and chemistry of the soils are well suited for agriculture, the availability of water limits agricultural productivity. The soil associations that occur in these areas are Avenal-Panoche, Panoche-Wasco, and Wasco-Panoche-Westhaven. These soils are deeply developed on alluvium and are well drained to moderately well drained. The surface soils are typically loam and sandy loam. The permeability is moderately slow to moderately rapid. Runoff is moderate and the erosion hazard is moderate. The shrink-swell potential is moderate to high, presenting a limitation to building development.

As indicated above, the areas mapped as these associations are not typically irrigated and are used primarily for non-irrigated crop production and grazing. Assuming that these soils are not irrigated, the Capability Class is VII. If irrigated, the Capability Class is upgraded to II, with the primary limitation being the erosion hazard and arid climate.

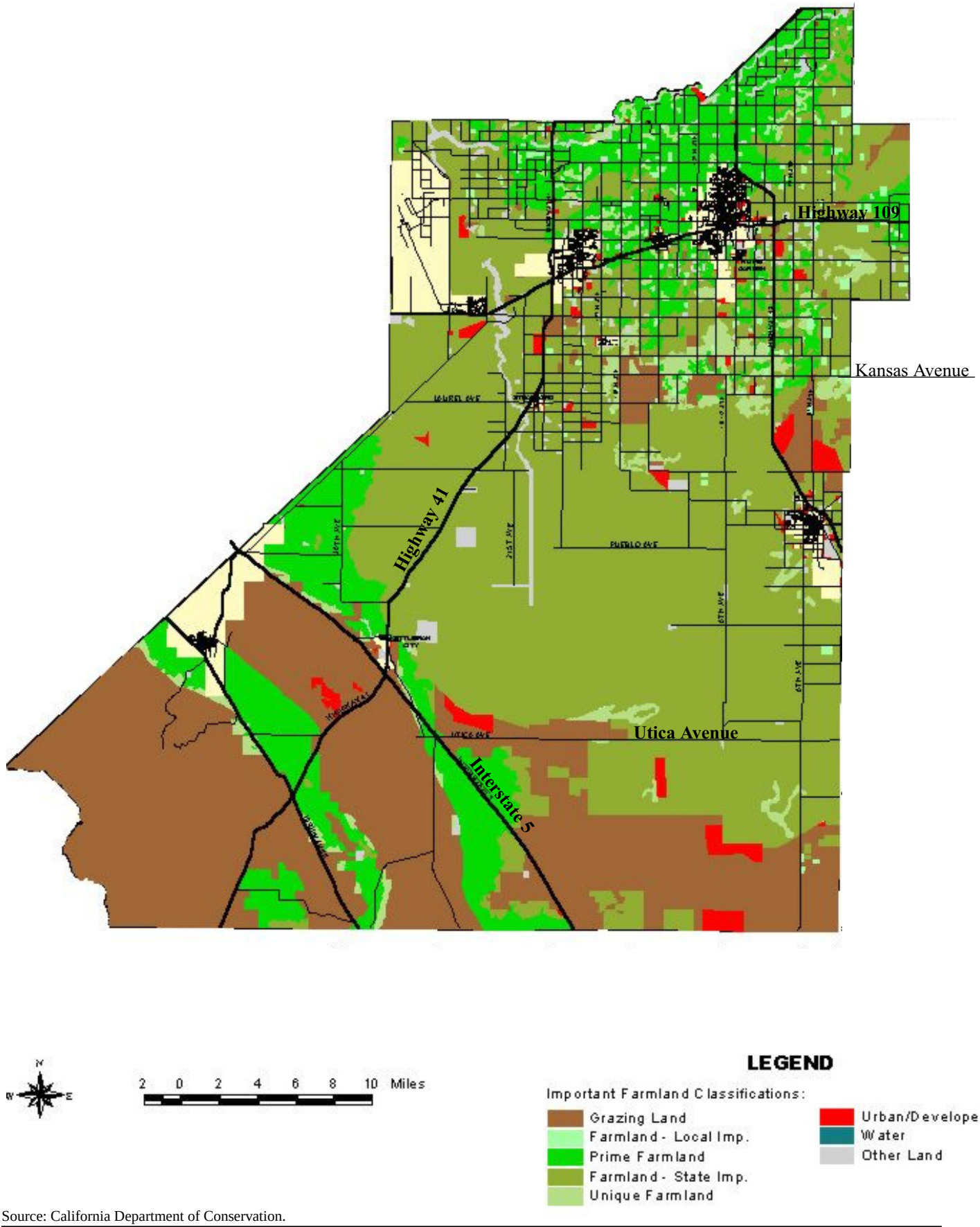
Southwestern Uplands

The soils of the uplands of the southwestern portion of the County, including the Kettleman Hills, Pyramid Hills, Keryenhagen Hills, and the Diablo Range, have severe limitations for agriculture and building development. The soils are developed within colluvium on sedimentary bedrock and are shallow and well-drained to excessively well-drained. The erosion hazard is high. The soil associations within the upland area include the Henneke-Wasesprings-Millsholm and Graviota-Vaquero-Altamont associations in the foothills of the Diablo Range, and the Kettleman-Cantuan-Mercey, Delgado-Kettleman, and Delgado-Carollo associations in the Kettleman and Kreyenhagen Hills. Severe limitations for agriculture include low rainfall, high erosion hazard, shallow depth to bedrock, and excessive shrink-swell potential. The areas are used primarily for rangeland and wildlife habitat. Grazing is generally restricted to winter and spring by low rainfall.

FARMLAND CLASSIFICATION

