2. SUMMARY

SECTION 2
SUMMARY

INTRODUCTION

This section provides a summary of the proposed Revised Draft Dairy Element to the Kings County General Plan (Element) and areas of controversy that have been identified by the public and public agencies in response to the Notice of Preparation. This section also provides a summary of the discretionary actions required to implement the proposed project.

PROPOSED PROJECT

The proposed project evaluated in this Program Environmental Impact Report (PEIR) is the Revised Draft Dairy Element and associated amendments to the Kings County Zoning Ordinance (Appendix A). The Element presents a comprehensive set of goals, objectives, and policies to guide development, expansion, and operation of milk cow (bovine) dairies within the County. The Element is designed to accomplish two equally important major purposes. The first purpose is to ensure that the dairy industry of Kings County continues to grow and contribute to the economic health of the County. The second purpose is to ensure that the standards established in the Element protect public health and safety and the environment. The County has determined that the best way to accomplish these combined goals is to adopt a separate general plan element that establishes development and operational policies for the local dairy industry.

The Element designates areas within the County suitable for the development and expansion of bovine dairy facilities (Dairy Development Overlay Zones, or DDOZs) and areas suitable for application of manure and process water generated at dairy facilities (Nutrient Spreading Overlay Zones, or NSOZs). The locations of the DDOZs are controlled by objectives and policies of the Element which restrict dairy development within and proximal to environmental constraints, including incompatible land uses (e.g., urban residential areas, schools, and the Lemoore Naval Air Station), flood zones, designated wildlife habitat, and areas of excessive slope. The DDOZs encompass approximately 394 square miles of land currently zoned for agricultural uses. Construction of dairy facilities and application of manure and process water would be allowed in the DDOZs.

Manure and process water application as irrigation and fertilizer would be allowed in flood zones as long as precautions are taken to avoid application during periods of expected inundation. The NSOZs encompass an additional ~~646~~ 642 square miles for additional

nutrient application. The combined areas of the DDOZs and NSOZs would total approximately ~~1,040~~ 983 square miles for dairy facilities and nutrient spreading. On the basis of the available land within the DDOZs and NSOZs, the Element has estimated a theoretical capacity for the maximum herd size for the County under the provisions of the Element. The limiting factor for the theoretical herd size was assumed to be the rate of nutrient (nitrogen and salts) application recommended by the Central Valley Regional Water Quality Control Board (RWQCB) to be protective of water quality. The maximum theoretical milk cow herd is estimated to be 381,980 milk cows (534,772 animal units,[1] AU) and 423,998 head of support stock (335,409 AU), after considering the nutrient loading related to other livestock and sewage sludge reuse. Accounting for the estimated dairy herd within the County in 1999 (124,668 milk cows and 138,344 head of support stock) and other existing sources of manure nutrients, the potential available remaining capacity in the County is approximately 257,312 milk cows and 285,654 head of support stock.

Dairies and dairy expansions proposed in the DDOZs, as designated in the Element, would be established by ~~conditional use permit, and could be expanded by either~~ site plan review (SPR) or conditional use permit (CUP), depending on circumstances. SPRs would be exempt from individual environmental review as long as they are consistent with the standards adopted in the Element concerning design, operation, monitoring, and reporting.

The PEIR evaluates the adequacy of the goals, objectives, and policies contained in the Element in reducing or eliminating potential environmental impacts associated with implementation of the Element.

NOTICE OF PREPARATION AND SCOPING SESSIONS

Two Notices of Preparation (NOP) were prepared and distributed to public agencies, community organizations, and other interested parties. The NOPs solicited public response as to the issues that should be included in the EIR. The initial NOP was mailed out on 17 November 2000 and responses were requested within a 30-day period, as required by Section 15082(a) of the CEQA Guidelines. Following amendments to the Element, a second NOP was distributed on 12 April 2001 that described the revised Element.

[1] An animal unit (AU) is a normalizing standard used to define equivalent numbers of animals managed at confined animal facilities. One animal unit is defined as one 1,000-pound mature dairy cow, specifically one Jersey cow. Support stock (e.g., heifers and calves) are smaller than milk cows and are assigned a fraction of an animal unit, depending on maturity (and weight). A mature Holstein cow is equivalent to 1.4 AU; a mature Guernsey cow is equivalent to 1.2 AU. For purposes of this EIR, all dairy cattle are conservatively considered Holstein cattle.

