



AGRICULTURAL LAND CONVERSION ANALYSIS

Lacey Ranch Area Master Plan Project

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ACRONYMS

AB	Assembly Bill
APN	Assessor's Parcel Number
CDFA	California Department of Food and Agriculture
CEQA	California Environmental Quality Act
DOC	California Department of Conservation
FMMP	Farmland Mapping and Monitoring Program
FPPA	Farmland Protection Policy Act
IFM	Important Farmland Maps
LCC	Land Capability Classification System
LESA	Land Evaluation and Site Assessment
MSL	Mean Sea Level
NRCS	Natural Resources Conservation Service
PRC	Public Resources Code
SCE	Southern California Edison
SUP	Special Use Permit
TCGP	Tulare County General Plan
UDB	Urban Development Boundary
USDA	United States Department of Agriculture
WRCC	Western Regional Climate Center
ZOI	Zone of Influence

SECTION ONE – INTRODUCTION

Agriculture in the United States has been historically afflicted with many challenges such as weather, pests, and disease, as well as fluctuating markets, the need for capital investments, and rapidly advancing technology. In recent decades, however, the pressures for growth have led to the significant conversion of farmland to non-farm use. Clearly, the loss of farmland resources and subsequent land use conflicts that have arisen as a result of non-farm growth have been a legitimate cause for concern. The loss of agricultural lands affects many local economies, threatens the way of life for many farmers, and calls into question the ability of this rapidly-developing world to provide food for this population growth. These challenges, among others, are facing Tulare County, which is located in the San Joaquin Valley, California’s top agricultural producing region.¹

The study area includes the portions of Kings County that will likely face the most intense growth pressures related to urbanization. While the San Joaquin Valley is an important producer of agricultural products worldwide, it is also one of the areas of California that is projected to bear massive future growth as the State’s population is expected to reach 50 million by 2050.² Growth within the San Joaquin’s farming counties is caused by growth restrictions and excessive cost of housing in coastal and urban counties, and relatively inexpensive land sold by willing farmers. Due to these factors, land use regulating agencies across the Valley must act to manage future urban growth while preserving important agricultural lands for future use.

1.1 Purpose and Analysis Methods

This document is an Agricultural Land Conversion Study (Study) for the development of the Lacey Ranch Area Master Plan (Project) located in Kings County. The Project includes the construction of residential units on approximately 156-acres of land currently in alfalfa production and annexation of that land from Kings County into the City of Lemoore.

¹ United States Environmental Protection Agency, Pacific Southwest, Region 9 Strategic Plan, 2011-2014.
<https://archive.epa.gov/region9/strategicplan/web/html/sanjoaquin.html>. Accessed August 2020.

² Demographics. CA @ 50 Million. California Population Estimates 1900 – 2060.
<https://ca50million.ca.gov/demographics/#:~:text=By%202050%2C%20California's%20population%20is,first%20decade%20of%20this%20century>. Accessed August 2020.

Projects involving changes in land use sometimes convert agricultural lands to non-agricultural uses. Conserving productive agricultural lands requires a project-specific evaluation of the direct and indirect effects, as well as the cumulative effects of the agricultural land conversion. This Study provides a checklist of items that should be considered by those analyzing the proposed Project site. In order to analyze the proposed Project's potential impact to agricultural lands, this Study utilized factors identified in the County of Kings 2035 General Plan (General Plan) and the California Department of Conservation's California Agricultural Land Evaluation and Site Assessment (LESA) Model.

The City of Lemoore, as a Lead Agency, typically bases a determination of agricultural resources significance on the thresholds established by the California Environmental Quality Act (CEQA) Guidelines. The Environmental Checklist Form of the CEQA Guidelines contains a list of impacts that may be deemed potentially significant. The Lead Agency should address questions from this checklist that are relevant to a project's environmental effects. The following significance thresholds are contained in Appendix G of the CEQA Guidelines.

***Agricultural Resources** – In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agricultural and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project, and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the Project:*

- a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?*
- b) Conflict with existing zoning for agricultural use or a Williamson Act contract?*
- c) Conflict with existing zoning for, or cause rezoning of forest land (as defined in Public Resources Code § 12220(q), timberland (as defined by Public Resources Code § 4526), or timberland zoned Timberland Production (as defined by Government Code § 51104(g))?*
- d) Result in the loss of forest land or conversion of forest land to non-forest use?*

- e) *Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?*

This study was conducted in the context of CEQA (California Public Resources Code Sections 21000 et seq.).

1.2 Proposed Project Location

The Project is located on approximately 156-acres immediately north of the City of Lemoore in Kings County and is bounded by W. Lacey Blvd to the north and 18th Avenue to the west. The Project is on assessor parcel number 021-030-057-000. The site lies within a portion of the NW quarter of Section 35, Township 18 South, Range 20 East, Mount Diablo Base and Meridian.

The area surrounding the proposed Project site consists largely of rural agricultural land and homesteads, and the residential units associated with the City of Lemoore immediately to the south. The site is partially designated by the City of Lemoore General Plan for future residential uses and is currently zoned as Limited Agricultural-10 District (AL-10) by Kings County. Approximately one-third of the site (the southern one-third) is within the City's Sphere of Influence (SOI) while the remaining two-thirds are currently outside the SOI. The entire site is within the adopted Urban Development Boundary and proposed for annexation into the City limits of Lemoore.