The Department of Conservation Farmland Mapping and Monitoring Program has classified farmlands throughout Kings County (CDC, 1998). The purpose of the program is to provide data to decision makers for use in planning for the present and future use of California's agricultural land resources. The program produces maps showing areas defined as meeting the characteristics of seven general agricultural land use categories. Land with the best combination of physical and chemical features to sustain long-term production of agricultural crops is classified as "prime farmland." The soil quality, growing season, and available moisture supply in areas classified as "prime farmland" are the best in the state for crop production. The most recent mapping of the County (Figure 4.1-3) by FMMP identifies three general areas of "prime farmland," the north-central portion of the County, the western valley margin, much of the Kettleman Plain, and the southern portion of Sunflower Valley. In 1998, 142,528 acres of the County were classified as "prime farmland."

IMPORTANT FARMLAND MAP 1998 Figure 4.1-3



Source: California Department of Conservation.

The mapping indicates that the majority (429,172 acres in 1998) of the valley floor (including the Tulare Lake Bed) is classified as "farmland of statewide importance." Lands in this classification are considered to have a good combination of physical and chemical features for the production of agricultural crops but have minor limitations relative to "prime farmland." Other farming areas (24,496 acres) are identified as"unique farmland." Although lands within this category do not meet the standards of "prime farmland" or "farmland of statewide importance," these lands have been used for the production of high value crops. Dairy sites within the County that existed at the time of FMMP are classified as "farmland of local importance." The upland areas (244,174 acres) of the southwestern portion of the County are classified as "grazing land" and are not typically suitable for crop production.

In addition to mapping and classifying farmlands statewide, the FMMP monitors conversion of agricultural land to nonagricultural use. Between 1996 and 1998, a net loss of 50 acres of prime farmland and 4,715 acres of "farmland of statewide importance" occurred in Kings County. The farmland conversion data indicate that 597 acres of prime farmland, 816 acres of "farmland of statewide importance," and 100 acres of "unique farmland" were converted to "farmland of local importance." These changes reflect, in part, the conversion of cropland to dairy facilities.