Scoping of the development of the Element and its environmental analysis was performed by the Kings County Planning Agency with assistance from the County's Dairy Review Committee. The Dairy Review Committee was a voluntary committee made up of interested people from the dairy community, allied industries, and others including representative of the general public and an environmental group. No formal membership was required to participate.

The scope of the Element was discussed at two Dairy Review Committee meetings and three subcommittee meetings held between May and November 1999. The subcommittees discussed the following specific issues:

- Manure management
- Design standards for dairy facilities
- Dairy monitoring program

The recommendation of the Dairy Review Committee was split. Both groups were in favor of developing an Element, but split on whether a Program EIR should be prepared. Since an environmental review is required as part of the development of a general plan or its elements, it was determined that a Program EIR would be prepared as part of the Element development and review process.

AREAS OF CONTROVERSY

There were six written responses to the initial NOP. The responses indicated general agreement with the range of issues that have been addressed in this PEIR. Responses were received from five public agencies, including the Central Valley Regional Water Quality Control Board, Native American Heritage Commission, Kings Mosquito Abatement District, Caltrans, and the Kern County Resource Management Agency. Concerns about potential environmental impacts included the following topics:

- Mosquito production
- Land application of manure and process water
- Process water and process water pond management
- Cultural resource preservation
- Cumulative transportation impacts

Following public distribution of the 21 December 2000 PEIR, several letters of comment were received. The comments contained in these letters were considered in the development of the revised Element and this PEIR. The letters included comments provided by the Cities of Hanford and Lemoore, Central Valley Regional Water Quality Control Board, Caltrans, Kings County Fire Department, Kings County Department of Public Health, United States Fish and Wildlife Service, Tulare Basin Wetlands Association,

California Department of Fish and Game, California Office of Governmental and Environmental Relations, Marc Schuil, and Michael LaSalle. These responses included comments on the following topics:

- Manure and process water management and application
- Fire protection
- Land use designations
- Transportation impacts (including cumulative impacts)
- Wetlands protection
- Pathogen migration
- Wildlife protection (including special-status species)

No letters of response were received on the second NOP (distributed on 12 April 2001) by 27 April 2001. Any comment letters received after 27 April 2001 will be considered during the preparation of the Final PEIR.

DISCRETIONARY ACTIONS FOR APPROVAL OF THE ELEMENT

The following approvals or entitlements would be required to allow the project to be implemented:

- Certification of the Program Environmental Impact Report
- Approval and adoption of the Element of the Kings County General Plan;
- Amendment of the Kings County Zoning Ordinance to ensure that dairy development is consistent with State law and implement the policies in the Element.

SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

The analysis of potential environmental impacts of implementation of the Element presented in this PEIR reflects the iterative and integrated process under which the Element was prepared. Throughout the process, the technical professionals on the EIR interacted with the staff of the Kings County Planning Agency to develop the goals, objectives, and policies contained in the Element. Initially, the EIR team performed impact analysis on a preliminary draft of the Element. As a result of that analysis, recommended mitigation measures were submitted to the KCPA for consideration. The Element was revised to include all of the recommended mitigation measures. Therefore, the version of the Element presented in Appendix A of this PEIR represents the project as mitigated by the recommendations made to the KCPA.

The impacts and associated mitigation measures of the revised Element are summarized in Table 2-1. The table provides the text of impact statements and the entire mitigation measure that would reduce the impact to a less than significant level, if possible. The table also presents the pertinent policies contained in the Element that mitigate the identified impact. Table 2-1 also indicates those instances where mitigation would not reduce an impact to a less-than-significant level. These significant and unavoidable impacts include:

- Particulate matter (PM_{10}) emissions on a project level
- Particulate matter (PM_{10}) emissions on a cumulative level
- Ozone precursors ~~Reactive organic gas (ROG)~~ emissions on a project level
- Ozone precursors ~~Reactive organic gas (ROG)~~ emissions on a cumulative level
- Hydrogen sulfide emissions on a project level
- Hydrogen sulfide emissions on a cumulative level
- Ammonia emissions on a project level
- Ammonia emissions on a cumulative level
- Methane emissions on a project level
- Methane emissions on a cumulative level
- Odor emission on a project level