1.3 Proposed Project Characteristics

The proposal for the site consists of the construction of up to 825 residential units broken down as follows:

- ±164 compact lots with an average lot size of 4,500 square feet
- ±310 medium lots with an average lot size of 6,500 square feet
- ±73 estate lots with an average lot size of 9,500 square feet
- ±145 multifamily units at 20 units per acre
- ±59 multifamily units at 12 units per acre

The Project includes a total of four parks for a total of 7.9 acres and 1.64 acres of trail area, as depicted on Figure 1. The 1.64 acres of trail area will be designated and zoned consistent with the designations and zoning of their adjacent parcels.

Project construction will require site preparation activities such as demolition to remove the existing alfalfa crop and site grading activities. Construction is expected to occur over 16 years as determined by market demands and will be constructed over four phases, broken down as follows:

- Phase 1 – 125 single family lots and 90 multifamily lots
- Phase 2 – 125 single family lots and 100 multifamily lots
- Phase 3 – Dependent on market conditions
- Phase 4 – Dependent on market conditions

It is anticipated that the Project would begin development in 2022.

SECTION TWO – REGULATORY SETTING

2.1 Federal

Farmland Protection Policy Act (7 USC 4201)

The purpose of the Farmland Protection Policy Act (FPPA) is to minimize the extent to which Federal programs contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses. It additionally directs Federal programs to be compatible with State and local policies for the protection of farmlands. Congress passed the Agriculture and Food Act of 1981 (Public Law 97–98) containing the FPPA— Subtitle I of Title XV, Sections 1539–1549. The final rules and regulations were published in the Federal Register on June 17, 1994.

The FPPA is intended to minimize the impact Federal programs have on the unnecessary and irreversible conversion of farmland to nonagricultural uses. It assures that, to the extent possible, Federal programs are administered to be compatible with State, local units of government, and private programs and policies to protect farmland. Federal agencies are required to develop and review their policies and procedures to implement the FPPA every two years. The FPPA does not authorize the Federal Government to regulate the use of private or non-Federal land or, in any way, affect the property rights of owners.

For the purpose of FPPA, farmland includes prime farmland, unique farmland, and land of Statewide or local importance. Farmland subject to FPPA requirements does not have to be currently used for cropland. It can be forestland, pastureland, cropland, or other land, but not water or urban built-up land.

Projects are subject to FPPA requirements if they may irreversibly convert farmland (directly or indirectly) to nonagricultural use and are completed by a Federal agency or with assistance from a Federal agency.³

³ USDA Natural Resources Conservation Service. Farmland Protection Policy Act. <http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/landuse/fppa/>. Accessed August 2020.

2.2 State of California

California Department of Conservation, Division of Land Resource Protection

The California Department of Conservation (DOC) applies the Natural Resources Conservation Service (NRCS) soil classifications to identify agricultural lands. Pursuant to the DOC's Farmland Mapping and Monitoring Program (FMMP), these designated agricultural lands are included in the Important Farmland Maps (IFM) used in planning for the present and future of California's agricultural land resources. The FMMP was established in 1982 to assess the location, quality, and quantity of agricultural lands and the conversion of these lands. The FMMP provides analysis of agricultural land use and land use changes throughout California. The DOC has a minimum mapping unit of 10 acres, with parcels that are smaller than 10 acres being absorbed into the surrounding classifications.

The list below provides a description of all the categories mapped by the FMMP⁴.

- **Prime Farmland.** Farmland that has the best combination of physical and chemical features able to sustain long-term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.
- **Farmland of Statewide Importance.** Farmland similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.
- **Unique Farmland.** Farmland of lesser quality soils used for the production of the State's leading agricultural crops. This land is usually irrigated, but may include nonirrigated orchards or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the four years prior to the mapping date.
- **Farmland of Local Importance.** Lands that produce dryland grains (barley and wheat); lands that have physical characteristics that would qualify for "Prime" or "Statewide Important" farmlands except for the lack of irrigation water; and

⁴ California Department of Conservation Division of Land Resource Protection. Farmland Mapping and Monitoring Program. Important Farmland Categories.

<https://www.conservation.ca.gov/dlrp/fmmp/Pages/Important-Farmland-Categories.aspx#:~:text=Important%20Farmland%20Categories.%201%20Rural%20Residential%20Land%20%28R%29,an%20extent%20of%20at%20least%2040%20acres.%20> Accessed August 2020.

lands that currently support confined livestock, poultry, and/or aquaculture operations.

- **Grazing Land.** Land on which the existing vegetation is suited to the grazing of livestock. This category was developed in cooperation with the California Cattlemen’s Association, University of California Cooperative Extension, and other groups interested in the extent of grazing activities. The minimum mapping unit for Grazing Land is 40 acres.
- **Urban and Built-up Land.** Land occupied by structures with a building density of at least one unit to 1.5 acres, or approximately six structures to a 10-acre parcel. This land is used for residential, industrial, commercial, institutional, public administrative purposes, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes.
- **Other Land.** Land not included in any other mapping category. Common examples include low density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry or aquaculture facilities; strip mines and borrow pits; and water bodies smaller than 40 acres. Vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land.

