COUNTY OF KINGS

DEPARTMENT OF PUBLIC HEALTH
DIVISION OF ENVIRONMENTAL HEALTH SERVICES

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SUBJECT: Revised Draft Dairy Element of the Kings County General Plan and Program Environmental Impact Report --

Thank you for the opportunity to review the draft Dairy Element and the Program Environmental Impact Report (PEIR). We have the following comments:

1. We fully concur with the finding made in the PEIR that the Fifty-Percent Reduced County Herd Size is the environmentally superior alternative. The "theoretical" capacity is just that and should not be the figure used to cap dairy cattle numbers. It implies an assumption that manure will be applied throughout the Nutrient Spreading Overlay Zone which has not been shown will be the case. Also, its derivation fails to consider nitrogen and salts from other sources such as synthetic fertilizers, biosolids, treated sewage discharged from POTWs, and animal waste from swine and poultry operations. 14-1 14-2

2. The Dairy Element should recognize the possibility of large volumes of dairy manure being imported from outside of the county. The more out-of-county manure that is applied, the less land will be available for spreading manure from Kings County's own dairy farms. Also, the environmental impacts of importation should be evaluated by the PEIR. For example, 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. 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 in Section 4.3.6: 14-3

> 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 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.

14-3 Cont.

3. In the Human Health section, the PEIR should have evaluated the potential environmental impact of nitrates in groundwater as 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 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. 14-4

4. Policy DE 1.2i would require a one-half mile buffer between any residential zone (meaning land zoned or designated for residential uses and not individual rural residences) and a dairy facility. However, the Dairy Element provides no background information to justify why that distance should be chosen instead of a greater one. On the contrary, the SJVUAPCD is quoted on Page 4.2-43 as stating that "dairies located within 1.0 mile of a sensitive receptor could generate odors that may be significant." Also, a member of our own Department's staff is quoted on Page 4.8-8: "fly complaints are typically made from residences within 0.5 to 3.0 miles of a dairy (depending on predominant wind direction) with a fly infestation." Consideration should be given to expanding that buffer zone, perhaps with regard to the prevailing wind direction, which is from the northwest during the fly season. 14-5

5. A source should be provided for the statement found on Page DE-10 of the Dairy Element that salt is generated at a rate of 1.29 lb. per day per AU.

6. Calculations of nitrogen loading used in the Dairy Element are based on factors that include 0.56lbs/AU/day for milk cows and 0.45 lbs./AU/day for support stock. A statement 14-6

is made on Page DE-10 that the "dairy process water (liquid manure) and solid manure factors are assumptions used in calculating Nitrogen values based on RWQCB's *Fact Sheet 4*." However, *Fact Sheet 4* contains a footnote no. 2 on Page 2 which references those nitrogen factors by stating that the "following assumptions used in calculating nitrogen values are consistent with assumptions used by staff in Merced County:" The primary source for those figures should be cited. It is important that the Dairy Element use the best science available rather than assumptions that were borrowed from someone else's assumptions. 14-6 Cont.

7. Although new dairy facilities would be prohibited in high water table areas, it isn't clear from reading Policy DE 1.2d whether existing dairies there would be permitted to expand. Zones 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 the shallow perched groundwater in those areas 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 the expansion of existing dairies would be restricted. 14-7

8. Policy DE 3.2a A. specifies a depth of at least five feet between the highest recorded groundwater level and the lowest point of the dairy facility. However, what if there are no records available? Instead, it should be based on the anticipated highest groundwater level as determined by a qualified engineer, hydrologist or soil scientist. 14-8

9. Policy DE 4.1B.2.g. on Page DE-28 requires that "naturally occurring or imported clayey soils" be used to underlie the corrals and dry manure storage areas. Appropriate criteria should be included to define acceptable clay, e.g. percentage or hydraulic conductivity. 14-9

10. Compliance with the requirements in Policy DE 5.1g would be impractical to monitor and should be deleted. 14-10

11. It is inappropriate to consider methane emissions to be a significant impact (Impact 4.2-9). First, methane has not been identified as a criteria air pollutant by either the California Air Resources Board (CARB) or the U.S. Environmental Protection Agency (USEPA) nor has it been classified by CARB or USEPA as a toxic air contaminant or hazardous air pollutant. Second, no quantified standards exist to evaluate whether methane emissions are environmentally significant. Third, on pages 4.2-3, 4.2-4, 4.2-44 and 4.2-75, in an attempt to justify considering methane emissions, the author of the draft PEIR cites methane as "the second most significant greenhouse gas (following carbon dioxide) that contributes to global warming." In that context, as the author rightly points out, methane emissions are only of concern insofar as they contribute to a global adverse environmental condition, i.e. global warming. Since dairy cows are maintained to meet the demand for milk and other dairy products, it is logical to assume that if Kings County's dairy cattle numbers do not increase, a similar number of cattle would be located somewhere else where their methane emissions would make an identical contribution to greenhouse gases from a global perspective. Finally, it is unclear why the methane emissions would remain a significant and unavoidable impact despite implementation of the several relevant mitigation measures recommended in the PEIR and proposed as policies in the Dairy Element. 14-11

12. The Dairy Element would stipulate that a remarkable number of technical plans be submitted with an application for an SPR, i.e. Comprehensive Nutrient Management Plan, Dead Animals Management Plan, Comprehensive Dairy Process Water Application Plan, Livestock Management Plan and Fugitive Dust Control Plan. Coupled with that is a detailed and comprehensive set of monitoring requirements, which are set forth in Section V. The successful implementation of the Dairy Element will depend on the management commitment and technical skills of dairy operators. Towards that end, it is recommended that the Dairy Element require that at least one manager from each new or expanded dairy facility be required to receive appropriate training with periodic refreshers. The Environmental Stewardship Short Course offered by UC Cooperative Extension could be an example of such training. 14-12

Again, thank you for the opportunity to review and comment on these documents which are of such importance to the future of Kings County. Please let me know if you have any questions.

Sincerely,

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Director of Environmental
Health Services

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