5.2 AGRICULTURAL RESOURCES

The purpose of this section is to determine the extent to which the project contributes to the physical deterioration of agricultural resources. This section describes the agricultural resources within the project study area, and the applicable regulations that govern those resources. The analysis includes a discussion of the potential agricultural productivity of the onsite soils and the potential impacts the project may have on the continued use of surrounding properties for agricultural production. The analysis is derived from the following sources and agencies:

- Shasta County. *Shasta County General Plan, Chapter 6, Agricultural Lands*.
- Shasta County. *Shasta County Code, Title 18, Environment; Chapter 18.06, Agricultural and Forestry Notification*.
- California Department of Conservation. *California Agricultural Land Evaluation and Site Assessment Model*. 1997.
- State of California. *Department of Conservation, Farmland Mapping and Monitoring Program*.
- United States Department of Agriculture (USDA), Natural Resources Conservation Service. *Soil Survey of Shasta County Area, California*. 1974.

This section describes the affected environment and regulatory setting for agricultural resources. It also describes the impacts on agricultural resources that would result from implementation of the proposed project and mitigation measures, if necessary, that would reduce these impacts.

5.2.1 ENVIRONMENTAL SETTING

According to the California Department of Food and Agriculture (CDFA), *Agricultural Statistics Review for 2015-2016*, Shasta County was ranked 41st in the State for total value of agricultural production in 2015 without timber and 36th with timber. Main agricultural commodities for total value of production include hay (other); cattle, stockers, and feeders; unspecified forest products; wild rice; cattle, beef cow, and breeding; miscellaneous nursery products; English walnuts; range pasture; irrigated pasture; and apiary products/bees.

The Shasta County *General Plan* designation for the project site is Rural Residential A (RA). Surrounding properties are also designated RA. Areas to the east along Deschutes Road are designated Agricultural Small Scale Cropland/Grazing (A-cg). The A-cg designation is applied to lands capable of supporting crop production by part-time or second income operators (refer to *General Plan* policy AG-a).

The current zoning designation for the westerly area of the site is Unclassified (U). The U district is applied as a holding district until a principal zone district has been determined. The remainder of the site is zoned Rural Residential (R-R) (3 and 5-acre minimum lot sizes). Properties to the north are zoned Exclusive Agriculture (EA) and U. Properties to the west are zoned U and Rural Residential-Mobile Home (R-R-T) (2 and 3-acre minimum lot sizes). Properties to the east and south are also zoned R-R, with minimum parcel sizes ranging from 2 to 5 acres. Properties along Deschutes Road to the east are zoned Limited Agriculture (A-1). The purpose of the A-1 District is to preserve agricultural lands at a size capable of supporting part-time agricultural operations (5-acre minimum).

5.2.2 REGULATORY SETTING

The following is a description of federal, State, and local environmental laws and policies that are relevant to the California Environmental Quality Act (CEQA) review process.

FEDERAL

Farmland Protection Policy Act (7 U.S.C. §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 non-agricultural 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, §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 non-agricultural 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 Farmland of Statewide or Local Importance. Farmland subject to FPPA requirements does not have to be currently used for cropland. It can be forest land, 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 non-agricultural use and are completed by a Federal agency or with assistance from a Federal agency.

United States Department of Agriculture, Natural Resources Conservation Service

The U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS), maps soils and farmland and provides science-based soil information. The NRCS manages the Farmland Protection Program, which provides funds to conserve productive farmland.

STATE

California Farmland Mapping and Monitoring Program (FMMP)

The FMMP, which monitors the conversion of the State's farmland to and from agricultural use, relies on information from the NRCS soils surveys, NRCS land inventory and monitoring criteria, and land use and water availability. Topography, climate, soil quality, and available irrigation water all factor into the FMMP farmland classifications.

The FMMP was established by the California Department of Conservation (DOC), under the Division of Land Resource Protection. Important Farmland Maps are compiled by the FMMP pursuant to §65570 of the California Government Code. The FMMP is an informational service only and does not constitute state

regulation of local land use decisions. Under the FMMP, "Important Farmland Categories" were established based on soils characteristics that have significant agricultural production values. Categories mapped by the FMMP are as follows:

- *Prime Farmland***.** Prime Farmland is land that has been used for irrigated agricultural production and meets the physical and chemical criteria for Prime Farmland as determined by the USDA, NRCS. 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 of Statewide Importance is similar to Prime Farmland but generally includes steeper slopes or less ability to store soil moisture. In order to be classified as Farmland of Statewide Importance, the land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.

- *Unique Farmland.* Unique Farmland is farmland of lesser quality soils used for the production of the state's leading agricultural crops. This land is usually irrigated, but may include non-irrigated orchards or vineyards. Land must have been cropped at some time during the four years prior to the mapping date.

- *Farmland of Local Importance.* Farmland of Local Importance is land important to the local economy as determined by the County Board of Supervisors and a local advisory committee. This land includes dryland grain producing lands and farmlands that are presently irrigated but do not meet the soil characteristics of Prime Farmland or Farmland of Statewide Importance. According to the FMMP, the majority of these farmlands in Shasta County are located within the Anderson-Cottonwood Irrigation District. These soils include Newtown gravelly loam (8 to 15 percent slopes), Moda loam, seeped (0 to 3 percent slopes), Moda loam, shallow (0 to 5 percent slopes), and Hillgate loam.