SEISMICITY

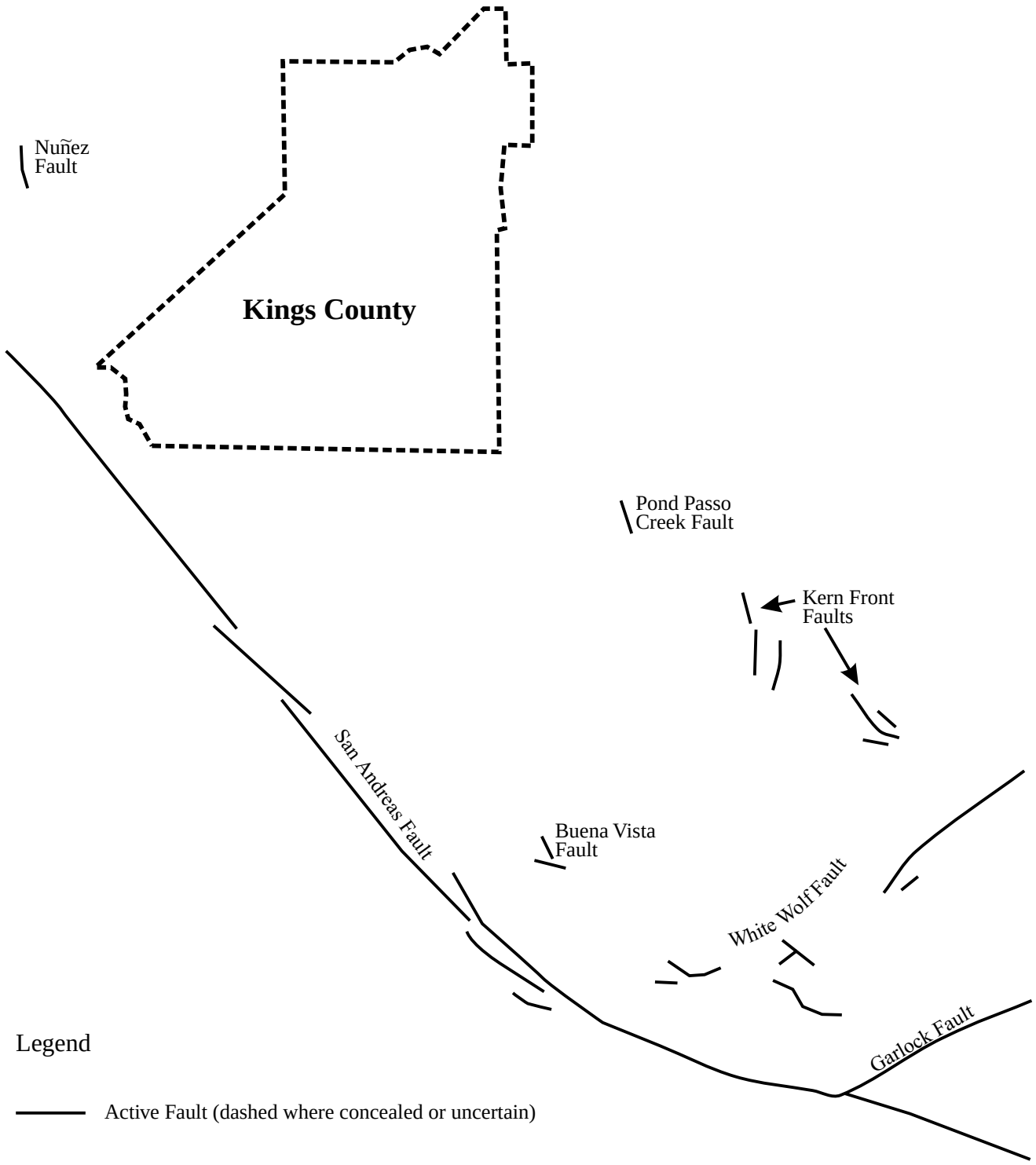
Kings County is located in a seismically active region and, therefore, designated seismic Zone 4 in the Uniform Building Code and Kings County Code of Building Regulations. Expected earthquakes on several active regional faults, including the San Andreas, White Wolf, Garlock, and Kern Front Faults, could cause moderate to strong seismic ground shaking within the County. Faults recognized as active[1] in the vicinity of the County are shown on Figure 4.1-4. No evidence of active earthquake faults has been identified in the County. The lack of evidence of active faulting at the site indicates that the potential for fault rupture is negligible.

