INITIAL STUDY
FOR THE
SUSSEX ESTATES SUBDIVISION PROJECT

MAJOR SUBDIVISION APPLICATION NO. MAS15-001

COUNTY OF MERCED
DEPARTMENT OF COMMUNITY AND ECONOMIC DEVELOPMENT
2222 “M” Street
Merced, CA 95340

Prepared with the Technical Assistance of:

environmental
PLANNING PARTNERS, INC.
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Sloughhouse, CA 95683

August 2016
NOTICE OF INTENT
TO ADOPT A MITIGATED NEGATIVE DECLARATION
FOR THE SUSSEX ESTATES SUBDIVISION PROJECT

To: Interested Persons

From: County of Merced
Department of Community and Economic Development
2222 “M” Street
Merced, CA 95340
Phone: (209) 385-7654
pnavares@co.merced.ca.us

Contact: Pam Navares, Planner I

Subject: Notice of Intent to Adopt a Mitigated Negative Declaration

Merced County is the Lead Agency pursuant to the California Environmental Quality Act (CEQA) for the proposed Sussex Estates subdivision project. Merced County intends to adopt a Mitigated Negative Declaration for the proposed project.

The project site is located to the west of Buhach Road, on a parcel that lies adjacent to existing homes on Cardiff Lane to the south, an existing home and undeveloped lots on Noah Drive to the north, and an existing home on Essex Drive to the west, in the Atwater area of unincorporated Merced County as described in the attached Initial Study/Mitigated Negative Declaration (IS/MND). Merced County is considering Major Subdivision Application No. MAS15-001. Approval of the application would subdivide an existing parcel of 7.71 acres into six residential lots of approximately one acre each. Five of the resulting lots would be accessed from a newly created residential cul-de-sac that would extend Sussex Road to the north, then turn to the east; one of the lots would have access directly to Essex Drive. The project would be completed in a single phase.

The proposed IS/MND is available for public review from 8:30 a.m. to 4:30 p.m., Monday through Friday, at the offices of the Merced County Community and Economic Development Department (address listed above) and online at the Merced County website at:

www.co.merced.ca.us/index.aspx?nid=414

The public comment period on the IS/MND closes on October 7, 2016. Comments may be submitted to Pam Navares, Planner I at the above address. Emailed comments should be submitted to “pnavares@co.merced.ca.us” and should include the phrase “Sussex Estates Subdivision Project IS/MND” in the subject line.
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INITIAL STUDY AND ENVIRONMENTAL EVALUATION

Project Title: Sussex Estates
Major Subdivision Application MAS15-001

Project Location: Sussex Drive/Cardiff Lane
Atwater, CA 95301

Lead Agency Name and Address: Merced County
Community and Economic Development Department
2222 “M” Street
Merced, CA 95340

Contact Person and Phone Number: Pam Navares, Planner I
Phone: (209) 385-7654

General Plan Designation: Agricultural Residential (AR) within the McSwain Rural Residential Center

Zoning: Agricultural-Residential Zone (A-R)

1. INTRODUCTION

Implementation of the Sussex Estates project would subdivide an existing parcel of 7.71 acres into six residential lots of approximately one acre each. Five of the resulting lots would be accessed from a newly created residential cul-de-sac that would extend Sussex Road to the north, then turn to the east. One of the lots would have direct access to Essex Drive.

2. PROJECT DESCRIPTION

PROJECT LOCATION

The proposed site of the Sussex Estates subdivision is located to the west of Buhach Road, on a parcel that lies adjacent to existing homes on Cardiff Lane to the south, behind an existing home and undeveloped lots on Noah Drive to the north, and an existing home on Essex Drive to the west, in the Atwater area of unincorporated Merced County (see Figures 1 and 2). The proposed subdivision would be developed on a single parcel totaling 7.71 acres identified as Merced County Assessors Parcel Number (APN) 059-020-062. The project site is located in Section 19, Township 7 South, Range 31 East, Mount Diablo Base and Meridian; 37°18.55’ N, 120°34.49’ W.
Sussex Estates Subdivision Project

Figure 1
Regional Location

SOURCE: Planning Partners, 2016
Sussex Estates
Atwater Quad Sheet
Section 19, Township 7 South Range 31 East
37° 18.922 N
120° 34.839 W

Legend
Sussex Estates - 7.7 acres

Figure 2
Project Vicinity

SOURCE: Google Earth Pro 2016; Planning Partners 2016
**Existing Site Conditions**

The project site consists of fallow land that has been disked for weed control and fire protection. There are no developed uses on the project site.