California Land Conservation (Williamson Act)

The California Land Conservation Act of 1965, commonly referred to as the Williamson Act, is promulgated in California Government Code Sections 51200–51297.4, and therefore is applicable only to specific land parcels within the State of California. The Williamson Act enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space uses in return for reduced property tax assessments. Private land within locally designated agricultural preserve areas is eligible for enrollment under Williamson Act contracts. However, an agricultural preserve must consist of no less than 100 acres. In order to meet this requirement, two or more parcels may be combined if they are contiguous, or if they are in common ownership.

The Williamson Act program is administered by the DOC, in conjunction with local governments, which administer the individual contract arrangements with landowners. The landowner commits the parcel to a 10-year period wherein no conversion out of agricultural use is permitted. Each year the contract automatically

renews unless a notice of non-renewal or cancellation is filed. In return, the land is taxed at a rate based on the actual use of the land for agricultural purposes, as opposed to its unrestricted market value. An application for immediate cancellation can also be requested by the landowner, provided that the proposed immediate cancellation application is consistent with the cancellation criteria stated in the California Land Conservation Act and those adopted by the affected county or city. Non-renewal or immediate cancellation does not change the zoning of the property. Participation in the Williamson Act program is dependent on county adoption and implementation of the program and is voluntary for landowners.

As defined by the Williamson Act, prime agricultural land includes: (1) Class I and II soils as classified by the NRCS; (2) land that qualifies for rating 80 through 100 in the Storie Index Rating by the University of California, Division of Agricultural Sciences; (3) land that supports livestock used for the production of food and fiber and with at least one animal unit per acre; 4) land planted with fruit or nut-bearing crops that yield not less than \$200 per acre annually during commercial bearing periods; or (5) land that has returned from the production of unprocessed agricultural plant products and annual gross value of not less than \$200 per acre for three of the previous five years.⁵

The Williamson Act states that a board or council by resolution shall adopt rules governing the administration of agricultural preserves. The rules of each agricultural preserve specify the uses allowed. Generally, any commercial agricultural use will be permitted within any agricultural preserve. In addition, local governments may identify compatible uses permitted with a use permit California Government Code Section 51238 states that, unless otherwise decided by a local board or council, the erection, construction, alteration, or maintenance of electric and communication facilities, as well as other facilities, are determined to be compatible uses within any agricultural preserve. Also Section 51238 states that board of supervisors may impose conditions on lands or land uses to be placed within preserves to permit and encourage compatible uses in conformity with Section 51238.1. Further, California Government Code Section 51238.1 allows a board or council to allow as compatible any use that without conditions or mitigations would otherwise be considered incompatible. However, this may occur only if that use meets the following conditions:

⁵ Government Code, Section 51201(c)(1)-(5).

- The use will not significantly compromise the long-term productive agricultural capability of the subject contracted parcel or parcels on other contracted lands in agricultural preserves.
- The use will not significantly displace or impair current or reasonably foreseeable agricultural operations on the subject contracted parcel or parcels or on other contracted lands in agricultural preserves. Uses that significantly displace agricultural operations on the subject contracted parcel or parcels may be deemed compatible if they relate directly to the production of commercial agricultural products on the subject contracted parcel or parcels or neighboring lands, including activities such as harvesting, processing, or shipping.
- The use will not result in the significant removal of adjacent contracted land from agricultural or open-space use.

Section 51243.5 states that a city may exercise its option to not succeed to the rights, duties, and powers of the county under the contract if each of the following had occurred prior to January 1, 1991:

- (1) The land being annexed was within one mile of the city's boundary when the contract was executed.
- (2) The city had filed with the local agency formation commission a resolution protesting the execution of the contract.
- (3) The local agency formation commission had held a hearing to consider the city's protest to the contract.
- (4) The local agency formation commission had found that the contract would be inconsistent with the publicly desirable future use and control of the land.
- (5) The local agency formation commission had approved the city's protest.

Farmland Security Zone Act

The Farmland Security Zone Act is similar to the Williamson Act and was passed by the California State Legislature in 1999 to ensure that long-term farmland preservation is part of public policy. Farmland Security Zone Act contracts are sometimes referred to as "Super Williamson Act Contracts." Under the provisions of this act, a landowner already under a Williamson Act contract can apply for Farmland Security Zone status by entering into a contract with the county. Farmland Security Zone classification automatically renews each year for an additional 20 years. In return for a further 35

percent reduction in the taxable value of land and growing improvements (in addition to Williamson Act tax benefits), the owner of the property promises not to develop the property into nonagricultural uses.

Public Resources Code Section 21060.1

The Public Resource Code (PRC) Section 21060.1 defines agricultural land for the purposes of assessing environmental impacts using the FMMP. The FMMP was established in 1982 to assess the location, quality, and quantity of agricultural lands and the conversion of these lands. The FMMP provides analysis of agricultural land use and land use changes throughout California.