- *Grazing Land.* Grazing Land is 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.* Urban and Built-Up Land is land occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel. This land is used for residential, industrial, commercial, construction, institutional, public administration, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes.

- *Other Land.* Other Land is 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, borrow pits; and water bodies smaller than forty acres.

- *Water.* This category includes perennial water bodies with an extent of at least 40 acres.

California Land Conservation Act (Williamson Act)

The California Land Conservation Act of 1965, commonly referred to as the Williamson Act, is promulgated in California Government Code §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. The Williamson Act program is administered by the CDC, 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.

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 §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, §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 §51238.1.

Further, California Government Code §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:

- 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.

The proposed project site is not under a Williamson Land Use Contract.

Farmland Security Zone Contract

The CDC passed the Farmland Security Zone legislation (Govt. Code §51296) in 1998. The Farmland Security Zone allows counties to establish an additional program for farmlands to enter into contracts with the State. This legislation allows landowners whose land is under a Williamson Act contract to petition to the county board of supervisors to annul the Williamson Act contract for a Farmland Security Zone Contract. A Farmland Security Zone Contract is a 20-year contract that allows the property owner to receive 35 percent more in tax savings than a Williamson Act contract. Both of these contracts require that lands be within an established Agricultural Preserve. Agricultural lands that are not in a preserve face the greatest threat of conversion, as they are assessed higher property taxes due to their proximity to urbanization. The proposed project site is not under a Farmland Security Zone contract or within an agricultural preserve.

Forest Land and Timberland

Public Resources Code section 12220(g) defines Forest Land as *"land that can support 10% native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits."*

Public Resources Code Section 4526 defines timberland as *"land, other than land owned by the federal government, which is available for, and capable of, growing a crop of trees of any commercial species used to produce lumber and other forest products, including Christmas trees."*

Government Code section 51104(g) defines Timberland Production Zone (TPZ) as *"an area which has been zoned pursuant to [Government Code] Section 51112 or 51113 and is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses, as defined in subdivision (h)."*

California Environmental Quality Act (CEQA)

Appendix G of the CEQA Guidelines states that lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment (LESA) Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland.

In addition, the CEQA Guidelines state that, in assessing impacts to forest resources, including timberland, 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.

LOCAL

Shasta County General Plan, Chapter 6.1 (Agricultural Lands Element)

The following *General Plan* objectives and policies are pertinent to the agricultural resources evaluation for the proposed project:

Objectives

AG-3 Recognition by Shasta County residents that the preservation of agricultural lands for agricultural uses, both large and small scale, is in the public interest because it preserves local and regional food supplies and is an important contributing industry to the Shasta County economy.

AG-4 Recognition by Shasta County residents that preservation of agricultural lands, both large and small-scale, provides privately maintained open-space, facilitates a rural lifestyle, and requires Countywide understanding of the problems facing ranchers and farmers.

AG-5 Protection of agricultural lands from development pressures and or uses which will adversely impact or hinder existing or future agricultural operations.

AG-6 Protection of water resources and supply systems vital for the continuation of agriculture.

CO-4 To guide development in a pattern that will minimize land use conflicts between adjacent land users.

Policies

AG-a Agricultural lands in Shasta County shall be classified according to three general categories based on the following criteria:

Lands designated on the land use maps as A-G capable of supporting grazing by full-time operators, including:

- Existing grazing lands used for this purpose.
- Lands which are not now but could be used for this purpose based on resource characteristics (soils, climate, access to water) and compliance with the applicable parcel size minimums of Table AG-2.

Land designated on the land use maps as A-C capable of supporting crop production by fulltime operators, including:

- Existing croplands used for this purpose.
- Lands which are not now but could be used for this purpose based on resource characteristics (soils, climate, access to water) and compliance with the applicable parcel size minimums of Table AG-2.

Land designated on the land use maps as A-cg capable of supporting crop production by part-time or second income operators, with the following characteristics:

- Existing lands used for this purpose.
- Lands which are not now but could be used for this purpose based on resource characteristics (soils, climate, access to water).
- Applicable parcel size minimums of 5, 10 or 20 acres, as best suited to the locale, and applied to part-time agricultural areas found in Table AG-2.

AG-b Existing agricultural lands and other County lands meeting the criteria described in Table AG-2 shall be reviewed by the County at five year intervals to determine the appropriateness of either their current or potential classification as agricultural lands. The purpose of this review is to ensure that agricultural lands either currently or potentially preserved for agricultural uses merit such special treatment and to provide a systematic, uniform, and equitable process for the periodic review of certain current or potential agricultural lands. This review process shall be used judiciously. Removal of land from the agricultural designation shall occur only when evidence and findings are provided which shows an overriding public need to develop the property for non-agricultural uses.

This review shall be conducted by the Department of Resource Management in conjunction with appropriate agricultural interest groups. Existing agricultural lands and other County lands may be nominated for review between five-year General Plan updates as follows:

- By resolution of intention by the Board of Supervisors or Planning Commission;
- By completed application of the property owner; and
- By recommendation of the Department of Resource Management.