ALTERNATIVES

This EIR includes an evaluation of alternatives to the proposed project. A revised location alternative was considered and rejected during the scoping process on the basis that the Element considers the most appropriate locations for new and expanded dairies and that the County cannot control dairy development outside the County. In addition, an alternative to limit the herd size at individual dairies was considered. This alternative was rejected on the basis that the County does not set specific limits on other types of agricultural activities as long as those activities are conducted in accordance with existing laws and regulations. In addition, the alternative was not found to reduce environmental impacts because it would likely result in development of a similar overall size dairy herd in the County to that proposed by the Element.

The alternatives evaluated include the No Project, two Reduced County Herd Size, and Increased Manure Treatment alternatives. The Ten Percent Reduced County Herd Size and Fifty Percent Reduce County Herd Size alternatives were considered to provide a context for the effect of varying maximum theoretical bovine herd size reductions. The Fifty Percent Reduced County Herd alternative is considered the environmentally superior alternative.

Table 2-1: SUMMARY OF IMPACTS AND MITIGATION MEASURES					
Environmental Impact	**Level of Significance before Mitigation**		**Mitigation Measures**	**Level of Significance after Mitigation**	
	LS	**S**		**LS**	**SU**
Geology, Soils, and Seismicity					
4.1-1 Construction of proposed embankments to contain dairy operations process water present the potential for erosion and slope failure and release of contained process water.	●		4.1-1 *None required.* Compliance with the requirements of Policies DE 2.1f, 3.1a, and ~~6.1c~~ 6.2b would ensure that potential adverse geotechnical issues would be evaluated by a qualified professional.	●	
4.1-2 Disturbance of agricultural soils caused by construction of dairy facilities.	●		4.1-2 *None required.*	●	
4.1-3 Potential damage during expected seismic shaking.	●		4.1-3 *None required.* Implementation of Policy DE 2.1f and enforcement of existing building code requirements would reduce the potential impacts related to seismic shaking to a less-than-significant level.	●	
4.1-4 The moderate to high shrink-swell potential and the potential for corrosion of uncoated steel and concrete within soils could present significant maintenance and stability problems for pipelines, foundations, and pavements.	●		4.1-4 *None required* . Implementation of Policy DE 2.1f and compliance with the requirements of the Uniform Building Code will reduce adverse soil condition impacts.	●	
Air Quality					
4.2-1 Construction activities associated with new or expanded dairies would result in a short-term increase in PM_{10} emissions from fugitive dust sources.	●		4.2-1 *None required.* Implementation of Policy 5.1d of the Element would reduce short-term construction-related PM_{10} emissions from fugitive dust to a less-than-significant level.	●	
4.2-2 Construction activities associated with new or expanded dairies would result in short-term exhaust emissions from construction equipment.	●		4.2-2 *None required.* Implementation of the Element would reduce construction related exhaust emissions to a less-than-significant level.	●	
4.2-3 Operation of new or expanded dairies ~~would~~ could increase PM_{10} air pollutant emissions from fugitive dust, exhaust from agricultural and dairy equipment, vehicular traffic exhaust, and formation of secondary $PM_{2.5}$.		●	4.2-3a (Fugitive Emissions from Unpaved Areas) *No additional feasible mitigation measures are available for the control of fugitive dust.* Implementation of Policies DE 5.1e, ~~5.1h~~ 5.1g, ~~5.1i~~ 5.1h, ~~6.1b~~ 6.1a, ~~6.1d~~ 6.2c, and ~~7.1d~~ 6.1b of the Element would reduce and control PM_{10} emissions from fugitive dust at future or expanded dairies.		●