*Physical Environment*

The project site is currently fallow and the topography is flat. The majority of the site abuts other residential parcels. Sussex Drive currently terminates at the project site’s southern boundary. Essex Drive is adjacent to the parcel at its northwest corner. Essex Drive extends to the east along a portion of the site’s northern border, then turns north, changing names at that point to Noah Drive. The project area is level at an elevation of 141 - 143 feet above sea level (MSL) (Google Earth Pro 2016).

The land on the subject property has been disked and does not support historical flora and fauna. The proposed project site is located in a part of the southern San Joaquin Valley that originally contained components of two natural communities prior to development: Northern Claypan Vernal Pool and Northern Hardpan Vernal Pool. Neither of these vegetation communities is currently present on the project site. There is no native vegetation on the project site, and the site does not support extensive wild plant diversity or cover. There are no native trees on the project site. No streams, marshes or vernal pools occur on the property.

*Site Access*

Existing access to the project site is provided by Sussex Drive on the south, and by Essex Drive/Noah Drive to the north. Regional access is provided by Buhach Road, Highway 140, and State Route 99.

**Surrounding Land Uses**

The project site is located in an area transitioning from agricultural and rural residential land uses on the east to more developed residential land uses to the west, south, and north. Existing land uses and facilities immediately surrounding the project site include single-family residences to the south and west; a single-family residence, a stormwater detention basin, and undeveloped residential parcels to the north; and rural residential uses and an almond orchard to east. See Table 1 for detail on the surrounding land uses and corresponding General Plan and zoning designations.
Table 1  Surrounding Land Uses at the Sussex Estates Subdivision Project Site

<table>
<thead>
<tr>
<th>Location</th>
<th>Land Use</th>
<th>General Plan</th>
<th>Zoning</th>
</tr>
</thead>
<tbody>
<tr>
<td>ON SITE</td>
<td>Undeveloped Parcel</td>
<td>Agricultural Residential (AR) within the McSwain Rural Residential Center</td>
<td>Agricultural-Residential (A-R)</td>
</tr>
<tr>
<td>NORTH</td>
<td>Single Family Residence; Stormwater Detention Basin; Undeveloped Parcels</td>
<td>Agricultural Residential (AR) within the McSwain Rural Residential Center</td>
<td>Agricultural-Residential (A-R)</td>
</tr>
<tr>
<td>EAST</td>
<td>Undeveloped Parcel; Single-Family Residence, Almond Orchard</td>
<td>Agricultural Residential (AR) within the McSwain Rural Residential Center</td>
<td>Agricultural-Residential (A-R)</td>
</tr>
<tr>
<td>SOUTH</td>
<td>Single Family Residences</td>
<td>Agricultural Residential (AR) within the McSwain Rural Residential Center</td>
<td>Agricultural-Residential (A-R)</td>
</tr>
<tr>
<td>WEST</td>
<td>Single Family Residences</td>
<td>Agricultural Residential (AR) within the McSwain Rural Residential Center</td>
<td>Agricultural-Residential (A-R)</td>
</tr>
</tbody>
</table>

Source: Merced County 2016; Planning Partners Site Visit, January 27, 2016.

**DESCRIPTION OF THE PROPOSED ACTION**

The project applicant has submitted Major Subdivision Application No. MAS15-001 to Merced County for approval to subdivide an existing parcel of 7.71 acres into six residential lots of approximately one acre each, and to construct a cul-de-sac to provide access from Sussex Drive to five of the residential lots. (See Figure 3 for the Tentative Subdivision Map.) Access to the remaining lot would be directly from Essex Drive.

Approval of the proposed project would result in the development of six individual lots and a cul-de-sac. Each residential lot would include a building pad, a domestic well, and a septic tank with an accompanying leachfield. A public utility easement would allow for underground utility lines. A storm drainage system would direct stormwater to an existing drainage basin on the parcel directly to the north of the project site.