The closest active fault identified by the Alquist-Priolo Earthquake Fault Mapping Program, the Nunez Fault, is located approximately 40 miles to the northwest. Surface rupture occurred along this fault during the 1983 Coalinga earthquakes. The main shock of these earthquakes, occurring on 2 May 1983, had a magnitude of 6.7. The surface rupture along the Nunez Fault was not considered to generate the main shock, rather, the earthquake was caused by movement along a "blind thrust" fault that is concealed at depth within a complex fold and thrust belt at the western margin of the San Joaquin Valley. This

[1] A fault is considered active under the California Alquist-Priolo Earthquake Faults Zoning Act if geologic or seismic evidence indicates that displacement along the fault has caused surface rupture in the last 11,000 years.

REGIONAL ACTIVE FAULTS

Figure 4.1-4



Source: Jennings, 1994.

BASELINE

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deformational zone extends along the entire western margin of the Great Valley and is termed the Coast Range-Sierran Block Boundary Zone (CRSBBZ). In addition to the 1983 earthquakes, a magnitude 6.0 earthquake occurred on 4 August 1985 with its epicenter located approximately 10.5 miles east of Coalinga.

Proximity to the CRSBBZ controls the expected ground shaking. Therefore, the western portion of Kings County is predicted by the California Division of Mines and Geology to experience more ground shaking than the eastern portion of the County. The estimated peak horizontal ground acceleration (a standard measure of seismic shaking) that is expected to occur in the western portion of the County over the next 50 years would be 0.3 to 0.6 g. This level of shaking would be comparable to Modified Mercalli Intensity (MMI) VIII to IX (Table 4.1-1); similar to intensities experienced in the area during the 1983 Coalinga earthquake. The ground in the eastern portion of the County is expected to be 0.1 to 0.3 g or MMI VII to VIII. This level of shaking would be similar to intensities experienced in the area during the 1952 White Wolf magnitude 7.2 earthquake. By comparison, the area of the project site was subjected to MMI V (eastern portion) to VI (western portion) during the 1983 Coalinga earthquake (Rymer and Ellsworth, 1990).

The potential for seismically-induced ground failure in the County is low to moderate. The valley floor portions of the County are relatively flat and the potential for slope failure is negligible. Liquefaction[2] of saturated, loose, granular sediments is unlikely, as the near-surface sediments are predominantly fine-grained lacustrine deposits. The fine texture and cohesiveness of these sediments would generally inhibit the potential for liquefaction. However, sandy layers may occur within the sediments underlying portions of the County. These layers may be subject to liquefaction. The Safety Element of the Kings County General Plan identifies the central portion of the County as being a zone of secondary liquefaction hazard, including all DDOZ west and DDOZ southeast, and the western portion of DDOZ 1.

MINERAL RESOURCES

According to the Resource Conservation section of the Kings County General Plan, there are currently no mineral extraction activities occurring within the County. The California Division of Mines and Geology has not identified any significant mineral resources within the County. Oil and gas resources have been identified in and extracted from portions of the County. Oil and gas production began in Kings County in the early 1900s. The

[2] During moderate to strong ground shaking, saturated sediments can undergo a type of failure referred to as liquefaction. During liquefaction, elevated pore water pressures cause a complete and sudden loss of strength and the sediments are transformed from a solid to liquid state. In a liquid state, the sediments have no bearing capacity and can flow. The results of flow can include collapse or settlement of the ground surface. Significant damage or collapse of structures built in areas affected by liquefaction can occur.

TABLE 4.1-1: **Modified Mercalli Scale**[1]