			4.2-3b (Secondary $PM_{2.5}$) *No additional feasible mitigation measures are available.* Implementation of Policies DE 3.1a, 5.1c, 5.1e, 6.1a, 6.2d, 6.3a, and 6.1b would be expected to reduce ammonia generated from dairy facilities and would also reduce other air pollutants generated from cattle manure. 4.2-3c (Equipment Exhaust) *No additional feasible mitigation measures are available.* Implementation of Policy DE 5.1i would reduce the potential for PM_{10} emissions from exhaust sources although the amount of the reduction is unknown.		
~~4.2-4 Operation of new or expanded dairies could increase exhaust emissions from agricultural and dairy equipment.~~	●		~~4.2-4 *None required.*~~ ~~Implementation of Policy DE 5.1j of the Element would reduce exhaust emission impacts to a less-than-significant level.~~	●	
~~4.2-5~~ 4.2-4 Operation of new or expanded dairies could generate adverse odors.		●	~~4.2-5~~ 4.2-4 *No additional feasible mitigation measures are available.* Implementation of Policies DE 1.2g, 1.2h, 1.2i, 3.1a, 3.1b, 3.1c, 5.1b, 5.1c, ~~5.1h~~ 5.1g, ~~6.1b~~ 6.1a, ~~6.1e~~ 6.2d, ~~6.1f~~ 6.2e, ~~7.1d~~ 6.1b, and ~~7.2a~~ 6.4a through ~~7.2e~~ 6.4c would significantly reduce odors generated from dairy facilities operated in conformance with the Element.		●
~~4.2-6~~ 4.2-5 Operation of new or expanded dairies would generate ozone precursor (ROG and NOx) emissions from cattle manure and combustion engine exhaust.		●	~~4.2-6~~ 4.2-5 *No additional feasible mitigation measures are available.* Implementation of Policies DE 3.1a, 5.1c, 5.1i, ~~6.1b~~ 6.1a, ~~6.1e~~ 6.2d, ~~6.1f~~ 6.2e, and ~~6.2a~~ 6.3a would be expected to reduce ~~ROG~~ ozone precursors and other air pollutants generated from cattle manure and equipment and vehicle exhaust.		●
~~4.2-7~~ 4.2-6 Operation of new or expanded dairies would generate ammonia emissions from cattle manure.		●	~~4.2-7~~ 4.2-6 *No additional feasible mitigation measures are available.* Implementation of Policies DE 3.1a, 5.1c, 5.1e, ~~6.1b~~ 6.1a, ~~6.1e~~ 6.2d, ~~6.2a~~ 6.3a, and ~~7.1d~~ 6.1b would be expected to reduce ammonia and other air pollutants generated from cattle manure.		●
~~4.2-8~~ 4.2-7 Operation of new or expanded dairies would generate hydrogen sulfide emissions.		●	~~4.2-8~~ 4.2-7 *No additional feasible mitigation measures are available.* Implementation of Policies DE 3.1a, 5.1c, ~~6.1b~~ 6.1a, ~~6.1e~~ 6.2d, ~~6.1f~~ 6.2e, ~~6.2a~~ 6.3a, and ~~7.1d~~ 6.1b would be expected to reduce hydrogen sulfide and other air pollutants generated from cattle manure.		●
~~4.2-9~~ 4.2-8 Operation of new or expanded dairies would generate methane emissions from cattle and cattle manure.		●	~~4.2-9~~ 4.2-8 *No additional feasible mitigation measures are available.* Implementation of Policies DE 3.1a, 5.1c, ~~5.1f~~, ~~6.1b~~ 6.1a, ~~6.1e~~ 6.2d, ~~6.1f~~ 6.2e, ~~6.1g~~, ~~6.2a~~ 6.3a, and ~~7.1d~~ 6.1b would reduce methane generated from ruminant livestock and manure.		●