Electricity and gas service would be provided by PG&E.

**Phasing**

The proposed project would be constructed in a single phase.

**3. REQUIRED APPROVALS, OTHER PROCESSES, AND CONSULTATIONS**

A listing and brief description of the regulatory permits and approvals required to implement the proposed project are provided below. This environmental document is intended to address the environmental impacts associated with all of the following decision actions and approvals.
Merced County

The County has the following permitting authority related to the proposed Cooperative project:

- **Preparation and Approval of an Initial Study / Mitigated Negative Declaration** - Merced County will act as the lead agency as defined by the California Environmental Quality Act (CEQA), and will have authority to determine if the IS/MND is adequate under CEQA.

- **Approval of Major Subdivision Application No. MAS15-001** - Merced County will consider the proposed Sussex Estates project under a “Major Subdivision Application.” Major Subdivisions are discretionary permits for the division of any land into five or more parcels.

- **Building Permit** - Merced County will require a building permit for each of the proposed single-family residences. A soils report completed by a licensed geotechnical engineer must be submitted with the building permit applications.

- **On-Site Septic Systems** – The Merced County DEH will review site plans and issue permits for the proposed on-site waste disposal systems.

San Joaquin Valley Air Pollution Control District

- **SJVAPCD Rules** - The construction of the proposed project may be subject to SJVAPCD Rules and Regulations, including Regulation VIII (Fugitive PM₁₀ Prohibitions), Rule 8021 (Construction, Demolition, Excavation, Extraction, and Other Earthmoving Activities), Rule 4601 (Architectural Coatings), and Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations).

State Water Resources Control Board

- **General Construction Activity** – The State Water Resources Control Board (SWRCB) has adopted a General Construction Activity Storm Water Permit for stormwater discharges associated with any construction activity (including clearing, grading, excavation, reconstruction, and dredge and fill activities) that results in the disturbance of at least one acre of total land area, or projects that disturb less than one acre but are part of a large common plan of development that disturbs one or more acres. All dischargers are required to obtain coverage under the Construction General Permit Order 2009-0009-DWQ. This General Permit has developed specific Best Management Practices (BMP) and requires a Stormwater Pollution Prevention Plan (SWPPP). Following submittal of a Notice of Intent package and development of a SWPPP in accordance with the Construction General Permit, the applicant will receive a Waste Discharge Identification Number from the SWRCB. Because the proposed project would disturb more than one acre, the General Construction Activity Permit would be required.

- **Report of Waste Discharge** – The SWRCB has implemented a Water Control Policy for the Siting, Design, Operation, and Maintenance of Onsite Wastewater Treatment Systems (OWTS). The siting and installation of the six new OWTS would be subject to the Minimum OWTS Design and Construction Standards as outlined in the policy. In accordance with Section 3.0 of that policy, the Merced County DEH will review site plans for the proposed disposal systems to ensure compliance.

Federal Government

No permitting from federal agencies would be required.
4. **ENVIRONMENTAL ANALYSIS**

**PURPOSE AND LEGAL BASIS FOR THE INITIAL STUDY**

As a public disclosure document, this Initial Study provides local decision makers and the public with information regarding the environmental impacts associated with the proposed project. According to Section 15063 of the CEQA Guidelines, the purpose of an Initial Study is to:

1. Provide the Lead Agency with information to use as the basis for deciding whether to prepare an Environmental Impact Report (EIR) or a Negative Declaration.
2. Enable an applicant or Lead Agency to modify a project, mitigating adverse impacts before an EIR is prepared, thereby enabling the project to qualify for a Negative Declaration.
3. Assist in the preparation of an EIR, if one is required by:
   a. Focusing the EIR on the effects determined to be significant,
   b. Identifying the effects determined not to be significant,
   c. Explaining the reasons for determining that potentially significant effects would not be significant, and
   d. Identifying whether a program EIR, tiering, or another appropriate process can be used for analysis of the project’s environmental effects.
4. Facilitate environmental assessment early in the design of a project.
5. Provide documentation of the factual basis for the finding in a Negative Declaration that a project will not have a significant effect on the environment.
6. Eliminate unnecessary EIRs.
7. Determine whether a previously prepared EIR could be used with the project.