2.3 City of Lemoore

2030 Lemoore General Plan

The 2030 Lemoore General Plan (General Plan) has policies that apply to projects within the City of Lemoore that serve to protect farmland. General Plan Implementing Policies are listed below.

COS-I-1 Protect lands designated for Agricultural/ Rural/Conservation uses with appropriate zoning consistent with the General Plan.

COS-I-2 Identify a secure funding mechanism for the purchase of conservation easements to support farmland preservation and a green space buffer on County land surrounding the Lemoore Planning Area, with particular emphasis on land east of the City.

There are several ways to obtain funding for farmland conservation easements, including but not limited to, development impact fees, transfers of development rights (TDRs), tax allocations/appropriations, grants, donations or bonds. Each tool has strength and weaknesses and the options must be evaluated to choose the best one for Lemoore. Implementation will necessitate cooperation with the County, usually in the form of a Memorandum of Understanding (MOU), and would also benefit from guidance through applicable land trust organizations, such as the American Farmland Trust or the California Council of Land Trusts.

COS-I-3 Work with the County to evaluate the need for and feasibility of creating a County Farmland Trust or Open Space District to negotiate open space transactions, hold easements, pursue local open space and farmland preservation policies.

A land trust of open space district would be voter-established entity with authority hold and manage lands for farmland preservation and conservation purposes. Donation of easements to a land trust or open space district may validate easements for tax purposes.

SECTION THREE – ENVIRONMENTAL SETTING

3.1 State of California

State of California Agricultural Production

The sales value generated by California agriculture increased by more than 1 percent between the 2018 and 2019 crop years. The state's 69,900 farms and ranches received \$50.1 billion for their output, up from the \$49.6 billion received in 2018. California's revenue was led by the dairy industry followed by almonds and grapes.⁶

Grape production generated \$5.4 billion in cash receipts in 2019, down 13.6 percent from 2018. Production decreased by 9.1 percent from 2018, and prices received by growers decreased from \$878 per ton of grapes in 2018 to \$846 per ton in 2019. Almond cash receipts were \$6.1 billion, up 8.8 percent from 2018. While the almond bearing acres increased by 90,000 acres, the price per pound fell from \$2.50 in 2018 to \$2.43 in 2019. Revenue generated from cattle was \$3.1 billion, showing a decrease of 3.9 percent from the reported revenue of \$3.2 billion in 2018.⁷

The dairy industry, California's leading commodity in cash receipts, generated \$7.3 billion for milk production in 2019, up 15.2 percent from 2018. Milk production increased by 0.4 percent and milk prices received by producers increased from \$15.78 per hundredweight of milk sold in 2018 to \$18.11 per hundredweight in 2019. As the leading dairy producing state in the country, California produced about 19 percent of the nation's supply in 2019.⁸

⁶ California Department of Food and Agriculture. California Agricultural Statistics Review. 2019-2020. https://www.cdfa.ca.gov/Statistics/PDFs/2020_Ag_Stats_Review.pdf. Accessed May 2021.

⁷ Ibid.

⁸ Ibid.

California remained the leading state in cash farm receipts in 2019 with combined commodities representing over 13 percent of the U.S. total. California's leading crops remained fruits, nuts and vegetables.⁹

California accounts for 40 percent of all organic production in the U.S. and organic sales continue to grow in the state. In 2019, sales of organic products in California totaled more than \$10.4 billion, which represents an increase of 3.5 percent from 2018.¹⁰

State of California Farmland Conversion

Of California's approximately 100 million acres of land, 43 million acres are used for agriculture. Of this, 16 million acres are grazing land and 27 million acres are cropland. Only about nine million acres of irrigated land are considered to be Prime, Unique or of Statewide Importance.¹¹

Irrigated farmland in California decreased by 11,165 net acres between 2014 and 2016. The highest-quality farmland, known as Prime Farmland, decreased by 18,312 net acres, coupled with a Farmland of Statewide Importance decrease of 26,557 net acres.¹²

Urban development, which totaled 44,942 acres, was virtually the same as the 2012-14 update. The highest amount, 47 percent, occurred in the San Joaquin Valley region. This is the first time the San Joaquin Valley has taken the top spot in the State for new Urban and Built-up Land since FMMP began compiling regional conversion statistics in 1990.¹³

Land was removed from irrigated categories—to uses aside from urban—at a rate 17 percent lower than compared with the prior update (153,766 acres in 2014 and 128,105 acres in 2016). Land idling, where irrigated land was converted to nonirrigated land due to a lack of irrigation over time or conversion to dry farming, was responsible for 85 percent of this type of conversion. Irrigated land conversions due to idling are often associated with water resource limitations, market conditions, and salinity-related land idling. The southern San Joaquin Valley was most impacted by land idling. There were

⁹ California Department of Food and Agriculture. California Agricultural Statistics Review. 2019-2020. https://www.cdfa.ca.gov/Statistics/PDFs/2020_Ag_Stats_Review.pdf. Accessed May 2021.

¹⁰ Ibid.

¹¹ California Department of Food and Agriculture. AgVision 2030 White Paper. Agricultural Land Loss & Conversion. July 2009. http://www.cdfa.ca.gov/agvision/docs/Agricultural_Loss_and_Conversion.pdf. Accessed October 2020.