Key: LS = less than significant
S = significant
SU = significant and unavoidable

Table 2-1: SUMMARY OF IMPACTS AND MITIGATION MEASURES (*continued*)					
Environmental Impact	**Level of Significance before Mitigation**		**Mitigation Measures**	**Level of Significance after Mitigation**	
	LS	**S**		**LS**	**SU**
~~4.2-10 Increased localized and regional air pollutant emissions would be generated during operation of new or expanded dairies from vehicular traffic~~.	●		~~4.2-10 *None required.*~~	●	
4.2-9 Increased localized carbon monoxide would be generated from vehicular traffic during operation of new or expanded dairies.	●		4.2-9 *None required.* Implementation of Policy DE 3.1g would reduce the potential for adverse queuing of traffic generated by dairy development and the potential for a significant increase in CO emissions.	●	
~~4.2-11~~ 4.2-10 Implementation of the Element would result in a cumulative increase in PM_{10} emissions.		●	~~4.2-11~~ 4.2-10 *None available.* Although implementation of Policies DE 5.1e, ~~5.1h~~ 5.1g, ~~5.1i~~ 5.1h, ~~6.1b~~ 6.1a, ~~6.1d~~ 6.2c, ~~6.1e~~, and ~~7.1d~~ 6.1b of the Element would reduce PM_{10} emissions from cumulative project operations, PM_{10} emissions could continue to be generated during cumulative operations.		●
~~4.2-12~~ 4.2-11 Implementation of the Element would result in a cumulative increase in ~~ROG~~ ozone precursor emissions.		●	~~4.2-12~~ 4.2-11 *None available.* Although implementation of Policies DE 5.1c, ~~6.1b~~ 6.1a, ~~6.1e~~ 6.2d, ~~6.1f~~ 6.2e, and ~~6.2a~~ 6.3a would reduce or prevent the release of ~~ROG~~ ozone precursor emissions into the environment from manure storage or collection systems, ~~ROG~~ ozone precursor emissions would continue to be generated from existing, new, or expanded dairies in the County (i.e., exhaust emissions, manure stockpile, initial deposition of manure).		●
~~4.12-13~~ 4.2-12 Implementation of the Element would result in a cumulative increase in methane emissions.		●	~~4.2-13~~ 4.12-12 *None available.* Implementation of Policies DE 3.1a, 5.1c, ~~5.1f~~, ~~6.1b~~ 6.1a, ~~6.1e~~ 6.2d, ~~6.1f~~ 6.2e, ~~6.1g~~, ~~6.2a~~ 6.3a, and ~~7.1d~~ 6.1b of the Element would reduce but not eliminate methane emissions from cumulative projects in the San Joaquin Valley air basin.		●
~~4.2-14~~ 4.2-13 Implementation of the Element would result in a cumulative increase in hydrogen sulfide emissions.		●	~~4.2-14~~ 4.2-13 *None available.* Implementation of Policies DE 3.1a, 5.1c, ~~6.1b~~ 6.1a, ~~6.1e~~ 6.2d, ~~6.1f~~ 6.2e, ~~6.2a~~ 6.3a, and ~~7.1d~~ 6.1b of the Element would reduce but not eliminate hydrogen sulfide emissions from cumulative projects in the San Joaquin Valley air basin.		●
~~4.2-15~~ 4.2-14 Implementation of the Element would result in a cumulative increase in ammonia emissions.		●	~~4.2-15~~ 4.2-14 *None available.* Implementation of Policies DE 3.1a, 5.1c, ~~6.1b~~ 6.1a, ~~6.1e~~ 6.2d, ~~6.1f~~ 6.2e, ~~6.2a~~ 6.3a, and ~~7.1d~~ 6.1b of the Element would reduce but not eliminate ammonia emissions from cumulative projects in the San Joaquin Valley air basin.		●