Each nomination for a land use or policy change shall be executed by a completed County application which includes special supplemental information required by the County specific to amendments for the Agricultural Lands Element. In its review, the Department of Resource Management and advisory groups shall address the following factors, and any recommendations presented shall provide an analysis which explicitly states the relationship to these factors:

- The local, State, and National interests in the preservation of agricultural lands to assure adequate, healthful, and nutritious food supplies.
- The availability of non-agricultural lands to serve the purposes which would otherwise require the conversion of agricultural lands into non-agricultural lands.
- The impact of the conversion of agricultural lands into non-agricultural lands (e.g. adjacent agricultural lands).
- The impact of the conversion of non-agricultural lands into agricultural lands (e.g., adjacent non-agricultural lands).
- The relationship between the geographic pattern of agricultural land use and the pattern of community development prescribed in the General Plan.

AG-d In order to protect full-time agricultural uses from incompatible land uses, lands being divided in areas designated either RA or RB that adjoin lands designated for full-time agricultural uses shall comply with one of the following:

- If outside of a rural community or town center, the minimum parcel size shall be ten acres or more depending on other policies or standards. Residential building sites shall be located, to the extent feasible, to avoid negative impacts on the adjacent land uses.
- If within a rural community or town center, the minimum parcel size shall be five acres or more depending on other policies or standards. Residential building sites shall be located, to the extent feasible, to avoid negative impacts on the adjacent land uses.
- If it can be shown that topographic or man-made features will sufficiently separate the uses, the above-mentioned standards shall not be applied.

AG-e Divisions of agricultural lands designated A-C or A-G shall conform to Table AG-2 with respect to the geographic location of the agricultural lands, their current primary use, and full-time operation. Any proposed division of lands shall be for exclusive agricultural purposes, except in the case of family member residences or family member financing, trades between agricultural operations, or the transfer or settlement of estates. Such exceptions may be approved only if all the following conditions are met:

- No conflicts with adjacent agricultural operations will result from the division.
- Any proposed division of land designated on the land use map as full-time agricultural lands shall require documentation that the division is necessary for continued full-time agricultural uses and that the proposed parcel sizes will not be detrimental to the economic viability of agricultural operations on said parcels or adjoining parcels.

AG-h The site planning, design, and construction of onsite and offsite improvements for non-agricultural development in agricultural areas shall avoid unmitigable short- and long-term adverse impacts on facilities, such as irrigation ditches, used to supply water to agricultural operations.

Table AG – 2
Minimum Parcel Size Requirements

		Minimum Parcel Size [1]	
Agricultural Area	**Current Primary Use**	**Full-Time Operators (A-C or A-G)**	**Part-Time Operators (A-cg)**
VALLEYS			
Sacramento River	Field Crops	40	5, 10 or 20
	Orchard Crops	40	5, 10 or 20
	Nursery Stock	40	5, 10 or 20
	Irrigated Pasture	120	5, 10 or 20
	Grazing	760	5, 10 or 20
Fall and Pit Rivers	Field Crops	40	5, 10 or 20
	Nursery Stock	40	5, 10 or 20
	Irrigated Pasture	160	5, 10 or 20
	Grazing	760	5, 10 or 20
FOOTHILLS			
Eastern Upland	Grazing	760	
	Irrigated Pasture	160	
Western Upland	Grazing	760	
	Irrigated Pasture	160	
MOUNTAIN MEADOWS			
Goose Valley	Irrigated Pasture	160	
Burney Creek Valley	Irrigated Pasture	160	
Cayton Valley	Irrigated Pasture	160	
Hat Creek Valley	Irrigated Pasture	160	

[1] In cases involving irregular sections, the minimum parcel size may vary up to five percent but not more than that needed to adjust for the irregularity, whichever is less.
Source: This table was developed in cooperation with the Shasta County Cattlemen's Association and the Shasta County Farm Bureau.

The following definitions are provided as guidelines for use with Table AG-2.

- *Cropland.* Land capable of producing agricultural products which are planted, cultivated, and harvested by either mechanical means or by hand, or both. Cropland types include field and row crops, orchards and vineyards, nursery crops, and other related food and fiber crops.

- *Irrigated Pasture.* Land used primarily for grazing and occasional haymaking, which is irrigated by surface or subsurface means according to generally accepted practices.

- *Grazing Land.* Land used primarily for grazing and which relies exclusively on rain and snowfall for production of forage. Agriculturally-fallow land is also considered grazing land if left fallow under the definition of "current primary use."

- *Current Primary Use.* The prevailing use on a majority of land or a parcel during three of the previous five years.

5.2.3 STANDARDS OF SIGNIFICANCE

SIGNIFICANCE CRITERIA

In accordance with State *CEQA Guidelines*, the effects of a project are evaluated to determine whether they would result in a significant adverse impact on the environment. An EIR is required to focus on these effects and offer mitigation measures to reduce or avoid any significant impacts that are identified. The criteria used to determine the significance of impacts may vary depending on the nature of the project. According to Appendix G of the State *CEQA Guidelines*, the proposed project would have a significant impact related to agricultural and forestry resources, if it would:

- *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.* Refer to Impact 5.2-1, below.