¹² California Department of Conservation. 2014-2016 Farmland Conversion Report. https://www.conservation.ca.gov/dlrp/fmmp/Pages/2014-2016_Farmland_Conversion_Report.aspx. Accessed May 2021.

¹³ Ibid.

70,886 acres of land reclassified from irrigated land to Grazing Land or Farmland of Local Importance in the San Joaquin Valley due to idling, comprising 65 percent of the statewide total.¹⁴

Conversions of range and other lands to new irrigated land between 2014 and 2016 totaled 129,494 acres, an increase of 9 percent from the prior cycle. Sixty-five percent of these new irrigated lands did not have soil qualities to meet the Prime Farmland criteria. Seven counties had irrigated land expansions greater than 5,000 acres which included all the San Joaquin Valley counties, except Kings County. Many of the San Joaquin Valley additions were orchards added in the valley and along the Sierra Nevada foothills.¹⁵

3.2 Kings County

Kings County Agricultural Production

Agricultural products are one of Kings County's most important resources. The *2019 Crop Report* stated "The gross value of all agricultural crops and products produced during 2019 in Kings County was \$2,187,693,000. This represents a decrease of \$92,982,000 (4.1%) from the 2018 value."¹⁶

Fruit and Nut Crops had the largest increase in value at \$43,645,000 (7.3%) due primarily to an increase in production and price of almonds. Seed Crops increased \$1,906,000 (16.2%) due to an increase in acreage.¹⁷

Livestock and Poultry Products had the largest decrease in value at \$72,682,000 (10.7%) due to a decrease in milk production. Vegetable crops decreased \$34,465 (16%) due largely to a decrease in processing tomato acreage and production. Livestock and Poultry decreased \$19,891,000 (7.1% due to less cattle, calves and poultry sold, as well as lower poultry prices. Field crops decreased \$10,510,000 due primarily to lower pima

¹⁴ California Department of Conservation. 2014-2016 Farmland Conversion Report. https://www.conservation.ca.gov/dlrp/fmmp/Pages/2014-2016_Farmland_Conversion_Report.aspx. Accessed May 2021.

¹⁵ Ibid.

¹⁶ Kings County Department of Agriculture 2019 Crop Report. Cover Story by Jimmy Hook, Agricultural Commissioner. <https://www.countyofkings.com/home/showpublisheddocument/24293/637345497607270000>. Accessed December 2020.

¹⁷ Ibid.

cotton prices. Apiary products decreased \$985,000 (6.6%) due largely to less acreage pollinated.¹⁸

3.3 Proposed Project Site

The 156-acre proposed Project site is currently in active agricultural production with alfalfa. The following section describes the relative yields of alfalfa hay grown on the proposed Project site during the past five years. The total value of the crop is based on 2019 crop data from the Kings County Department of Agriculture 2019 Crop Report.¹⁹ The site is currently owned and farmed by the Assemi Group, Inc..

3.3.1 Agricultural Crops and Yields

According to Jeff Roberts of Assemi Group, Inc., approximately 155-acres of alfalfa hay has grown on the proposed Project site for the past five years and one acre is occupied by dirt roads.

Alfalfa hay was ranked number ten among the top ten commodities grown in Kings County for the year 2019 with a value of \$45,276,000. The Kings County 2019 Crop Report indicates an acre of alfalfa hay produced a yield of 8.59 tons with a crop value of \$205 per ton. Alfalfa crop yields and total value are provided in Table 1.

Table 1
Annual Project Site Crop Yield

Crop	Bearing Acreage	Per Acre Yield/Ton	Total Tons	Unit Value per Ton (\$)	Total Value (\$)
Alfalfa hay	155	8.59	1,331.5	205	272,957.50

3.3.2 Land Classifications

According to the FMMP²⁰, the proposed Project site is mapped as containing approximately 154 acres of Prime Farmland and one acre of Unique Farmland.

¹⁸ Ibid.

¹⁹ Ibid.

²⁰ California Department of Conservation. California Important Farmland Finder. <https://maps.conservation.ca.gov/DLRP/CIFF/>. Accessed December 2020.

3.3.3 Soil Suitability

Soils

The 155-acre proposed Project site is composed of two different soil types, as depicted in Table 2.

Table 2
Project Site Soils and Storie Index²¹

Soil Type	Acreage	Site %	Storie Index	Characteristics
Nord Complex	153.6	99.1	Grade 1	Alluvium derived from igneous rock. Well drained, no frequency of ponding, moderate available water storage
Whitewolf coarse sandy loam	0.6	0.9	Grade 2	Alluvium derived from igneous and sedimentary rock. Somewhat excessively drained, no frequency of ponding and low available water storage.

Storie Index

The Storie Index is a soil rating based on soil properties that govern a soil’s potential for cultivated agriculture in California. Four factors that represent the inherent characteristics and qualities of the soil are considered in the index rating: profile characteristics, texture of the surface layer, slope, and other factors (e.g., drainage, salinity). A score ranging from 0 to 100 percent is determined for each factor, and the scores are then multiplied together to derive an index rating. Storie Index ratings have been combined into six grade classes as follows: Grade 1 (excellent), 100 to 80, Grade 2 (good), 79 to 60; Grade 3 (fair), 59 to 40; Grade 4 (poor), 30 to 20, Grade 5 (very poor), 19 to 10, and Grade 6 (nonagricultural), less than 10. The Storie Index of the proposed Project site is provided in Table 2.