	Intensity	Effects	v,2 cm/s	g3
M4	I.	Not felt. Marginal and long-period effects of large earthquakes.		
3	II.	Felt by persons at rest, on upper floors, or favorably placed.		
	III.	Felt indoors. Hanging objects swing. Vibration like passing of light trucks. Duration estimated. May not be recognized as an earthquake.		0.0035-0.007
4	IV.	Hanging objects swing. Vibration like passing of heavy trucks; or sensation of a jolt like a heavy ball striking the walls. Standing motor cars rock. Windows, dishes, doors rattle. Glasses clink. Crockery clashes. In the upper range of IV wooden walls and frame creak.		0.007-0.015
	V.	Felt outdoors; direction estimated. Sleepers wakened. Liquids disturbed, some spilled. Small unstable objects displaced or upset. Doors swing, close, open. Shutters, pictures move. Pendulum clocks stop, start, change rate.	1-3	0.015-0.035
5	VI.	Felt by all. Many frightened and run outdoors. Persons walk unsteadily. Windows, dishes, glassware broken. Knickknacks, books, etc., off shelves. Pictures off walls. Furniture moved or overturned. Weak plaster and masonry D cracked. Small bells ring (church, school). Trees, bushes shaken (visibly, or heard to rustle - CFR).	3-7	0.035-0.07
6	VII.	Difficult to stand. Noticed by drivers of motor cars. Hanging objects quiver. Furniture broken. Damage to masonry D, including cracks. Weak chimneys broken at roof line. Fall of plaster, loose bricks, stones, tiles, cornices (also unbraced parapets and architectural ornaments - CFR). Some cracks in masonry C. Waves on ponds; water turbid with mud. Small slides and caving in along sand or gravel banks. Large bells ring. Concrete irrigation ditches damaged.	7-20	0.07-0.15
	VIII.	Steering of motor cars affected. Damage to masonry C; partial collapse. Some damage to masonry B; none to masonry A. Fall of stucco and some masonry walls Twisting, fall of chimneys, factory stacks, monuments, towers, elevated tanks. Frame houses moved on foundations if not bolted down; loose panel walls thrown out. Decayed piling broken off. Branches broken from trees. Changes in flow or temperature of springs and wells. Cracks in wet ground and on steep slopes.	20-60	0.15-0.35
7	IX.	General panic. Masonry D destroyed; masonry C heavily damaged, sometimes with complete collapse; masonry B seriously damaged. (General damage to foundations - CFR.) Frame structures, if not bolted, shifted off foundations. Frames racked. Serious damage to reservoirs. Underground pipes broken. Conspicuous cracks in ground. In alluviated areas sand and mud ejected, earthquake foundations, sand craters.	60-200	0.35-0.7
8	X.	Most masonry and frame structures destroyed with their foundations. some well-built wooden structures and bridges destroyed. Serious damage to dams, dikes, embankments. Large landslides. Water thrown on banks of canals, rivers, lakes, etc. Sand and mud shifted horizontally on beaches and flat land. Rails bent slightly.	200-500	0.7-1.2
	XI.	Rails bent greatly. Underground pipelines completely out of service.		>1.2
	XII.	Damage nearly total. Large rock masses displaced. Lines of sight and level distorted. Objects thrown into the air.		

Note:

Masonry A, B, C, D. To avoid ambiguity of language, the quality of masonry, brick or otherwise, is specified by the following lettering (which has no connection with the conventional Class A, B, C construction).

- # Masonry A: A Good workmanship, mortar, and design, reinforced, especially laterally, and bound together by using steel, concrete, etc; designed to resist lateral forces.
- # Masonry B: Good workmanship and mortar, reinforced, but not designed to resist lateral forces.
- # Masonry C: Ordinary workmanship and mortar; no extreme weaknesses such as non-tied-in corners, but masonry is neither reinforced nor designed against horizontal forces.
- # Masonry D: Weak materials, such as adobe; poor mortar; low standards of workmanship; weak horizontally.

[1] From Richter (1958).
[2] Average peak ground velocity, cm/s.
[3] Average peak acceleration (away from source).
[4] Richter magnitude correlation.

petroleum reserves are located within Tertiary sedimentary rocks of the San Joaquin, Temblor, and Kreyenhagen formations. The principal active petroleum resource fields include the Pyramid Hills, Kettleman Middle and North Dome, and Tulare Lake oil fields, and the Harvester gas field. The Dudley Ridge and Northwest Trico gas fields have been abandoned. The active and abandoned fields contain numerous active, idle, and abandoned oil and gas wells and abandoned non-producing ("dry") exploratory wells. In addition, numerous abandoned dry wells are located outside the boundaries of the fields. The California Department of Conservation, Division of Oil, Gas and Geothermal Resources (DOGGR) maintains records of the location and details of construction and abandonment of all oil and gas wells. Although significant volumes of oil and gas have been produced, production has been in decline within the County for the last 30 years.