- *Conflict with existing zoning for agricultural use or a Williamson Act contract.* Refer to AREAS OF NO PROJECT IMPACT, below.

- *Involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland to non-agricultural use.* Refer to Impact 5.2-2, below.

- *Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)) or result in the loss of forest land or conversion of forest land to non-forest use.* Refer to AREAS OF NO PROJECT IMPACT, below.

Based on these standards, the effects of the proposed project have been categorized as either a "*less than significant*" impact or a "*potentially significant*" impact. Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than

significant level through the application of mitigation, it is categorized as a "*significant and unavoidable*" impact.

AREAS OF NO PROJECT IMPACT

In October 2012 and February 2016, the County conducted an Initial Study to determine significant effects of the proposed project. In the course of this evaluation, certain impacts of the proposed project were found to not to be significant because of the inability of a project of this scope to create such impacts or the absence of project characteristics producing effects of this type. The effects determined not to be significant are not required to be included in primary analysis sections of the Draft EIR. As such, the following impacts either are not applicable to the proposed project or are not reasonably foreseeable and are not addressed further within this section (refer to Section 10.0, EFFECTS FOUND NOT TO BE SIGNIFICANT):

- *Conflict with existing zoning for agricultural use or a Williamson Act contract*.
- *Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)) or result in the loss of forest land or conversion of forest land to non-forest use.*

5.2.4 POTENTIAL IMPACTS AND MITIGATION MEASURES

METHODOLOGY

The potential impacts of the proposed project were evaluated qualitatively by comparing the anticipated project effects on agricultural resources with existing conditions. In addition, the LESA Model (1997) was used to rate the quality of agricultural land resources based on specific measurable features.

The evaluation is based on professional judgment, an analysis of project consistency with the goals and polices of the Shasta County *General Plan*, available literature, other publicly available information from applicable agencies, and the significance criteria established by Appendix G of the State *CEQA Guidelines*, which the County has determined to be appropriate criteria for this Draft EIR. In accordance with CEQA, the effects of a project are evaluated to determine if they would result in a significant adverse impact on the environment. Agricultural resource impacts are analyzed below according to topic. Mitigation measures directly correspond with an identified impact.

IMPACT 5.2-1	***Covert 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.***

Significance: Less than Significant Impact.

Impact Analysis: According to the FMMP Important Farmland Map, no portion of the project site is designated Prime Farmland, Unique Farmland, or Farmland of Statewide Importance; however, approximately 687.87 acres of the proposed project site is designated by the FMMP as Grazing Land and has been used for dryland cattle grazing since the early 1940s. Approximately 154.6 acres will remain as open space and allow continued use as Grazing Land.

In order to determine whether impacts to agricultural resources are significant, the California Agricultural Land Evaluation and Site Assessment (LESA) model was used for the following assessment. The LESA analysis does not include the 154.6 acres that will remain as open space and continue to be used as Grazing Land.

The LESA Model is comprised of six assessment factors: Two Land Evaluation factors are based upon measures of soil resource quality. Four Site Assessment factors provide measures of a given project's size, water resource availability, surrounding agricultural lands, and surrounding protected resource lands (e.g., lands under Williamson Act contracts). Each of these factors is separately rated on a 100-point scale. The factors are then weighted relative to one another and combined, resulting in a single numeric score that becomes the basis for making a determination of a project's potential significance. Existing Shasta County *General Plan* classifications and zoning designations are not incorporated into the LESA analysis. The two Land Evaluation factors are as follows:

The Land Capability Classification (LCC) Rating

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 they are 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. A description of each soil rating is provided in Table 5.2-1, LAND CAPABILITY CLASSIFICATION CLASSES.

Table 5.2-1
LAND CAPABILITY CLASSIFICATION CLASSES

Class	Description
I	Soils have few limitations that restrict their use.
II	Soils have moderate limitations that reduce the choice of plants or that require moderate conservation practices.
III	Soils have severe limitations that reduce the choice of plants or that require special conservation practices, or both.
IV	Soils have very severe limitations that reduce the choice of plants or that require very careful management, or both.
V	Soils are subject to little or no erosion but have other limitations that are impractical to remove, that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.
VI	Soils have severe limitations that make them generally unsuitable for cultivation and that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.
VII	Soils have very severe limitations that make them unsuitable for cultivation and that restrict their use mainly to grazing, forestland, or wildlife habitat.
VIII	Soils and miscellaneous areas have limitations that preclude commercial plant production and that restrict their use to recreational purposes, wildlife habitat, watershed, or aesthetic purposes.

Source: Natural Resources Conservation Service. 2017.

The LCC also includes capability subclasses, which are soil groups within one capability class and are designated by the letters "e", "w", "s", or "c" as described in Table 5.2-2, LAND CAPABILITY CLASSIFICATION SUBCLASSES.

Table 5.2-2
LAND CAPABILITY CLASSIFICATION SUBCLASSES

Subclass	Description
e	The main problem or hazard is the risk of erosion. The susceptibility of erosion and past erosion damage are the main soil factors that affect soils in this subclass.
w	Water in or on the soil interferes with plant growth or cultivation. Poor soil drainage, wetness, a high-water table, and overflow are the factors that affect soils in this subclass.
s	The soil has limitations within the rooting zone, mainly because it is shallow, has low moisture-holding capacity, or is stony.
c	The chief limitation is climate that is very cold or very dry.