**INITIAL ENVIRONMENTAL CHECKLIST**

Following each major category in the Initial Study, there are four determinations by which to judge the project’s impact. These categories and their meanings are shown below:

“**No Impact**” means that it is anticipated that the project will not affect the physical environment on or around the project site. It therefore does not warrant mitigation measures.

“**Less-than-Significant Impact**” means the project is anticipated to affect the physical environment on and around the project site, however to a less-than-significant degree, and therefore not warranting mitigation measures.

“**Less-than-Significant Impact with Mitigation**” applies to impacts where the incorporation of mitigation measures into a project has reduced an effect from “Potentially Significant” to “Less Than Significant”. In such cases, and with such projects, mitigation measures will be provided including a brief explanation of how they reduce the effect to a less-than-significant level.

“**Potentially Significant Impact**” means there is substantial evidence that an effect is significant, and no mitigation is possible.
APPLICATION OF THE 2030 MERCED COUNTY GENERAL PLAN AND ZONING CODE

The 2030 Merced County General Plan guides economic development, land use, agriculture, transportation and circulation, public facilities and services, natural resource, recreation and cultural resources, health and safety, air quality, water, and other decisions. The General Plan is intended to provide for orderly growth, and to convey the community’s values and expectations for the future. An EIR for the 2030 General Plan was certified and the General Plan adopted by Merced County in December 2013. A Draft Background Report of existing environmental conditions within the County was finalized in December 2013 with certification of the General Plan EIR. The Background Report functions as the existing setting section for the General Plan EIR. The EIR, including the Background Report, is hereby incorporated by reference pursuant to State CEQA Guidelines Section 15150 as though fully set forth herein. A copy of the General Plan, General Plan EIR, and Background Report can be obtained at the Department of Community and Economic Development, 2222 “M” Street, Merced, CA 95340. It is also available for download from the Merced County General Plan website at:

http://www.co.merced.ca.us/index.aspx?NID=100

TIERING FROM THE 2030 MERCED COUNTY GENERAL PLAN EIR

“Tiering” refers to the relationship between a program-level EIR (where long-range programmatic cumulative impacts are the focus of the environmental analysis) and subsequent environmental analyses such as this subject document, which focus primarily on issues unique to a smaller project within the larger program or plan pursuant to Section 15168 of the State CEQA Guidelines. Tiering focuses the environmental review on the project-specific significant effects that were not examined in the prior environmental review or are susceptible to substantial reduction or avoidance by specific revisions in the project, by the imposition of conditions, or by other means.

In the case of the Sussex Estates project, the environmental analysis for this Initial Study is tiered from the EIR for the 2030 Merced County General Plan. The Merced County Board of Supervisors certified the EIR and adopted the 2030 General Plan on December 10, 2013 (SCH #2011041067). The 2030 General Plan regulates the location, use, design, construction, and operation of developed land uses within the County; all existing and proposed land uses within the County are required to comply with the goals and policies of the 2030 General Plan, including the Sussex Estates project. To reflect this, the requirements of the 2030 General Plan and conclusions of the environmental analysis contained in the 2030 General Plan EIR were incorporated in this Initial Study.

The 2030 General Plan EIR comprehensively evaluated the potential environmental effects of implementing the 2030 General Plan, and from the approval of new or modified land uses. The 2030 General Plan EIR identified a number of mitigation measures that would reduce the magnitude of these potential effects. Those measures were subsequently adopted by the County in its adoption of the 2030 General Plan, and a Mitigation Monitoring and Reporting Program was adopted. Because the Sussex Estates project is consistent with, and implements, the 2030 General Plan, those previously adopted mitigation measures and conditions apply to the Sussex Estates project, and would continue to apply after approval of the currently requested actions. Therefore, the Sussex
Estates project is related to the 2030 General Plan EIR and, pursuant to Section 15152(a) of the CEQA Guidelines, tiering of environmental documents is appropriate.

The 2030 General Plan EIR can be reviewed at the location set forth above.

