



Linda S. Adams  
Secretary for  
Environmental Protection

# California Regional Water Quality Control Board Central Valley Region

Karl E. Longley, ScD, P.E., Chair



Arnold  
Schwarzenegger  
Governor

Sacramento Main Office  
11020 Sun Center Drive #200, Rancho Cordova, California 95670-6114  
Phone (916) 464-3291 • FAX (916) 464-4645  
<http://www.waterboards.ca.gov/centralvalley>

## Setbacks, Buffers and Other Alternatives to Protect Surface Waters

The schedule in Waste Discharge Requirements General Order for Existing Milk Cow Dairies (Order No. R5-2007-0035) requires a statement of completion for the following item in Attachment C, Nutrient Management Plan:

### IV. "Setbacks, Buffers, and Other Alternatives to Protect Surface Water (see Technical Standard VII below)

- A. Identify all potential surface waters or conduits to surface water that are within 100 feet of any land application area.
- B. For each land application area that is within 100 feet of a surface water or a conduit to surface water, identify the setback, vegetated buffer, or other alternative practice that will be implemented to protect surface water. (Technical Standard VII below)"

Technical Standards (see Page C-14 of the Order)

### VII. "Setbacks and Vegetated Buffer

- A. ***Land Application Specification C.9 of the Order: "Manure and process wastewater shall not be applied closer than 100 feet to any down gradient surface waters, open tile line intake structures, sinkholes, agricultural or domestic well heads, or other conduits to surface water, unless a 35-foot wide vegetated buffer or physical barrier is substituted for the 100-foot setback or alternative conservation practices or field-specific conditions will provide pollutant reductions equivalent or better than the reductions achieved by the 100-foot setback."***
- B. ***A setback is a specified distance from surface waters or potential conduits to surface waters where manure and process wastewater may not be land applied, but where crops may continue to be grown.***
- C. ***A vegetated buffer is a narrow, permanent strip of dense perennial vegetation where no crops are grown and which is established parallel to the contours of and perpendicular to the dominant slope of the land applications area for the purposes of slowing water runoff, enhancing water infiltration, trapping pollutants bound to sediment and minimizing the risk of any potential nutrients or pollutants from leaving the land application area and reaching surface waters.***
- D. ***The minimum widths of setbacks and vegetated buffers must be doubled around the wellhead of a drinking water supply well constructed in a sole-source aquifer.***

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***E. Practices and management activities for vegetated buffers include the following:***

- 1. Removal of vegetation in vegetated buffers will be in accordance with site production limitations, rate of plant growth, and the physiological needs of the plants.***
- 2. Do not mow below the recommended height for the plant species.***
- 3. Maintain adequate ground cover and plant density to maintain or improve filtering capacity of the vegetation.***
- 4. Maintain adequate ground cover, litter and canopy to maintain or improve infiltration and soil condition.***
- 5. Periodic rest from mechanical harvesting may be needed to maintain or restore the desired plant community following episodic events such as drought.***
- 6. When weeds are significant problems, implement pest management to protect the desired plant communities.***
- 7. Prevent channels from forming.”***

Information to consider:

## **SURFACE WATER PROTECTION**

- The requirements for setbacks and buffers are based on guidelines developed by U.S. EPA for use throughout the United States. While allowed by this Order, they may not be suitable for use at the site of your dairy and more effective measures may be required to provide the water quality protection required by the Order. If you use setbacks and/or buffer strips that are not effective in protecting water quality, you face the potential of enforcement action and at a minimum you will have to modify your waste management system.
- Alternatives to setbacks and buffers include berms and tailwater recovery systems. These management systems do not allow any water containing animal waste to leave dairy property if built and operated properly.

## **GROUNDWATER PROTECTION**

- Vegetated buffers are usually not suitable for protection of wellheads.

- The California Department of Water Resources (DWR) is responsible for developing statewide standards for water wells. The standards require that all water wells shall be located an adequate horizontal distance from known or potential sources of pollution and contamination. A 100-foot minimum horizontal separation between wells and animal or fowl enclosures is generally considered adequate, but local conditions may require greater separation distances to ensure groundwater quality protection.
- Local governments, counties, cities, and some water districts are responsible for enforcing standards that are either equal to or more stringent than DWR's well standards. To determine who enforces well standards in your community, contact your local county environmental health department.
- Regional Water Board staff will not approve an installation or a practice that is not in compliance with applicable local well standards.
- Dairies that want to use an alternative to the 100-foot separation to protect a well must obtain approval of the alternative from the local agency responsible for enforcing the water well standards. As stated in the general order, any alternative must be at least as protective as the 100-foot separation; it cannot be less protective. Written documentation of the approval should be maintained in your records.
- The Regional Board may call for additional steps to be taken on a case-by-case basis if there is an apparent threat to water quality.

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