Source: Natural Resources Conservation Service. 2017.

The Storie Index Rating

The Storie Index provides a numeric rating (based upon a 100-point 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 index rating as shown in Table 5.2-3, STORIE INDEX RATINGS. 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.

Table 5.2-3
STORIE INDEX RATINGS

Factor	Description
A: Soil Profile Group	*Factor A* is a rating of the character of the soil profile based on the degree of soil development. Soils are placed in profile groups based on landform type and genetic horizontal development. Soil development is defined as the presence of Bt horizons or cemented layers. Bt horizons are subsurface layers that have an increase in clay relative to the overlaying horizons. The increase is a result of the translocation of clay by percolating water from overlaying soil horizons.
B: Surface Texture	*Factor B* is based on surface texture. Loamy soils receive the highest ratings, and clay-rich and sandy soils receive lower ratings. Rock fragment content is used to modify the scores, which range from 10 to 100 percent. The rating for Factor B can vary as much as 30 percent for a specific texture class depending on the volume of coarse fragments present.
C: Slope	*Factor C* is based on the steepness of the slope. Slopes of 0 to 8 percent receive high scores, which range from 85 to 100 percent. Slopes of 9 to 30 percent have scores ranging from 70 to 95 percent. Slopes greater than 30 percent receive lower scores ranging from 5 to 50 percent. Users choose a score in a somewhat subjective manner based on these slope classes.
X: Drainage, Alkalinity, Fertility, Acidity, Erosion, and Microrelief	*Factor X* focuses on drainage class, alkalinity, nutrient status, degree of acidity, wind and water erosion, and microrelief. Scoring for each characteristic in Factor X is subjective. Drainage, erosion and microrelief scores range from 10 to 100 percent, while fertility status and acidity scores range from 60 to 100 percent and 80 to 95 percent, respectively.

Source: Natural Resources Conservation Service. 2017.

Project Site Soils

Soils on the project site are shown on Figure 5.6-1, SOILS MAP, in Section 5.6, GEOLOGY AND SOILS, and are summarized in Table 5.2-4, PROJECT SOIL TYPES (ONSITE AND OFFISTE ROAD), below.

Table 5.2-4
PROJECT SOIL TYPES (ONSITE AND OFFSITE ROAD)

Map Unit Symbol	Soil Name	Total Acres	% of Project Site	Land Capability Classification (LCC)	Storie Index
Ae	Anderson gravelly sandy loam, moderately deep	27.65	4.83	III-s	34
CfA	Churn gravelly loam, deep, 0-3 % slopes	6.7	1.17	III-s	65
CgB	Clough gravelly loam, 3-8 % slopes	60.41	10.56	IV-e	20
IeE	Inks-Pentz complex, 30-50% slopes	48.96	8.56	VII-e	8
NeC	Newtown gravelly loam, 8-15% slopes	176.57	30.87	III-e	35
RcA	Red Bluff gravelly loam, moderately deep, 0-3% slopes	119.8	20.95	III-s	45
RcB	Red Bluff gravelly loam, moderately deep, 3-8% slopes	130.76	22.86	III-e	40
ReA	Redding-Red Bluff gravelly loams, 0-3% slopes	1.12	0.20	IV-s	27
	Total:	571.97			

Sources: Natural Resources Conservation Service. 2017; USDA, Soil Conservation Service and Forest Service. Soil Survey of Shasta County Area, California, 1974.

No portion of the proposed project site is irrigated; therefore, the LCCs presented in Table 5.2-4 reflect the classification for non-irrigated soils. As indicated in Table 5.2-4, the project site does not include any LCC Class I or II soils. The majority of the site (461.48 acres) contains LCC Class III soils, which have severe limitations that reduce the choice of plants or that require special agricultural conservation practices, or both. A total of 61.53 acres is designated as Class IV soils with very severe limitations that reduce the choice of plants or that require very careful management, or both. A total of 48.96 acres is rated Class VII, which is not suited to cultivation but could be used as pasture, rangeland, grazing land, forestland, or wildlife habitat. Soils on the project site are identified as either Subclass “e” or “s”, indicating the major issues are related to erosion and soil limitations within the rooting zone.

Water Resources Availability

The LESA Model includes a Water Resources Availability rating based on existing water sources and whether restrictions in water supply could occur in drought years. The LESA model acknowledges it may be possible to obtain a reliable water supply, but at a greater cost; therefore, the model considers not only physical limitations of a property, but also economic factors.

According to the NRCS, there are soil limitations on the project site for installation and use of irrigation systems on the entire Project site. A total of 494.24 acres is somewhat limited due to low water holding capacity, rapid water movement, and slope; 77.73 acres are very limited for these same reasons plus issues with seepage, depth to bedrock and saturated zones, and content of large stones.

Because no portion of the proposed project site is irrigated, and soil limitations exist on the majority of the project site, irrigated production is not likely feasible; however, rainfall may be adequate for dryland production in non-drought years.