**Incorporation of the 2030 Merced County General Plan EIR By Reference**

Based on the reasoning set forth above, this environmental evaluation implements, and is consistent with, mitigation measures and study protocols adopted by Merced County in its certification of the 2030 General Plan EIR and its approval of the 2030 Merced County General Plan. Because of its importance relative to understanding the environmental analysis that has occurred to date with respect to the potential environmental impacts associated with the construction and operation of developed land uses in Merced County, the 2030 General Plan EIR is hereby incorporated by reference pursuant to CEQA Guidelines Section 15150 as though fully set forth herein.

**Summary of the Impacts Analysis of the 2030 Merced County General Plan EIR**

The 2030 Merced County General Plan EIR presents an assessment of the environmental impacts associated with the implementation of the General Plan and land uses developed consistent with the Plan in Merced County. The EIR evaluated the environmental impacts of the Plan on a comprehensive basis, including discussion of the full range of impacts that would occur because of future development. The EIR identified potential significant environmental impacts arising from implementation of the General Plan and land uses developed consistent with the Plan for the following issue areas:

**Aesthetics**: light and glare; and cumulative impacts to aesthetics.

**Agriculture and Forestry**: conversion of Important Farmland to non-agriculture use; conflict with zoning for agricultural use or provisions of the Williamson Act; land use changes that would result in conversion of farmland to non-agricultural uses from urban development; land use changes that would result in conversion of farmland to non-agricultural uses due to the Minor Subdivision of Rural Parcels or due to inadequate parcel sizes; and cumulative impacts to agricultural resources.

**Air Quality**: operational emissions of PM$_{10}$ and PM$_{2.5}$ associated with General Plan buildout; health risks associated with locating sensitive receptors near high volume roads; cumulative impacts to air quality.

**Biological Resources**: adverse effects to special status species and sensitive habitats due to conversion of farmlands and open space; adverse effect on wetlands, riparian habitat, and other sensitive natural communities; loss or modification of federally protected wetlands; interference with animal movement/migration patterns; cumulative impacts to biological resources.

**Cultural Resources**: adverse changes to the significance of a historical resource; adverse change in the significance of archaeological resources, paleontological resources, unique geological features, or disturbances to human remains; degradation or loss of traditional cultural properties where Native American customs and traditions are practiced; cumulative impacts to cultural resources.

**Geology**: use of septic tanks or alternative wastewater disposal systems in unfit soils that may result in increased nutrients or other pollutants reaching and damaging groundwater resources.
Global Climate Change: increase in GHG emissions associated with 2030 General Plan buildout; increase in GHG emissions that would conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions; cumulative impacts to global climate change.

Hazards and Hazardous Materials: projects located on a site that is included on a list of hazardous materials sites resulting in a significant hazard to the public or to the environment; projects located within an airport land use plan or within the vicinity of a public or private airport resulting in a safety hazard for people working or residing in the area.

Hydrology and Water Quality: depletion of groundwater supplies or interference with groundwater recharge; modification of surface water drainage patterns resulting in detrimental flooding or substantial erosion or siltation; cumulative impacts to hydrology and water quality.

Land Use Compatibility: physically divide an established community.

Mineral Resources: loss of mineral resources; and cumulative loss of mineral resources.

Noise: permanent increase in ambient noise levels; traffic noise level increases at existing sensitive uses caused by development consistent with the 2030 General Plan; expose people to, or generate excessive groundborne vibration or groundborne noise levels; cumulative impacts to noise.

Population and Housing: induce population growth, directly or indirectly.

Transportation and Circulation: conflict with an applicable plan, ordinance or policy establishing measures of effectiveness of county roads, State Highways, or streets within incorporated cities in Merced County; increase hazards due to a design feature or incompatible uses; inadequate emergency access; conflict with policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or decrease the performance or safety of those facilities; cumulative impacts to transportation and circulation.

Utilities and Service Systems: sufficient water supply resources available to accommodate continued development through buildout of the 2030 General Plan; cumulative impacts to utilities and service systems.

Other CEQA Topics: cumulative impacts to growth inducement and irreversible environmental changes.
ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, including five impacts that are “Less than Significant with Mitigation” as indicated by the checklist discussion on the following pages.