SUBSIDENCE

Land surface subsidence is a phenomenon under which the land surface is measurably but gradually lowered over time. The subsidence of the land surface can be caused by a wide range of natural and human-induced factors. Natural subsidence is generally caused by deformation of the earth's crust or tectonics. As indicated earlier, tectonic subsidence of the axis of the San Joaquin Valley caused by down-warping of the crust along the San Joaquin Valley syncline resulted in the formation of Pleistocene lakes and lacustrine sediment deposition. The rate of tectonic subsidence is very slow and measurable only by very precise surveying. However, the observation of tectonic subsidence is very difficult in areas affected by subsidence caused by human factors. The primary cause of human-induced subsidence is the extraction of fluids from the subsurface (including groundwater and oil or gas). When fluids are removed from voids within sediment and rock by pumping, the structure of these materials can partially collapse, resulting in compression or consolidation. When this occurs, a loss of volume results, potentially causing settlement at the surface. Within the San Joaquin Valley, historically intensive groundwater extraction has resulted in significant land subsidence within some areas of the valley.

Kings County is located within a broad area of the southern San Joaquin Valley where groundwater withdrawal resulted in significant subsidence (Bertoldi, et al., 1991). However, most of the subsidence occurred following the period of intensive groundwater withdrawal during the 1940s through the 1960s. The rate of groundwater withdrawal declined sharply in the late 1960s when surface water supplies became available. In addition, proactive management of groundwater resources, including large groundwater recharge projects, promoted the recovery of depressed groundwater levels. By 1983, land subsidence in the San Joaquin Valley had either slowed considerably or stopped (Ireland, 1986).

The Kings County General Plan identifies two areas of "secondary hazard" related to subsidence. One area is located southeast of Corcoran; the second area is along the western margin of the County.

RELEVANT GOALS, OBJECTIVES, AND POLICIES

The Kings County Draft Dairy Element (Appendix A) includes several components that address geologic resources and seismic hazards. Specifically, **Goal DE 1** proposes to restrict dairy development to areas where dairies would be most compatible with surrounding land uses and environmental constraints (including adverse geologic, pedologic, and seismic conditions). **Objective DE 1.2** promotes using specific ~~criteria~~ standards to avoid potential land use conflicts, which could include conflicts with potential adverse conditions. Policies that implement **Objective DE 1.2** include **Policy DE 1.2f**, which prohibits dairy development within areas of excessive slope in the southwestern portion of the County. **Policy DE 1.2d** limits dairy development in areas of high groundwater, reducing potential impacts associated with liquefaction of saturated sediments. **Policy DE 2.1f** requires that a site-specific geotechnical report be prepared and submitted as part of applications for all new dairy facilities. **Goal DE 3** requires development of policies for evaluation of the potential environmental effects during review of proposals for new dairies. **Objective DE 3.1** supports this goal and establishes the requirement for assessment of soil characteristics **(Policy DE ~~3.2b~~ 3.1a.B)** ~~and loss of agricultural land **(Policy DE 3.1a(G))**~~. **Policy DE ~~6.1c~~ 6.2b** requires annual inspection of slopes surrounding manure separation pits and process water ponds to ensure timely recognition of erosion and slope stability problems.

IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

Unstable geologic environments can potentially result in significant damage to structures and/or cause injuries or death to persons exposed to those hazards. For purposes of impact analysis for this EIR, a potentially significant impact would result if the project would result in or expose people or structures to any of the following:

- Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault;

- Strong seismic ground shaking;

- Seismic-related ground failure, including liquefaction;

- Landslides;
- Substantial soil erosion or the loss of topsoil;
- Geologic unit or soil that is unstable or that would become unstable as a result of the project, and potentially result in on-site or off-site landslide, lateral spreading, subsidence, liquefaction or collapse;
- Expansive soil, as defined in Table 18-1-B of the Uniform Building Code (~~1994~~ 1997), creating substantial risks to life or property;
- Soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.

