a foundation of understanding was built that allowed the participants to discuss ideas and propose solutions in a respectful environment. At the second meeting, the panel agreed on a mission statement, which reads, "The goal of the panel is to assist staff in developing recommendations to the Regional Board for a replacement to the expired waivers that will be protective of water quality, the viability of Central Coast agriculture, and comply with state law."

All panel recommendations were developed by consensus. Although the panel did not reach consensus on all aspects of the adopted program, considerable progress was made during the year of panel meetings. The input provided by the panel was very valuable in helping staff develop the waiver program. Perhaps even more importantly, a foundation has been laid for future communication between the agricultural and environmental communities across the Central Coast Region, as well as with the Regional Board.

Among the recommendations of the panel were the education and farm water quality plan development requirements, management practice implementation and reporting through a checklist format, and the tiered structure of the waivers, which offer reduced reporting for those meeting all the requirements. The panel also recommended that monitoring focus on currently applied agricultural constituents, make use of existing monitoring resources wherever possible, and be structured on a regionwide, cooperative basis rather than on individual discharge monitoring, all of which have been incorporated into the monitoring program.

Conclusion

The Regional Board has endeavored to develop a collaborative and cost-effective approach to water quality protection, by focusing on management practice implementation and by developing a regionalized monitoring option that will focus monitoring resources on currently applied agricultural constituents and concentrate monitoring in areas where data already indicates problems associated with agricultural activities. Primary focus during the first waiver cycle will be on performance requirements and use of water quality information to adjust practice implementation. To reduce administrative costs, staff has developed data management options such as direct monitoring data submittals, web-based enrollment and practice reporting, and coordination with pesticide use reporting.

The collaborative process used to develop the waiver has laid a foundation for successful implementation of the waiver program, and ultimately should result in better water quality throughout the agricultural areas of the Central Coast Region. Statewide interest in this process and the success of the program may lead to similar approaches in other parts of the state.