Water Resources					
4.3-1 Construction activities associated with new or remodeled dairies could result in degradation of water quality in receiving waters by reducing the quality of storm water runoff.	●		4.3-1 *None required.* Implementation of existing National Pollutant Discharge Elimination System regulations (including the construction period SWPPP) would reduce this potential impact to a less-than-significant level.	●	
4.3-2 Projects implemented under the Element could modify surface water drainage patterns, potentially causing localized off-site migration of runoff, erosion, and/or flooding.	●		4.3-2 *None required.* Conformance with State Confined Animal Facility regulations and implementation of Policies DE 1.2c, 1.2f, 3.2c, 3.2d, 4.1b, and 4.1c would reduce impacts associated with runoff from dairy facilities to a less-than-significant level.	●	
4.3-3 Implementation of the proposed project would result in an increase in impervious surfaces, potentially increasing runoff volumes and velocities.	●		4.3-3 *None required.* Compliance with existing State Confined Animal Facility regulations and programs would reduce the impact to a less-than-significant level without additional mitigation.	●	
4.3-4 Dairies located in flood-prone areas could be damaged or rendered temporarily inoperable during a flood event. In addition, flood waters could inundate dairy facilities (manured areas and/or process water storage facilities) and fields where wet or dry manure had been recently applied causing impacts to surface water quality.	●		4.3-4 *None required.* Implementation of the pollution prevention actions required by the Element, including Policies DE 1.2c, 3.2d, and 3.2g, would minimize the potential for degradation of water quality during flood events and reduce the impact to a less-than-significant level.	●	
4.3-5 Operation of existing and new dairies could result in releases of pollutants (including nutrients such as nitrogen and phosphorus), impacting the quality of surface waters.	●		4.3-5 *None required.* Compliance with existing regulations and programs and Policies DE 1.2f, 3.1a, 4.1a, 4.1b, 4.1c, and 4.1d proposed by the Element would reduce potential impacts to surface water quality to a less-than-significant level without additional mitigation.	●	
4.3-6 Implementation of the proposed project could result in depletion of water resources.	●		4.3-6 *None required.* Implementation of Policy DE 3.2h would reduce the impact of depletion of water resources to a less-than-significant level.	●	
4.3-7 Activities associated with dairy facilities and support cropland could result in an increase in the rate of salt and nitrogen loading, and the release of pathogens in the basin, degrading groundwater quality.	●		4.3-7 *None required.* Implementation of Policies DE 1.2c, 1.2d, 1.2f, 3.1a, 3.2a, 3.2b, 3.2c, 3.2h, 3.2i, 4.1a.A, 4.1a.B, 4.1b, 4.1c, ~~6.1h~~ 6.2f, and ~~7.2d~~ 6.4d would reduce localized and regional groundwater quality impacts to a less-than-significant level.	●	

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Table 2-1: SUMMARY OF IMPACTS AND MITIGATION MEASURES (*continued*)					
Environmental Impact	**Level of Significance before Mitigation**		**Mitigation Measures**	**Level of Significance after Mitigation**	
	LS	**S**		**LS**	**SU**
4.3-8 Existing water supply wells may represent preferred pathways for pollutant migration to the subsurface.	●		4.3-8 *None required.* Implementation of Policies DE 3.2c and 3.2i would reduce the impacts associated with potential direct migration of pollutants into wells to a less-than-significant level.	●	
4.3-9 Implementation of the proposed Element could result in cumulative impacts to water quality.	●		4.3-9 *None required.* Implementation of Policies DE 1.2c, 1.2d, 1.2f, 3.1a, 3.2a, 3.2b, 3.2c, 3.2g, 3.2h, 4.1a, 4.1b, 4.1c, 4.4a, ~~6.1h~~ 6.2f, and ~~7.2d~~ 6.4d would reduce the cumulative impact to groundwater quality to a less-than-significant level.	●	
Biological Resources					
4.4-1 Dairy development could result in conversion of existing vegetative cover and associated wildlife habitat, including habitat for special-status species or sensitive natural communities.	●		4.4-1 *None required.* Implementation of Policies DE 1.2e and 3.3a would reduce the biological resource impacts to a less-than-significant level.	●	
4.4-2 Loss and modification of wetlands.	●		4.4-2 *None required.* Implementation of Policies DE 1.2e and 3.3a would reduce the biological resource impacts to a less-than-significant level.	●	
Noise					
4.5-1 Construction activities associated with new or expanded dairies would result in short-term noise increases.	●		4.5-1 *None required.* Compliance with Policies 40a and 40b of the General Plan would reduce this potential impact to a less than-significant-level without additional mitigation.	●	
4.5-2 Operation of a new or expanded dairy could increase noise levels generated by additional vehicular traffic.	●		4.5-2 *None required.*	●	
4.5-3 New or expanded dairies could be exposed to adverse existing noise sources.	●		4.5-3 *None required.* Compliance with Policy 40c of the General Plan and Policy DE 1.2b of the Element would reduce construction-related noise impacts to a less-than-significant level without additional mitigation.	●	
4.5-4 Noise levels generated by project operations.	●		4.5-4 *None required.* Implementation of Policies DE ~~7.2a~~ 6.4a through ~~7.2c~~ 6.4c of the Element and compliance with Policies 40a and 40b of the General Plan would reduce noise impacts related to dairy operations to a less-than-significant level.	●	