Surrounding Agricultural Land Use

The LESA Model rates the potential significance of the conversion of agricultural land based in part on the proportion of surrounding land that is currently producing agricultural crops. The determination is based upon identification of a project’s Zone of Influence (ZOI), which is defined as directly adjoining properties

and those within a minimum of ¼ mile of the project boundaries. The ZOI for the proposed project was identified as approximately 2,527.95 acres. A review of the FMMP Important Farmland Map and aerial photography, as well as field visits, indicated a total of approximately 725.7 acres within the ZOI is currently used for agricultural purposes. This represents 28.71 percent of the ZOI. The LESA model does not assign a score to this factor if the surrounding land in agricultural use is less than 40 percent of the ZOI.

In addition, as stated in Section 5.10, LAND USE AND PLANNING, there are approximately 1,005 parcels less than 6 acres within a mile to a mile and a half of the proposed project (refer to Figure 5.10-1, COMPOSITE PARCEL MAP). The proposed project does not adjoin lands designated on the Shasta County *General Plan* for agricultural uses (refer to *General Plan* policy AG-a); therefore, the minimum parcel sizes established by *General Plan* policy AG-d do not apply to the proposed project. Although the proposed project would alter current conditions on the site, the proposed project would be compatible in density with the surrounding existing uses. The proposed rezone would not change the rural character of the area or the site as originally intended in the Shasta County *General Plan*.

Surrounding Protected Resource Land

The LESA Model also takes into consideration lands with long-term use restrictions that are compatible with or supportive of agricultural uses of land. Examples include Williamson Act contracted lands; Farmland Security Zones, publicly owned lands maintained as park, forest or watershed resources; and lands with agricultural, wildlife habitat, open space, or other natural resource easements that restrict the conversion of such land to urban or industrial uses. According to the DOC, there are no Williamson Act contracted lands or Farmland Security Zones within the ZOI. In addition, according to the Shasta County *General Plan*, there are no publicly-owned lands or natural resource easements that apply to any property within the ZOI.

LESA Analysis Conclusion

The LESA analysis for the subject site resulted in a Land Evaluation (LE) rating of 23.66 and a Site Assessment (SA) rating of 18, for a total score of 41.66. Loss of agricultural lands with a score between 40 and 59 is considered significant only if both the LE and SA ratings are each 20 or more. Therefore, the LESA model indicates that the project would have a *less than significant* impact on Prime Farmland, Unique Farmland, and Farmland of Statewide Importance.

Mitigation Measures: No mitigation measures are required.

Level of Significance After Mitigation: No mitigation measures are required. Impacts would be *less than significant.*

IMPACT 5.2-2	***Involve other changes in the existing environment that, due to their location or nature, could result in conversion of farmland to non-agricultural use.***

Significance: Potentially Significant Impact.

Impact Analysis: As discussed above, there are approximately 725.7 acres of agricultural lands within the Zone of Influence of the subject development. Residential development in this rural area could result in conflicts with surrounding agricultural lands due to the noises, open range grazing, odors, dust, chemicals, smoke, and hours of operation that may accompany agricultural operations.

Increased residential development also could adversely affect grazing operations through harassment and destruction by trespassers and dogs; increased traffic and traffic hazards (incompatible uses); increased potential for wildfires; and greater demand for water supplies. As a result, agricultural operations may be forced to cease or curtail operations to the point at which the viability of the agricultural operation is threatened. In addition, increased residential development in the area could place economic pressure on farmers or ranchers to subdivide or convert their land to non-agricultural uses due to the potential for financial gain.

There are also other less visible but significant conflicts affecting agricultural lands due to the impact of rural residential development on land prices. As land is developed or merely subdivided for residential purposes, land prices generally increase, which could make it more difficult for ranchers to buy or lease land for grazing operations. People wanting to enter the grazing industry often find it is not financially possible.

In furtherance of the County's policy to protect, promote and encourage agricultural operations, Chapter 18.06 (Agriculture and Forestry Notification) of the *Shasta County Code* requires notification be given to property purchasers or lessees of land adjacent to agricultural use areas. The notification informs them that they may be subject to impacts from the conduct of existing and future agricultural-related activities, which may be considered objectionable.

In addition, §18.06.030 of the *Shasta County Code* requires all discretionary development approvals, including but not limited to subdivisions, be conditioned to require the owner(s) of the property to comply with disclosure provisions upon any subsequent sale of the affected property. **MM 5.2-1** includes the specific disclosure requirement.

While this mitigation measure does not eliminate conflicts resulting from nearby agricultural uses, it is intended that purchasers and users will better understand the impact of living near agricultural operations and be prepared to accept such conditions as the natural result of living in or near rural areas. This reduces the potential for land-use conflicts in the future. Therefore, this impact would be considered *less than significant*.

Mitigation Measures:

MM 5.2-1: Upon subsequent sale or lease of all or part of the affected property, including the sale of individual lots following subdivision of the property, a real estate transfer disclosure statement shall be provided to the purchaser or lessee and shall include the following language:

It is the policy of the County of Shasta to protect, promote and encourage properly conducted agricultural operations within the County. You are hereby notified that the property you are purchasing is located near agricultural lands or operations, or is included within or adjacent to an area where agricultural operations are or may be permitted. You may be subject to inconveniences or discomfort arising from such operations.