²¹ United States Department of Agriculture, NRCS, Web Soil Survey: USDA Soil Survey of Kings County. Accessed August 2020. Attachment A.

Land Capability Classification

The Land Capability Classification System is used by the United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) to determine a soil’s agricultural productivity. The Land Capability Classification indicates the suitability of soils for most kinds of field crops. Crops that require special management are excluded. The soils are grouped according to their limitations for field crops, the risk of damage if they are used for crops and the way they respond to management. Soils are rated from Class I to Class VIII, with soils having the fewest limitations receiving the highest rating (Class I). The “prime” soil classification indicates the absence of soil limitations, which if present, would require the application of management techniques (e.g., drainage, leeching, special fertilizing practices) to enhance production. A general description of soil classifications, as defined by NRCS, is provided in Table 3. The majority of the Project site (153.6 acres or 99.1%) is rated as having Class II soils. The site also has 1.3 acres of Class III soils.

Table 3
Land Capability Classification²²

Soil Classification	Description
I	Soils have few limitations that restrict their use.
II	Soils have moderate limitations that reduce the choice of plants, or that require special conservation practices.
III	Soils have severe limitations that reduce the choice of plants, require conservation practices, or both.
IV	Soils have very severe limitations that reduce the choice of plants, require very careful management, or both.
V	Soils are not likely to erode but have other limitations; impractical to remove soils that limit their use largely to pastures or range, woodland, or wildlife habitat.
VI	Soils have severe limitations that make them generally unsuited to cultivation and limit their use largely to pasture, or range, woodland, or wildlife habitat.
VII	Soils have very severe limitations that make them unsuited to cultivation and that restrict their use largely to pasture or range, woodland or wildlife habitat.

²² United States Department of Agriculture, NRCS, Web Soil Survey: USDA Soil Survey of Kings County. Accessed August 2020. Attachment A.

VIII	Soils and landforms have limitations that preclude their use for commercial plant production and restrict their use to recreation, wildlife habitat, or water supply, or to aesthetic purposes.
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3.3.4 Williamson Act Contracts

As discussed in the Section 2.2, the California Land Conservation Act, also known as the Williamson Act, is a voluntary program that allows agricultural property owners to have their property assessed on the basis of its agricultural production rather than at the current market value. The proposed Project site is currently under a Williamson Act Contract.

3.3.5 Water

Hydrology in the Project site's vicinity is associated with the Tulare Lake Basin, one of three main subareas in Kings County. Approximately four percent of the Tulare Lake Basin is currently built-up and urbanized. The present-day Tulare Basin has been developed extensively for agriculture and petroleum extraction. Agricultural fields, vineyards, and orange groves are interspersed with oil fields. Grains, cotton, and corn are the main agricultural crops in the Tulare Basin. The Tulare Basin has mild winters and hot dry summers. Despite transient tule marsh areas, the area is dry and the valley summer heat is intense.

The Tulare Lake Basin is in the northern alluvial fan and basin subarea characterized by southwest to south flowing rivers, creeks, and irrigation canal systems that convey water from the Sierra Nevada to the west toward the Tulare Lake Bed. The southern portion of the basin is internally drained by the Kings, Kaweah, Tule, and Kern Rivers.²³

The proposed Project lies over the Tulare Lake Groundwater Sub-Basin and water is managed by the South Fork Kings Groundwater Sustainability Agency. Surface water is provided by Lemoore Canal & Irrigation Company and groundwater is pumped from existing on-site agricultural wells.

²³ California Department of Water Resources. California's Groundwater Bulletin 118. 2004. Tulare Lake Hydrologic Region, San Joaquin Valley Groundwater Basin. https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Groundwater-Management/Bulletin-118/Files/2003-Basin-Descriptions/5_022_12_TulareLakeSubbasin.pdf. Accessed September 2020.

According to water well measurements maintained by the California Department of Water Resources between the years 2012 and 2016, groundwater surface elevations in the proposed Project area have ranged from 209 feet to 219 feet.²⁴

3.3.6 Climate

The proposed Project site is located in the southern Central Valley of California; this area has the rainy winters and dry summers that are characteristic of a Mediterranean climate. The Central Valley has greater temperature extremes than the coastal areas because it is less affected by the moderating influence of the Pacific Ocean.

The Western Regional Climate Center (WRCC) provides climate data derived from stationary weather stations throughout the western United States. WRCC has developed a data set for monthly climate for the Project area (1899 to 2016); this data set is based on weather readings taken from the Hanford 043747 Station, the nearest weather station to the proposed Project site. The majority of rainfall occurs from November through March with an average annual rainfall of approximately eight inches per year. The monthly average temperature maximum was 97.8°F in July and the monthly average minimum was 35.2°F in January.²⁵

²⁴ California Department of Water Resources, Water Data Library
<https://wdl.water.ca.gov/WaterDataLibrary/GroundwaterBrowseData.aspx?LocalWellNumber=&StationId=33156&StateWellNumber=18S20E26J001M&SelectedCounties=&SiteCode=363342N1197629W001&SelectedGWBasins=>
Accessed January 2021.

