



COUNTY OF KINGS

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DEPARTMENT OF PUBLIC HEALTH DIVISION OF ENVIRONMENTAL HEALTH SERVICES

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KINGS COUNTY
PLANNING AGENCY

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Kings County Government Center
1400 W. Lacey Boulevard
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SUBJECT: Notice of Preparation of a Program Environmental Impact Report – Draft Dairy Element of the Kings County General Plan

Thank you for the opportunity to give our views on the scope and content of the environmental information which should be included in the Program Environmental Impact Report (PEIR). We offer the following suggestions:

The PEIR should thoroughly evaluate the protection of groundwater quality in the context of future dairy development. The disposal of manure and wastewater generated by dairies has resulted in the pollution of groundwater by both nitrates and salts. This problem has been by no means limited to Kings County and has been amply demonstrated in the Chino Basin and in the Visalia area. *U.S. Geological Survey Circular 1159* states that "data from wells in the eastern San Joaquin Valley that were less than or equal to 200 feet deep indicate that median nitrate concentrations increased significantly from the 1950s to the 1960s, and from the 1970s to the 1980s." The increase in the number of dairies and other confined-animal feedlots is cited in that document as a contributing factor along with an increase in the application of nitrogen fertilizer. It goes on to point out that nitrate concentrations in excess of 2.0 mg/L indicate degradation from overlying land use.

The presence of nitrates in groundwater is a hazard to public health. The use of nitrate-contaminated drinking water to prepare infant formula can result in a condition known as infant methemoglobinemia or "blue baby syndrome." Affected infants develop a peculiar blue-gray skin color and may become irritable or lethargic, depending on the severity of their condition. The condition can progress rapidly to cause coma and death if it is not recognized and treated appropriately. A recent article in the journal, *Environmental Health Perspectives* 108:675-678 (2000), reports on the investigation of two cases of methemoglobinemia in Wisconsin. Both cases involved infants who became ill after being fed formula that was

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reconstituted with water from private wells. Water samples collected from these wells during the infants' illnesses contained nitrate-nitrogen concentrations of 22.9 and 27.4 mg/L.

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Parts of Kings County are poorly drained and are characterized by perched water tables. In particular, this is true of the Island District and elsewhere in the northwest portion of the county where large numbers of dairies are now located. However, areas with high water tables are not conducive to the operation of dairy farms, wastewater lagoons or the land application of large volumes of manure due to the impact of salts and nitrates on groundwater quality. Abandoned and poorly constructed water wells serve as conduits for the movement of pollutants from shallow perched groundwater to the deeper aquifers we rely upon for domestic, agricultural, and industrial use. Therefore, we strongly recommend that the Dairy Element designate high water table areas as "sensitive areas" where dairies would be prohibited.

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The PEIR should consider the potential environmental advantages of non-traditional means of managing dairy wastes such as the on-site or off-site composting of manure, anaerobic digesters, and Autogenous Thermophilic Aerobic Digestion (ATAD). The Draft Manure Management Strategy Report for the Chino Basin, Santa Ana River Watershed, September 1999, presented by the Santa Ana River Watershed Group (SARWG) states that the application of ATAD to processing waste streams has been intensively studied for over 40 years. The SARWG report claims that ATAD allows a facility to rapidly transform organic matter into useful fertilizer or feed products while achieving a high degree of disinfection using a small footprint and with little or no impact on the local environment. Reportedly, in the Chino Basin Dairy Area (CBDA), a private development group is analyzing the feasibility of installing a regional manure ATAD system.

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The PEIR should also consider the possible environmental impacts of the land application of dairy manure that may be imported from outside the county. The pressures of urbanization and the environmental problems resulting from years of dairy waste disposal within the Chino Basin have forced the dairy industry there to export its waste. For example, the SARWG report referenced above states in Section 4.3.6:

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A second pilot project is under consideration for direct land application of manure to up to 50,000 acres of farmland in Kings County. A large farming operation has available up to 50,000 acres of land suitable for manure land application. The farmer proposes a year-round project

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operating 300 days per year at the rate of 1,000 tons of manure per day. To launch this project the farmer is requesting a three-year project commitment at the rate of \$16.00 per ton of manure. The distance between the CBDA and the property in Kings County is approximately 220 miles each way.

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The entire SARWG report may be downloaded at <http://www.sarwg.org/TOC2/MMSToc.htm>

The last paragraph of the Notice of Preparation lists the major issues to be analyzed in the PEIR. We concur that they are all worthy of consideration. However, it is suggested that the most thorough analysis be made of impacts to water resources and water quality, air emissions and odors, and of course, public health.

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The careful preparation and rigorous enforcement of a Dairy Element can be a major step towards providing for the orderly expansion of the dairy industry in Kings County while simultaneously protecting the quality of life and environmental health in our county. We look forward to working with you and your Agency on this important and long-awaited project.

Sincerely,



Keith Winkler, REHS
Director of Environmental
Health Services

cc: Loretta Tucker, REHS