Visual Resources					
4.6-1 The general height, scale, lighting, and design of typical dairy facilities that would be allowed under the Element would be consistent with other farming operations in the agricultural zones of Kings County.	●		4.6-1 *None required.*	●	
4.6-2 There is a potential for outdoor lighting and glare associated with dairies allowed under the Element to affect nearby rural residences.	●		4.6-2 *None required.* Implementation of Policies DE 1.2i, 3.1a, 3.1b, 3.1c, 3.1h, and ~~7.2a~~ 6.4a through ~~7.2c~~ 6.4c would reduce the potential for light and glare impacts to a less-than-significant level.	●	
Land Use and Policies					
4.7-1 Since the Element goals, policies, and programs would be consistent with applicable policies of the Kings County General Plan, there are no significant impacts.	●		4.7-1 *A new goal, new objective, and two new policies shall be added to the Kings County Land Use Element under "III. Policies for Rural Areas," which cross-references the Element, to direct readers to the additional policies in the adopted Element. The proposed new Land Use Element goal and policies recommended to be added are as follows:* "Goal ~~DE~~ 9A: Restrict the locations where dairies may be located to those areas of the County where they are most compatible with surrounding uses and activities and environmental constraints as ~~required by DE~~ presented in the *Dairy Element*. "Objective ~~DE~~ 9A.1: Use specific ~~criteria~~ standards to avoid potential land use conflicts through the site plan review (SPR) streamlined review process when approving new dairies and expansion of existing dairies. ~~"Policy DE 9A.1a: Prohibit new dairy facilities in designated wetlands and undisturbed wildlife habitat areas; and in proximity to cities, rural communities, Lemoore Naval Air Station, schools, and other dairies.~~ "Policy ~~DE~~ 9A.1~~b~~ a: Proposed new dairies and expansions of existing dairies, and associated dairy stock replacement facilities, ~~and substantial expansions,~~ may be approved through the ~~site plan review~~ SPR process if they meet all of the ~~criteria~~ standards in the *Dairy Element* concerning siting, design, operation, monitoring and reporting."	●	
4.7-2 Since some of the Element policies and programs supercede and are more restrictive than dairy regulations in the Kings County Zoning Ordinance, there are no significant impacts.	●		4.7-2 *New text shall be added to the Kings County Zoning Ordinance, Section 2102, Site plan review application and fee, as follows:* "Applications for proposed new bovine dairy facilities, and ~~substantial~~ expansions of existing facilities exceeding the baseline capacity, shall be approved through the site plan review process if the applications meet all of the specified criteria of the Element ~~(Section IV and Appendix C)~~."	●	

Key: LS = less than significant
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Table 2-1: SUMMARY OF IMPACTS AND MITIGATION MEASURES (*continued*)					
Environmental Impact	**Level of Significance before Mitigation**		**Mitigation Measures**	**Level of Significance after Mitigation**	
	LS	**S**		**LS**	**SU**
			Section 1908(F) of the Kings County Zoning Ordinance shall be deleted in its entirety and replaced with the following text: "Applications for proposed new bovine dairy facilities, and substantial expansions of existing facilities, shall be approved through the site plan review process if the applications meet all of the specified criteria of the Element ~~(Section IV and Appendix C)~~. A site plan review may be approved by the zoning administrator for a new or expanded bovine dairy facility if the dairy is in ~~substantial~~ compliance with the design criteria contained in the Element."		
4.7-3 New and expanded dairy facilities allowed under the Element could cause impacts to natural resources and sensitive land uses.	●		4.7-3 *None required.* Implementation of the policies of the Element would reduce the potential adverse impacts to biological and natural resources to a less-than-significant level.	●	
4.7-4 Implementation of the Element will prevent or minimize impacts to residentially zoned lands within the four cities, rural communities, and other sensitive uses.	●		4.7-4 *None required.* Implementation of Policies DE 1.2a, 1.2b, 1.2g, 1.2i, and 1.2j of the Element would reduce the potential noise, lighting, and odor impacts of dairy facility operations and process water irrigation on new subdivision residents within the three cities.	●	
4.7-5 New and expanded dairy facilities allowed under the Element could cause impacts to adjacent individual rural residences in the agricultural areas.	●		4.7-5 *None required.* Implementation of the policies of the Element would reduce the potential noise, traffic, lighting, and odor impacts of dairy facility operations and process water irrigation on nearby residences to a less-than-significant level.	●	
Human Health/Risk of Upset					
4.8-1 Workers could be exposed to hazardous materials during dairy operation, resulting in adverse health impacts.	●		4.8-1 *None required.* Implementation of Policy DE 4.3a and conformance with hazardous materials laws and regulations would reduce this impact to a less-than-significant level.	●	
4.8-2 Potential exposure to residual agricultural chemicals during construction of the dairy facilities, resulting in adverse health impacts.	●		4.8-2 *None required.*	●	
4.8-3 Operation of the dairies could result in increased vector activity, potentially creating adverse human health impacts.	●		4.8-3 *None required.* Implementation of Policies DE 4.3b and 4.3c would reduce impacts related to vector activity to a less-than-significant level.	●	

