

Alternative Management Practices Under the Ground Water Regulations for Band Treatments in Citrus

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Enclosure to Enforcement Letter Enforcement Letter ENF 04-22

Referrals If you have any questions regarding this document, please contact your Enforcement Branch Liaison.

About this document This document explains alternative management practices that have been approved for citrus growers in runoff ground water protection areas (GWPA's).

Background Ground water protection regulations found in Title 3, California Code of Regulations (3CCR) were amended on May 27, 2004. This regulation change replaced "Pesticide Management Zones" with a new system that identifies areas susceptible to ground water contamination based on soil type and depth to ground water, as well as actual pesticide detections. These areas designated according to the pathway of movement to ground water are:

- Runoff GWPA's
- Leaching GWPA's.

Runoff GWPA's: 3CCR section 6487.4 Title 3, CCR section 6487.4 prohibits the use of all pesticides registered for agricultural, outdoor industrial, and outdoor institutional use containing chemicals listed in 3CCR section 6800(a) in runoff GWPA's unless one of the prescribed management practices can be met and are designated by the commissioner on the permit.

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**Band treatments:
3CCR section
6487.4(c)**

Band treatments refer to applications of pesticides to a narrow strip on or along a crop row rather than continuous over the field area.

Band treatments are one of seven prescribed management practices that allow for use of chemicals in 3CCR section 6800(a). With this practice, the pesticide must be applied immediately adjacent to the crop row so that not more than 33 percent of the distance between the rows is treated.

California Citrus Mutual request for alternative management practice

California Citrus Mutual (CCM), representing citrus growers, submitted a request to the Department of Pesticide Regulation (DPR) for approval of an alternative management practice for citrus in runoff GWPAs. CCM requested that band applications of pesticides listed in 3CCR section 6800(a) to citrus trees be extended to the drip line of the tree, even if the band width exceeds the 33 percent of the distance between the tree rows currently allowed.

The basis for the request was that the mitigation measures provided in the regulations were not adaptable to most citrus operations and that several of the measures potentially could put some growers in violation of conservation practices of the San Joaquin Valley Air Pollution Control District PM 10 (particulate matter) Plan.

Additional alternative management practices

Following the same reasoning described below, the decision also affects the prescribed management practices specified in 3CCR section 6487(a) “soil disturbance” and section 6487(b) “incorporation of the pesticides.”

Specifically, these subsections now mean that in citrus, soil to be treated with a pesticide listed in 3CCR section 6800(a) does not need to be disturbed prior to application from the dripline of the tree to the row of the same tree, even if that distance exceeds 33 percent of the distance between tree rows, and, a pesticide listed in 3CCR section 6800(a) does not need to be incorporated from the dripline of the tree to the row of the same tree, even if that distance exceeds 33 percent of the distance between tree rows.

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Justification for request CCM argued in the event of rainfall sufficient to cause movement of herbicides, the dense canopy of the citrus tree shields the treated area by deflecting the rain to the outside of the tree and away from the treated area. This diversion effectively mitigates the potential for movement to ground water.

Director's findings Although deflection of precipitation by the citrus tree canopy may play a role in mitigating runoff, there are additional reasons the proposed alternative management practice would mitigate runoff.

Studies have shown that runoff occurs mainly as a result of low soil infiltration rates. Low soil infiltration rates result from soil compaction caused in part by tractor and other equipment traffic and in part by the rain hitting the soil. Soil compaction under the tree canopy would be less because:

- The low hanging canopy typical of citrus provides a barrier to operation of agricultural equipment under the dripline
- The citrus canopy reduces the velocity of the precipitation, which mitigates the soil compacting effect of the precipitation.

Therefore, the soil is less compacted and will absorb more water within the dripline of the tree. Thus, expanding the band treatment area to include the area under the dripline is an effective practice to mitigate runoff.

Director's decision Pursuant to 3CCR section 6487.4(h)(1), the DPR Director approved the requested alternative management practice and two additional alternative management practices. These alternative practices are effective immediately.

DPR will update the regulations accordingly in an upcoming rulemaking.