In addition to the analysis of unstable geologic condition, this section of the EIR evaluates potential impacts of the proposed Element on soils as an agricultural resource. Therefore, the following significance criteria are also considered:

- Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use;
- Conflict with existing zoning for agricultural use or a Williamson Act contract;
- Involve other changes in the existing environment that, due to their location or nature, could result in conversion of farmland to non-agricultural uses.

Impact 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. This is a less-than-significant impact.

Under existing conditions, the topography within the Dairy Development Overlay Zones (DDOZs) is primarily flat (with slopes less than one percent) and the potential for slope failure is negligible. The only exception are the slopes along existing irrigation canals and agricultural ditches. The potential for slope failure along the canals is minimized by the low height (generally less than ten feet) and maintenance activities under which the slopes are regraded periodically, providing uniform slope surfaces. Under the proposed project, manure separation pits and process water ponds at some potential dairy sites would be constructed above the existing ground surface by the emplacement of earthen embankments. Generally, the embankments would be constructed with available surface soils at the dairy site and would not require the importation of fill materials from off-site locations.

The properties of the shallow surface soils in portions of the County could present problems for appropriate embankment construction. The surface soils of the soil mapping units within the DDOZs are predominantly loams and silty loams, some of which are alkali and have high salt content. These soils generally have low compressive strength that can present slope stability problems if not properly treated and compacted. These soils are also potentially subject to a phenomenon known as hydrocompressibility.

In addition, the soils have a high potential for erosion when exposed on a steep slope such as those proposed for the embankments. Although the potential for water erosion by runoff would be limited due to low precipitation amounts and slow runoff, the potential for erosion by wave action could result in minor slope failures along the interior margin of constructed embankments.

The site-specific potential for slope failures and erosion of the embankment slopes at new or expanded dairies is addressed in the Element. **Policy DE 3.1a** requires that soil characteristics, slope stability, and erodibility be considered in siting of new and expanded dairies. **Policy DE 2.1f** requires that all applications for new dairies include a Geotechnical Report prepared by a licensed geotechnical engineer or certified civil engineer. Appendix J of the Element presents specific requirements for information to be presented in the Geotechnical Report. The report shall, at minimum, present the results of sufficient subsurface sampling and testing to classify and characterize the soils and groundwater conditions in areas of proposed dairy facility structures and process water storage facilities. The report shall include recommendations for foundation design, cut and fill slope design, and site grading. The recommendations shall specifically address:

- Soil consolidation and compression
- Shrink-swell potential
- Soil corrosivity
- Cut and fill slope stability under static and pseudo-static conditions
- Erosion potential
- Liquefaction potential

Additionally, a post-construction report, certifying that lagoons and embankments have been constructed in conformance with design requirements, is required.

Under **Policy DE ~~6.1c~~ 6.2b**, the dairy operators are responsible for conducting an annual inspection of the interior and exterior slopes surrounding the manure separation pits and process water ponds following the rainy season of each year during the first three years of operation. The inspections are required to document the occurrence of any significant erosion (e.g., formation of rills or gullies longer than ten feet and/or deeper than one foot) or any significant slope failures (e.g., soil slips greater than 100 square feet in area). A

report of the inspections, including recommendations and schedule for completing any necessary corrective action, must be submitted to the Kings County Dairy Monitoring Office. This policy ensures that long-term stability of the slopes if maintained.

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. Conformance with professional recommendations would reduce the impact to a less-than-significant level.

Mitigation Measure 4.1-1

None required.

Impact 4.1-2

Disturbance of agricultural soils caused by construction of dairy facilities. This is a less-than-significant impact.

The development of new or expanded dairies would require construction of dairy barn and associated structures and manure separation pits and process water pond. Construction of these improvements would likely require extensive grading to meet requirements for uniform and positive drainage in corrals and the excavation of ponds, or construction of pond embankments. The grading would presumably result in disturbance of the naturally developed soil horizons. Such disturbance could adversely affect the capability of these soils for agricultural crop production.

The Element would allow construction of dairy facilities within five distinct Dairy Development Overlay Zones. The Element estimates that, at buildout, approximately 42,693 acres of land would be required for dairy facilities. Within each of the DDOZs, large areas of land are classified by the FMMP as "prime farmland" or "farmland of statewide importance." Conversion of these areas to dairy facilities would result in reclassification of these areas by FMMP to "farmlands of local importance."