- Aesthetics
- Agricultural and Forestry Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology / Soils
- Greenhouse Gas Emissions
- Hazards & Hazardous Materials
- Hydrology / Water Quality
- Land Use / Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation / Traffic
- Utilities / Service Systems
- Mandatory Findings of Significance

ENVIRONMENTAL SETTING AND EVALUATION OF POTENTIAL IMPACTS

Responses to the following questions and related discussion indicate whether or not the proposed project would have or would potentially have a significant adverse impact on the environment, either individually or cumulatively with other projects. All phases of project planning, implementation, and operation are considered. Mandatory Findings of Significance are located in Section XVIII below.

The California Supreme Court has clarified CEQA practice to limit the evaluation of environmental effects only to the impact of a proposed project on the environment, and not the effects of the environment on a project. Thus, adverse effects from existing environmental hazards on a proposed new use would not be assessed for CEQA purposes, and no environmental conclusions would be reached. No mitigation could be required. The exception to this general rule would be if the construction or operation of the proposed project modified a condition on the project site or affecting the project site in a way that caused new or increased environmental effects offsite, or if implementation of the project exacerbated an existing condition for offsite uses.

This revision of CEQA practice affects the following issue areas in this Initial Study:

**VI. Geology and Soils**
- Question a.i - Earthquake Faults
- Question a.ii - Seismic Ground Shaking
- Question a.iii - Ground Failure/Liquefaction
- Question a.iv - Landslides
- Question d - Expansive Soils

**VIII. Hazards and Hazardous Materials**
- Question e - Public Airport Hazards
- Question f - Private Airport Hazard
- Question h - Wildland Fire Hazard

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IX. Hydrology and Water Quality

Question g - Housing in Floodplain
Question i - Exposure to flood risk
Question j - Inundation by seiche or tsunami

XII. Noise

Question e - Public Airport Noise
Question f - Private Airport Noise

However, for many environmental hazards, local agencies such as Merced County impose requirements to avoid or reduce hazards. Similarly, local agencies have the ability to impose conditions of project approval to avoid or reduce hazardous conditions.

The following analysis is based upon Appendix G of the State CEQA Guidelines as used by Merced County. Because Appendix G has not been modified in response to the ruling of the California Supreme Court, the evaluation below follows the order of the questions posed by Appendix G. For traditionally evaluated impacts that are not now appropriate CEQA topics, the environmental conclusion has been replaced with the phrase “CEQA Not Applicable.” A discussion of the potentially hazardous condition follows, including recommended conditions of approval where appropriate.
**AESTHETICS**

Would the project:

<table>
<thead>
<tr>
<th></th>
<th>Potentially Significant Impact</th>
<th>Less than Significant with Mitigation</th>
<th>Less than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Have a substantial adverse effect on a scenic vista?</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) Substantially degrade the existing visual character or quality of the site and its surroundings?</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**ENVIRONMENTAL SETTING**

The proposed project is located in a residential area that transitions to agricultural uses on the east. The project site consists of fallow land that has been disked for weed control and fire protection. The visual character of the project vicinity is defined by the neighboring residential community, with nearby areas to the east transitioning to agricultural uses, including an almond orchard on the east side of Buhach Road.

Foreground land uses visible from the site include residences, and agricultural uses to the east. Long-range views are limited by the residences immediately surrounding the site, with the exception of one currently undeveloped parcel adjacent to the northeast corner of the project site. Viewers into the project site include residents in the neighboring community, and travelers on Buhach Road to the east of the project site.

Neither the project site, nor the views to or from the site, have been designated as an important scenic resource by Merced County, or any other public agency. No state or locally designated scenic highway has been identified in the vicinity of the project site (Caltrans 2011).