Such discomfort or inconveniences may include noise, odors, fumes, dust, smoke, insects, operation of machinery (including aircraft), during any 24-hour period. Also, discomfort or inconvenience may result from the storage or disposal of manure; the application, by spraying or otherwise, of fertilizers, soil amendments, herbicides, and pesticides; and grazing of livestock on open range. One or more of the inconveniences described may occur as a result of any agricultural operation that is in conformance with existing laws and regulations and accepted customs and standards. If you live near an agricultural area, you should be prepared to accept such inconveniences or discomfort as a normal and necessary aspect of living in a county with a strong rural character and an active agricultural sector.

Level of Significance After Mitigation: Impacts would be *less than significant* with mitigation incorporated.

5.2.5 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

IMPACT 5.2-3	***Development of the proposed project, as well as buildout in accordance with the County's General Plan, may result in the cumulative loss of farmland.***

Significance: Potentially Significant Impact.

Cumulative Setting: The cumulative setting for agricultural resources includes the unincorporated area of Shasta County.

Impact Analysis: Although the proposed project would not significantly impact Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, Grazing Land is considered Farmland of Local Importance in Shasta County because it is important to the local economy, as determined by the County Board of Supervisors and a local advisory committee. The proposed project would result in the loss of approximately 533.27 acres of Grazing Land as mapped by the FMMP, which represents approximately 0.13 percent of designated Grazing Land in Shasta County.

According to the California Department of Conservation, Division of Land Resource Protection (2014), Shasta County contains approximately 433,346 acres of agricultural land. As shown in Table 5.2-5, SHASTA COUNTY AGRICULTURAL LAND, the County experienced an average annual decrease of all agricultural land of approximately 528 acres per year from 1984 through 2014. The average annual decrease in Grazing Land was approximately 144 acres per year.

According to the 2016 Shasta County Crop and Livestock Report, prepared by the County's Agricultural Commissioner, the value of agricultural products produced in the County in 2016 was $81,133,000, which is relatively consistent with values over the past few years (refer to Table 5.2-6, SHASTA COUNTY AGRICULTURAL PRODUCTION VALUES).

Table 5.2-5
SHASTA COUNTY AGRICULTURAL LAND [1]

Category	Acres 1984	Acres 2014 [2]	1984 – 2014 Net Acreage Change	Average Annual Acreage Change
Prime Farmland	19,534	10,509	-9,025	-301
Farmland of Statewide Importance	4,369	2,741	-1,628	-54
Unique Farmland	251	515	264	9
Farmland of Local Importance	6,541	5,413	-1,128	-38
Important Farmland Subtotal	30,695	19,178	-11,517	-384
Grazing Land	**418,481**	**414,168**	**-4,313**	**-144**
Agricultural Land Total	449,176	433,346	-15,830	-528
Urban and Built-Up Land	24,333	37,167	12,834	428
Other Land	542,219	544,841	2,622	87
Water Area	5,484	5,877	393	13

[1] 41 percent of Shasta County inventoried.
[2] Conversion of geospatial data to North America Datum 1983 (NAD 83) led to minor changes in total FMMP acreage beginning in 2014.

Table 5.2-6
SHASTA COUNTY AGRICULTURAL PRODUCTION VALUES

Category	2016	2015	2014	2013
Livestock [1]	$20,976,000	$27,884,000	$28,965,000	$23,348,000
Apiary	$8,777,000	$7,900,000	$7,383,000	$6,646,000
Field Crops	$33,023,000	$33,034,000	$38,890,000	$38,463,000
Nursery Stock	$14,347,000	$6,579,000	$5,182,000	$6,369,000
Fruit and Nut Crops	$4,010,000	$5,518,000	$7,217,000	$6,402,000
Totals	$81,133,000	$80,915,000	$87,637,000	$81,228,000

[1] Production values for stocker/pasture cattle decreased from $2,072,000 in 2015 to $1,298,000 in 2016, a decrease of approximately 37 percent.

Source: 2016 Shasta County Crop and Livestock Report.

As shown in Table 5.2-7, SHASTA COUNTY PRODUCTION VALUE FOR PASTURE, the production value for rangeland was greater in 2016 than in 2013. This is due to an increase in value of rangeland.

Table 5.2-7
SHASTA COUNTY PRODUCTION VALUE FOR PASTURE

Category	2016	2015	2014	2013
Irrigated	$3,920,000	$3,920,000	$3,920,000	$4,125,000
Improved	$1,400,000	$1,400,000	$1,400,000	$1,400,000
Rangeland	$2,930,000	$2,637,000	$2,925,000	$2,275,000
Totals	$8,250,000	$7,957,000	$8,245,000	$7,800,000

Source: Shasta County Crop and Livestock Reports, 2013, 2014, 2015, and 2016

According to the Tierra Robles Wildland Fuel/Vegetation Management Plan (Wildland Resource Managers, 2015), the easterly area of the project site that is designated as open space will remain available for livestock grazing to reduce fuel height of annual grasses and create natural trail fuel breaks. Actual grazing dates and herd numbers will be determined annually based on annual rainfall amounts, but the grazing period should be from approximately January 15 to May 30. Grazing activities will be managed by the Tierra Robles Community Service District.