However, the proposed project would not result in the conversion of farmland to non-agricultural use. The Kings County General Plan specifically permits "animal concentrations" on lands designated General Agricultural, confirming animal husbandry as an agricultural use. Development of dairy facilities on cropland would not be considered conversion to nonagricultural use. The construction and operation of dairies within General Agricultural areas are permitted under the County Zoning Ordinance. Such developments are also consistent with provisions of the Williamson Act, as enforced in the County (i.e., the *Uniform Rules for Agricultural Preserves in Kings County*). Therefore, the disturbance of agricultural soil would be a less-than-significant impact.

Mitigation Measure 4.1-2

None required.

Impact 4.1-3

Potential damage during expected seismic shaking. This is a less-than-significant impact.

Moderate to strong seismic shaking could occur throughout the County during expected earthquakes on regional active faults. The agricultural buildings and residences at the dairy facilities permitted under the proposed project would be required to be designed and constructed in accordance with the requirements of the current building code for seismic design. These requirements would minimize the potential for building collapse during earthquakes. Although structural and nonstructural damage could occur, these potential impacts would be similar to those that could occur throughout the region. The potential for damage and possibly related human injuries is acknowledged as an acceptable risk through the adoption of building codes that do not preclude this risk. Therefore, damage to proposed structures and other improvements caused by seismic shaking is a less-than-significant impact.

The process water ponds, manure separation pits, and associated dairy runoff conveyance systems could be constructed completely or partially above the existing ground surface. Possible damage to these facilities caused by seismic shaking could occur but is addressed in the requirements of **Policy DE 2.1f**.

The potential for liquefaction or other related seismically-induced ground failure is low to moderate due to the gentle topography and the low potential for saturated near-surface granular sediments. Investigation of the effects of the 1983 Coalinga earthquakes indicated that the occurrence of liquefaction-related ground failure was limited to isolated areas in recent deposits along active stream channels (Rymer and Ellsworth, 1990). In addition, significant ground failure associated with liquefaction typically occurs in areas where liquefied sediments can flow to a "free face," which extends below the liquefied layer, such as a stream bank or artificial cut. Under the Element, excavations expected at proposed dairy facilities would not extend below the groundwater table and this condition would not occur.

One other potential liquefaction hazard could be presented by dairy development under the proposed project. The fill materials used for embankments around proposed manure separation pits and ponds could include granular materials that could be locally saturated. However, **Policy DE 2.1f** requires that a site-specific Geotechnical Report for proposed dairies evaluate the liquefaction potential at project sites. In addition, **Policy DE 4.1a,B,2.c**

requires that the soils lining the pits and ponds have low hydraulic conductivity, reducing the potential for saturation of underlying granular sediments. Therefore, the potential for liquefaction is considered low.

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.

Mitigation Measure 4.1-3

None required.

Impact 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. This is a less-than-significant impact.

The soils throughout the seven DDOZs proposed by the Element present a moderate to high potential for corrosion of untreated steel and concrete and moderate to high shrink-swell potential. Utility pipelines would be required to cross areas containing corrosive soils. Corrosion of the pipelines or other buried steel structures could result in failure of the lines. Concrete footings and pavement could also be subject to corrosion. Repair or replacement of the pipelines and concrete could result in interruption of service. Modern dairy designs for the southern San Joaquin Valley typically propose that a process water collection system would be constructed of plastic pipe and would not be significantly affected by the high corrosivity of the soils. The Uniform Building Code has specific design requirements for design specifications for steel and concrete exposed to corrosive soils and requirements for construction in expansive soils. In addition, **Policy DE 2.1f** specifically requires that the site-specific geotechnical report prepared for each proposed dairy development evaluate the potential adverse effects of soil corrosivity and present professional recommendations to reduce these effects. Implementation of **Policy DE 2.1f** and compliance with the requirements of the Uniform Building Code will reduce this impact to a less-than-significant level.

Mitigation Measure 4.1-4

None required.