²⁵ Western Regional Climate Center. Period of Record Monthly Climate Summary, Hanford, California.
<https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca3747>. Accessed January 2021.

SECTION FOUR – FARMLAND CONVERSION

4.1 Methodology

This study follows the California Land Evaluation Site Assessment Model to assess the proposed Project's potential impacts to agricultural lands.

4.1.1 Land Evaluation and Site Assessment

The California Land Evaluation and Site Assessment Model (LESA) provides guidelines for rating the relative quality of land resources based on specific measurable features. It is intended "to provide lead agencies with an optional methodology to ensure that significant effects on the environment of agricultural land conversions are quantitatively and consistently considered in the environmental review process."²⁶ It is designed to make determinations of the potential significance of a project's conversion of agricultural lands.

The LESA is composed of six different factors, which are divided into two sets: Land Evaluation and Site Assessment factors. Two Land Evaluation factors (Land Capability Classification Rating and Storie Index Rating) are based upon measures of soil resources quality and intended to measure the inherent, soil-based qualities of land as they relate to agricultural suitability. Four Site Assessment factors (Project Size Rating, Water Resource Availability Rating, Surrounding Agricultural Lands Rating, and Surrounding Protected Resource Lands Rating) are intended to measure social, economic, and geographic attributes that also contribute to the overall value of agricultural land.

The two sets of factors are evenly weighted, meaning the two Land Evaluation factors and four Site Assessment factors are of equal importance; however, for a given project, each of these six factors is separately rated in a 100-point scale. The factors are then weighted relative to one another and combined, resulting in a single numeric score for a given project, with a maximum attainable score of 100 points. This final project score becomes the basis for making a determination of the potential impacts' level of significance for the project, based upon a range of established scoring thresholds.

²⁶ Public Resources Code Section 21095

Land Evaluation Factors

The LESA includes two Land Evaluation factors, discussed below, that are separately rated.

The Land Capability Classification Rating (LCC): The LCC indicates the suitability of soils for most kinds of crops. Groupings are made according to the limitations of the soils when used to grow crops and the risk of damage to soils when used in agriculture. Soils are rated from Class I to Class VIII, with soils having the fewest limitations receiving the highest rating (Class I). Specific subclasses are also utilized to further characterize soils.

The Storie Index Rating: The Storie Index provides a numeric rating (based upon a zero to 100 scale) of the relative degree of suitability or value of a given soil for intensive agriculture. The rating is based upon soil characteristics only. Four factors that represent the inherent characteristics and qualities of the soil are considered in the Storie Index rating: profile characteristics, texture of the surface layer, slope, and other factors such as drainage or salinity. In some situations, only the United States Department of Agriculture's LCC information may be available. In those cases, the Storie Index ratings can be calculated from information contained in soil surveys by qualified soil scientists; however, if limitation of time and/or resources restrict the derivation of the Storie Index rating for a given project, it may be possible to adapt the Land Evaluation by relying solely upon the LCC rating.

Site Assessment Factors

The four Site Assessment factors that are separately rated and included in the LESA as discussed below.

The Project Size Rating: The Project Size rating is based upon identifying acreage figures for three separate groupings of soil classes within the project site, and then determining what grouping generates the highest Project Size score. The Project Size Rating relies upon acreage figures that were tabulated under the Land Capability Classification Rating.

The Water Resources Availability Rating: The Water Resources Availability rating is based upon identifying the various water sources that may supply a given property, and then determining whether different restrictions in supply are likely to take place in years that are characterized as being periods of drought and non-drought.

The Surrounding Agricultural Land Rating: Determination of the Surrounding Agricultural Land rating is based upon identification of a project's Zone of Influence (ZOI), which is defined as that land near a given project, both directly adjoining and within a defined distance away, that is likely to influence, and be influenced by, the agricultural land use of the subject project site. The Surrounding Agricultural Land rating is designed to provide a measurement of the level of agricultural land use for lands close to a given project. The LESA rates the potential significance of the conversion of an agricultural parcel that has a large proportion of surrounding land in agricultural production more highly than one that has relatively small percentage of surrounding land in agricultural production. The definition of the ZOI that accounts for surrounding lands (up to a minimum of 0.25 mile from the project boundary) is the result of several iterations during model development for assessing an area that will generally be a representative sample of surrounding land use. Figure 2 shows the ZOI surrounding the proposed Project site and the FMMP classifications. There are 568.7 acres of land within the ZOI of the project site; of those lands, 383.1 acres are Prime Farmland, 41.2 are Unique Farmland and the remaining 144.4 acres consist of rural residential land and urban and built-up land and semi-agricultural and rural commercial land.