Mitigation for the loss of agricultural lands is challenging. Some jurisdictions in California have adopted ordinances requiring preservation of agricultural lands elsewhere in the area. Such preservation can be accomplished through purchase of a conservation easement protecting existing agricultural lands or through payment of in-lieu fees that would ultimately fund purchase of a conservation (agricultural) easement. Shasta County does not currently have an in-lieu fee mechanism in place to provide for the acquisition of agricultural easements. However, the County can require the applicant to purchase a conservation easement to protect offsite agricultural lands. Establishment of such an easement would provide mitigation for the cumulative loss of Grazing Land.

The lands to be protected under the conservation easement should provide an equivalent or greater grazing capacity than the development site. Grazing capacity is defined in terms of "Animal-Unit Months (AUM)," which is based on the amount of forage production needed to support one cow and calf for a month (26 pounds of dry matter per day). As shown in Table 5.2-8, GRAZING LAND CONVERSION AND MITIGATION REQUIREMENT, the project site provides approximately 1,354.1 AUMs. A total of 309.9 AUMs would be preserved in areas designated as Open Space.

Table 5.2-8
GRAZING LAND CONVERSION AND MITIGATION REQUIREMENT

Map Unit Symbol	Soil Name	Total Acres	Acres not Designated as Grazing Land *	AUM (Based on Soil Type)	AUM Total	Acres Preserved in Open Space	AUM in Preserved Open Space	Mitigation Needed (AUMs)
Ad	Anderson gravelly sandy loam	33.32		2	66.6	33.3	66.6	0
Ae	Anderson gravelly sandy loam, moderately deep	27.65		2	55.3			55.3
CfA	Churn gravelly loam, deep, 0-3% slopes	6.7	6.7	3	0			0
CgB	Clough gravelly loam, 3-8% slopes	60.41	16.88	1.5	65.3			65.3
IeD	Inks-Pentz complex, 5-30% slopes	105.02		2	210	56.1	112.1	97.9
IeE	Inks-Pentz complex, 30-50% slopes	50.93		2	101.9	50.9	101.9	0
NeC	Newtown gravelly loam, 8-15% slopes	176.57	2.23	2	348.7			348.7
RcA	Red Bluff gravelly loam, moderately deep, 0-3% slopes	119.8	12.89	2	213.8	8.2	16.5	197.3
RcB	Red Bluff gravelly loam, moderately deep, 3-8% slopes	135.45		2	270.9	4.7	9.4	261.5
RdA	Redding gravelly loam, 0-5% slopes, moist, MLRA 17	8.23		2	16.5			16.5
ReA	Redding-Red Bluff gravelly loams, 0-3% slopes	1.12		1.5	1.7			1.7
StD	Supan gravelly loam, 15-30% slopes	1.37		2.5	3.4	1.4	3.4	0
Total:		**726.57**	**38.7**		**1,354.1**	**154.6**	**309.9**	**1,044.2**

* As mapped by the California Farmland Mapping and Monitoring Program (FMMP)
Sources: Natural Resources Conservation Service. 2017; USDA, Soil Conservation Service and Forest Service. 1974.

MM 5.2-2 requires establishment of a conservation easement to offset the loss of Grazing Land as shown in Table 5.2-8. It should be noted that **MM 5.4-1a**, in Section 5.4, BIOLOGICAL RESOURCES, requires establishment of an offsite conservation easement to offset the loss of oak woodlands. Because the project site supports both grazing and woodland, it would be appropriate for Shasta County to allow establishment of a single conservation easement providing for grazing within an oak woodland setting; this would eliminate the need for two single-purpose conservation easements.

Mitigation Measures:

MM 5.2-2: The loss of agricultural (grazing) lands on the subject property shall be offset through establishment of a conservation easement providing for agricultural use of offsite lands in perpetuity. Shasta County or a qualified land conservation organization shall facilitate the establishment of the conservation easement. The conservation easement shall be held by a conservation-oriented third party acceptable to Shasta County. The offsite agricultural lands shall be located in Shasta County and shall provide a grazing capacity of at least 1,044 Animal-Unit Months (AUMs). An Operation and Management Plan identifying the land to be protected, acceptable land uses, management practices, and a reporting program shall be provided for Shasta County review and acceptance prior to establishment of the easement. All costs associated with establishing the conservation easement shall be the responsibility of the project applicant.

Level of Significance After Mitigation: The County's *General Plan* acknowledges that agricultural land uses are a major component of the County's resource land base and are also a major element in defining the quality of life available to the residents of Shasta County. Were agriculture to lose its land-based prominence in the County, the rural character and country living so valued by its residents and so important to its economy would likely decline.

The County's *General Plan* recognizes that agricultural land is a non-renewable resource. Although **MM 5.2-1** helps maintain the viability of agricultural lands near the development site, and **MM 5.2-2** requires a permanent conservation easement be established to provide for agricultural use of offsite lands, the conversion of Grazing Land is an irreversible loss and remains cumulatively considerable and, therefore, a *significant and unavoidable* impact.