**Question (a) Scenic Vista: Less-than-significant Impact.** The vicinity of the project site is not designated as a scenic vista by the State of California, Merced County, or any other public agency. The project site is surrounded on three sides by an established residential community. Short- to mid-range views into the project site include residents in the surrounding neighborhood. Because a single parcel situated at the northeast corner of the project site is currently undeveloped, a mid-range view of an almond orchard extends to the east from that corner of the site. Because implementation of the proposed project would result in the subdivision of a parcel into six individual lots that would ultimately feature single-family residences, and those residences would be similar in size and stature to other residences in the surrounding area, the project would not substantially interfere with any existing scenic view. A less-than-significant impact would occur, and no mitigation would be necessary.
Question (b) Scenic Highway: Less-than-significant Impact. There are no officially designated State Scenic Highways in the vicinity of the project site (Caltrans 2011). Neither the project site, nor views to or from the project site, have been designated an important scenic resource by the State of California, Merced County, or any other public agency. Because no scenic highway is located within the site’s viewshed and there would be no damage to scenic resources, there would be no impact with implementation of the proposed project.

Question (c) Visual Character: Less-than-significant Impact. The existing visual character of the area surrounding the project site is defined by a mix of residential and agricultural land uses. Implementation of the proposed project would result in the subdivision of a parcel, and ultimately the development of six single-family residences, the visual effects of which would be reasonable and expected in the context of the surrounding community and the residential land use designation of the site and adjacent area. The scale of the proposed lots and accompanying residences would be similar in size to other residences in the project vicinity. Implementation of the proposed project would result in a less-than-significant impact to visual character, and no mitigation would be necessary.

Question (d) Light and Glare: Less-than-significant Impact. As an undeveloped lot, the project site features no existing day or nighttime lighting. Implementation of the proposed project would result in the creation of a cul-de-sac with street lighting. Because there is currently no development on the project site, the proposed street lighting would result in a new or increased source of light and glare that would be visible to motorists on perimeter streets, and to viewers from nearby residences. Outdoor lighting at the new residences would also be a new source of lighting in the project vicinity. However, new street and outdoor lighting would be similar to that currently existing in the neighborhoods surrounding the project site.

Merced County requires that the proposed project comply with lighting standards that ensure that lighting on the site would be focused within the project boundary, and shielded away from adjacent roadways and properties. Compliance with the County’s lighting standards would reduce this potential effect below a level of significance, and no mitigation would be necessary.
II. AGRICULTURE AND FOREST RESOURCES

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?

   Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact
   ------- | ------- | ------- | -------

   ✓

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

   Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact
   ------- | ------- | ------- | -------

   ✓

c) 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))?

   Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact
   ------- | ------- | ------- | -------

   ✓

d) Result in the loss of forest land or conversion of forest land to non-forest use?

   Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact
   ------- | ------- | ------- | -------

   ✓

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

   Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact
   ------- | ------- | ------- | -------

   ✓

ENVIRONMENTAL SETTING

Aerial photographs of the project area indicate that as early as 1998, the project site was used for pasture or rowcrops. Based on aerial photographs, agricultural activities appear to have ceased after 2003, and the site has seasonally been disked for weed control since 2004. (Google Earth Pro 2016). According to the Merced Irrigation District (MID), no operating irrigation facilities are located on the project site or in the vicinity (MID 2015).

The project site is designated as Agricultural Residential (A-R) within the McSwain Rural Residential Center in the 2030 Merced County General Plan. The Merced Code Zoning Code applies a designation of Agricultural-Residential Zone (A-R) to the site. The project site is not currently within the Williamson Act Agricultural Preserve, nor is the land under a Williamson Act contract (Merced 2013a).

The Natural Resources Conservation Service (NRCS) provides agricultural ratings for soils in the project area in the Merced County Soil Survey. See Table 2 below for a listing of soils found on site.
Table 2  Sussex Estates Project On-Site Soil Types

<table>
<thead>
<tr>
<th>Soil Map Unit Symbol and Name</th>
<th>Approx. Acres of Soil Type in Project Site</th>
<th>CA Revised Storie Index Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>(AkA) Atwater loamy sand, imperfectly drained variant, 0 to 3 percent slopes</td>
<td>6.9</td>
<td>Grade 4 - Poor</td>
</tr>
<tr>
<td>(SmA) Snelling sandy loam, imperfectly drained variant, 0 to 1 percent slopes</td>
<td>0.8</td>
<td>Grade 4 - Poor</td>
</tr>
</tbody>
</table>


According to the California Department of Conservation’s (DOC) Important Farmlands Map of Merced County (FMMP), the project site contains is comprised of Prime Farmland if Irrigated (NRCS 2016). As noted, no irrigation facilities exist on the project site or in the vicinity.