The Surrounding Protected Resource Land Rating: The Surrounding Protected Resource Land rating is essentially an extension of the Surrounding Agricultural Land rating, and it is scored in a similar manner. Protected resource lands are those lands with long-term use restrictions that are compatible with or supportive of agricultural uses of land. Included among them are the following:

- Williamson Act contracted lands
- Publicly owned lands maintained as a park, forest, or watershed resources
- Lands with agricultural, wildlife habitat, open space, or other natural resource easements that restrict the conversion of such land to urban and industrial uses

Final LESA Scoring

A single LESA score is generated for a given project after all the individual Land Evaluation and Site Assessment factors have been scored and weighted. The LESA is weighted so that 50 percent of the total LESA score of a given project is derived from

the Land Evaluation factors and 50 percent is derived from the Site Assessment factors. The final LESA score was determined for the proposed Project and the modeling results are described in Table 4.

Table 4
Land Evaluation and Site Assessment Model Scoring Summary

Category	Factor	Raw Points	Factor Weight	Weighted Points	Comments
Land Evaluation	Land Capability Class	89.8	0.25	22.45	Majority of site is LCC II
	Storie Index	1.01	0.25	0.25	Majority of site is ranked as 1
	Subtotal		0.50	22.7	
Site Assessment	Project Size	100	0.15	15	
	Water Resource Availability	100	0.15	15	Groundwater is available via on-site wells
	Surrounding Agricultural Land	80	0.15	12	
	Surrounding Protected Resource Lands	60	0.05	3	Approximately 68% of ZOI is under contract
	Subtotal		0.50	45	
Final Score			67.7		

Thresholds of Significance

The LESA is designed to make determinations of the potential significance of a project’s conversion of agricultural lands during the Initial Study phase of the CEQA process. Scoring thresholds are based upon both the total LESA score and the component Land Evaluation (LE) and Site Assessment (SA) separate subscores. In this manner, the scoring thresholds are dependent upon the attainment of a minimum score for the LE and SA subscores so that a single threshold is not the result of heavily skewed subscores (i.e., a site with a very high LE score but a very low SA score, or vice-versa). The LESA scoring thresholds are described in Table 5.

Table 5
LESA Scoring Thresholds

Total LESA Score	Scoring Decision
0 to 39 points	Not considered significant
40 to 59 points	Considered significant only if LE and SA subscores are each greater than or equal to 20
60 to 79 points	Considered significant unless either LE or SA subscore is less than 20 points
80 to 100 points	Considered significant

According to the LESA Threshold of Significance, the total score of 67.7 for the proposed Project site is considered significant as neither the LE or SA are less than 20 points.

SECTION FIVE – IMPACT ANALYSIS AND RECOMMENDATIONS

5.1 Farmland Conversion

According to the FMMP,²⁷ the 155-acre proposed Project site is mapped as containing approximately 154 acres of Prime Farmland and one acre of Unique Farmland. The entire site is within the City of Lemoore Urban Development Boundary and the bottom third of the site is within the existing City of Lemoore Sphere of Influence.

A Land Evaluation and Site Assessment (LESA) was conducted to analyze potential impacts resulting from the conversion of farmland. The LESA was developed by the California Department of Conservation to make determinations of the potential significance of a project's conversion of agricultural lands. As described in Section 4.1.1 above, the LESA determined that the site-specific conversion of agricultural land would be significant.

Level of Significance: Significant Impact.

5.2 Zoning or Williamson Act Contract Conflicts

Agricultural Zoning

The Project site is currently zoned as Limited Agricultural-10 District by Kings County and as a part of the Project, the Zone District will be changed to Low, Medium and High Density Residential and Parks/Recreation by the City of Lemoore. The new zoning would accommodate the proposed Project and as such, there would be *no impact* resulting from a zoning conflict.

Williamson Act Contract

²⁷ California Department of Conservation. Farmland Mapping and Monitoring Program. Kings County. <https://maps.conservation.ca.gov/DLRP/CIFF/>. Accessed August 2020.

As noted, the Project site is subject to a Williamson Act contract, pursuant to Government Code Section 51200 et seq. The entire Project site is currently under a Williamson Act Contract; however, a protest was filed with the Local Agency Formation Commission (LAFCo) on December 1, 1982, in accordance with Section 51243.5 (a) of the Government Code, as amended, which will result in a dissolution of the Williamson Act Contract upon annexation of the subject site to the City.

With the dissolution of the Williamson Act Contract, there would be no conflict with a Williamson Act Contract and as such, *no impacts* to this subject area.

Level of Significance: No Impact.

5.3 Loss or Conversion of Forest Land

This impact evaluates the potential for the proposed Project to conflict with existing Forest Land zoning or result in the loss of forest land or result in the conversion of forest land to non-forest use. There is no forest land zoning on the proposed Project site and there are no forest uses on the site. No loss of forest land would occur, and no conflicts with forest land zoning would occur. Therefore, there is no impact.

Level of Significance: No Impact.

5.4 Other Conversion Factors

The requested annexation, general plan amendment and zone change is site specific and does not apply to any properties other than the Project site. The entire site is within the City of Lemoore's adopted Urban Development Boundary and the southern one-third is within the Sphere of Influence. The site has been planned for development and as such, there is little potential for the proposed Project to result in the conversion of any surrounding agricultural lands.

Level of Significance: Less Than Significant.