

ITEM: 23

SUBJECT: Regulation of Food Processing Waste Discharges to Land

BOARD ACTION: *Information Item*

BACKGROUND: Solid and liquid wastes from food processing industries (including canneries; meat, fruit and vegetable packing houses; cheese manufacturers; and wineries) contain significant quantities of organic matter, nutrients and salts. In the Central Valley Region, the majority of these facilities treat and dispose of their waste by discharge onto land. The focus of Regional Board regulation of these discharges has been to ensure that wastes are applied to fields at reasonable rates to avoid creating a condition of nuisance. Reasonable rates were determined empirically in the 1970's and perpetuated in guidelines intended to ensure that organic loading would not exceed what could be broken down by microorganisms within the soil without generating nuisance (odor) conditions, and that nutrients would not exceed what would be taken up by crops grown on the fields where the wastes are discharged.

Historically, many smaller discharges were regulated under conditional waivers of waste discharge requirements or, for the many larger operations, by individual waste discharge requirements. Senate Bill 390 amended Section 13269 of the California Water Code to cause all regional board waivers to expire on 1 January 2003. This legislation required all regional boards to evaluate whether the waiver conditions effectively protected water quality, and to revise the conditions appropriately and implement an effective compliance monitoring system to renew the waivers, or cease granting waivers. The Regional Board revised the conditions of waiver in January 2003. To obtain a waiver now, the Regional Board requires that all but the most innocuous food processing waste dischargers seeking a waiver submit a Report of Waste Discharge in which it characterizes the wastes, develops and implements a waste management plan to prevent discharge to surface waters and to ensure no degradation of groundwater quality, and includes a program to monitor waste applications to ensure waiver conditions are met.

ISSUES: Groundwater monitoring at many discharge sites has produced data demonstrating significant groundwater quality impacts from salts and nutrients in the wastes and from minerals leached from the soil by overloading of organic matter. Salts are not degraded within soil nor are they taken up in significant quantity by crops grown on disposal fields. As with general agriculture, intentional leaching of salt from the root zone is necessary under the best of circumstances to sustain most crops. If more nitrogen is applied than necessary to sustain organic waste decomposition or for crop uptake, the excess will migrate to groundwater. Deficiencies in both the guidelines and the waste discharge requirements, and poor adherence to both on the part of the regulated

community, have contributed to the situation. Degradation of groundwater quality by salt and nitrate continues to be one of the greatest threats to beneficial uses of groundwater within the Central Valley; however, the Regional Board has the ability to control nitrate and salt contributions from food processing waste discharges via its regulatory program.

Regional Board staff has developed a proposed regulatory strategy for food processing waste discharges to land intended to address existing deficiencies and prevent future water quality impacts. The strategy is consistent with existing policies and regulations and founded on scientific principles and accountability.

A number of factors will affect the success of the proposal, not the least of which are staff resource constraints, technology transfer issues, and inefficiencies. Staff is bringing this item to the Regional Board to allow opportunity for public and industry comment as to the deficiencies and proposed changes, and to obtain support from the Board that this change in direction, or some modified form of it, is necessary to increase efficiency and effectiveness of our regulatory programs as they apply to food processing waste discharges to land.

Staff asks that the Regional Board concur with a proposed approach to better regulate waste discharges to land from the food processing industry. Staff's approach emphasizes the following:

- 1) The discharge of food processing waste to land has the potential to degrade and/or pollute the underlying groundwater. Data submitted to the Regional Board clearly shows that pollution has occurred at a number of facilities.
- 2) It is appropriate and necessary to require that a food processing discharger submit detailed information regarding its waste discharge. At a minimum, this includes a full characterization of its waste at each release point, groundwater characterization, and a reliable prediction of potential groundwater impacts due to the discharge.
- 3) It is appropriate to update existing Monitoring and Reporting Programs to the level of detail described in the staff report.
- 4) If a discharge has degraded, or has the potential to degrade underlying groundwater, then "best practicable treatment and control" (BPTC) measures must be evaluated and implemented to minimize degradation to that allowed by the State Board Resolution No. 68-16, the Antidegradation Policy.
- 5) If a discharge cannot be treated and/or managed in a manner

to prevent groundwater pollution, then it is subject to regulation under Title 27 of the California Water Code. Alternatively, the discharge may be prohibited

- 6) If a discharge causes groundwater pollution and/or unauthorized degradation, then the discharger is subject to enforcement action, which would include requirements to implement changes to prevent pollution or unauthorized degradation in the future, and to remediate the groundwater impact in accordance with State Board Resolution No. 92-49, the Cleanup Policy.
- 7) To address the critical lack of staff resources: the State Board should be requested to augment resources for this program; food processing facilities should be reclassified into the appropriate threat/complexity rating such that they pay annual fees commensurate with the true impact/threat to water quality; and enforcement orders should contain a provision to recover staff costs.

This is for the Board's information. No action will be taken.

Mgmt. Review _____
Legal Review _____

28 January 2005

Central Valley Regional Water Quality Control Board
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670