4.8-4 Operation of the dairy facilities could expose people to dairy manure pathogens, potentially causing adverse human health impacts.	●		4.8-4 *None required.* Implementation of Policies DE 1.2c, 1.2d, 1.2f, 3.1a, 3.2b, 3.2c, 4.1a, 4.1b, 4.1c, ~~6.1h~~ 6.2f, and ~~7.2a~~ 6.4a through ~~7.2c~~ 6.4c would reduce the impact of exposure to pathogens to a less-than-significant level.	●	
4.8-5 Residual manure remaining at dairy facilities following cessation of manure management facilities operation could expose people to elevated methane and nitrate levels, potentially causing adverse human health impacts.	●		4.8-5 *None required.* Implementation of Policy DE ~~5.1k~~ 5.1j will reduce the impacts associated with residual manure to a less-than-significant level.	●	
4.8-6 Construction of dairy facility structures over or near improperly abandoned oil or gas wells could result in accumulation of natural gas within the structures, presenting the potential for fire and explosion. This is a less-than-significant impact.	●		4.8-6 *None required.* Implementation of Policies DE 3.5a and 3.5b of the Element will reduce impacts associated with abandoned oil or gas wells to a less-than-significant level.	●	
Transportation					
4.9-1 Truck and other traffic from new dairy development would be added to County roadways.		●	4.9-1 *The following policy shall be included in the Element:* "Policy DE 3.1g: The Technical Report for new and expanded dairies shall include a Traffic Impact Study (see Component 8 of Appendix J) prepared by a qualified traffic engineer in conformance with guidelines provided by the California Department of Transportation, which demonstrates that the project will not result in degradation of the level of service of adjacent roadways to below Level of Service (LOS) D on County roadways or LOS C on State highways. Additionally, the Traffic Impact Study shall demonstrate that the proposed dairy project will not result in significant safety hazards. Where the Traffic Impact Study determines that the LOS will be degraded to a LOS E or lower on adjacent roadways, a conditional use permit and additional environmental review focused on traffic related environmental issues will be required before any new dairy development or expansion of an existing dairy may occur."	●	
Public Services and Utilities					
4.10-1 Increases in water consumption.	●		4.10-1 *None required.*	●	
4.10-2 Increase in the amount of storm water runoff.	●		4.10-2 *None required.* Implementation of Policy DE 4.1a and conformance with State Confined Animal Facility regulations would reduce impacts related to runoff to a less-than-significant level.	●	

Key: LS = less than significant
S = significant
SU = significant and unavoidable

Table 2-1: SUMMARY OF IMPACTS AND MITIGATION MEASURES (*continued*)					
Environmental Impact	**Level of Significance before Mitigation**		**Mitigation Measures**	**Level of Significance after Mitigation**	
	LS	**S**		**LS**	**SU**
4.10-3 Increases in the demand for police and fire protection, emergency medical response, solid waste collection and disposal services, school facilities, and recreation facilities.	●		4.10-3 *None required.* Implementation of ~~Policies~~ Policy DE 3.6a ~~and 3.6b~~ would reduce the potential for impacts to public services to a less-than-significant level.	●	
Cultural Resources					
4.11-1 Disturbance or destruction of cultural (historical and archaeological) resources. This would be a significant impact if archaeological resources were to be identified at dairy development sites.	●		4.11-1 *None required.* Implementation of Policies DE 3.1d and 3.1e would reduce the potential for disturbance or destruction of cultural resources to a less-than-significant level.	●	