The project site is located in an area that includes agricultural and residential land uses; however, there are no forest lands, timberland, or timberland zoned Timberland Production in the vicinity. No commercial forest management practices occur on the project site.

**Question (a) Important Farmland: Less-than-significant Impact.** Implementation of the proposed project would occur in an area designated by the FMMP as Prime Farmland if Irrigated; however, no irrigation facilities exist on the project site or in the vicinity. Because the project site is located in an area that includes agricultural and residential land uses, and the majority of the site is surrounded by single-family residences, the project would be considered an infill project. Nuisance effects at surrounding residences related to dust, noise from agricultural operations, restrictions on the application of agricultural chemicals, and lack of access for agricultural equipment would hinder potential agricultural operations. For these reasons, and because the proposed project is an appropriate use as designated in the Zoning Code and the 2030 General Plan, the conversion of potential Prime Farmland would be a less-than-significant impact.

**Questions (b) Agricultural Production, Williamson Act: Less-than-significant Impact.** The Merced County General Plan and Zoning Ordinance designate the project site for residential use. As stated above, the project site is not within the Williamson Act Agricultural Preserve, nor is it under a Williamson Act contract. The proposed use, a residential subdivision, would be an appropriate use consistent with the Merced County General Plan and Zoning Ordinance. For these reasons, the proposed project would not conflict with zoning for agricultural use or a Williamson Act contract. Therefore, impacts would be less than significant, and no mitigation would be necessary.

**Questions (c)(d) Forest land: No Impact.** The project site is not zoned for forest land, timberland, or timberland zoned Timberland Production. There are no forest resources located on the project site. Therefore, no impact would occur and no mitigation would be necessary.

**Question (e) Non-forest Use: Less-than-significant Impact.** The proposed project would not involve the development of any use that would be inconsistent with the zoning of the project site. Because it would be considered an infill project and would be consistent with land uses in the surrounding area, the development of non-agricultural uses would be a less-than-significant impact. Since there are no forest resources on the project site, there would be no conversion of such uses. Therefore, a less-than-significant impact would occur, and no mitigation would be necessary.
III. AIR QUALITY

Would the project:

a) Conflict with or obstruct implementation of the applicable air quality plan?

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

c) Result in a cumulatively considerable net increase of any criteria air pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

d) Expose sensitive receptors to substantial pollutant concentrations?

e) Create objectionable odors affecting a substantial number of people?

![Checkmarks indicating impacts]

ENVIRONMENTAL SETTING AND REGULATORY FRAMEWORK

Air quality influences public health and welfare, the economy, and quality of life. Air pollutants have the potential to adversely impact public health, the production and quality of agricultural crops, visibility, native vegetation, and buildings and structures.

Criteria pollutants are those that are regulated by either the state or federal Clean Air Acts. Non-criteria pollutants are not regulated by these Acts, but are a concern as precursors to criteria pollutants and/or for their potential for harm or nuisance.

Regulatory Framework

Ambient air quality is described in terms of compliance with state and national standards, and the levels of air pollutant concentrations considered safe to protect the public health and welfare. These standards are designed to protect people most sensitive to respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. The U.S. EPA, the federal agency that administers the Federal Clean Air Act (CAA) of 1970, as amended in 1970, has established national ambient air quality standards (NAAQS) for seven air pollution constituents. As permitted by the CAA, California has adopted more stringent state ambient air quality standards (SAAQS), and expanded the number of air constituents regulated.

Merced County is located in the San Joaquin Valley Air Basin (SJVAB). Under both the federal and state CAAs, the San Joaquin Valley Air Pollution Control District (SJVAPCD) regulates air quality in Merced County. The SJVAPCD has jurisdiction over all point and area sources of air emissions except for mobile sources (such as motor vehicles), consumer products, and pesticides. To improve the health and air quality for Valley residents, the SJVAPCD implements air quality management strategies and enforces its Rules and Regulations. The SJVAPCD and the California Air Resources
Board (ARB) have joint responsibility for attaining and maintaining the NAAQS and SAAQS in the SJVAB.

The ARB is required to designate areas of the state as attainment, nonattainment, or unclassified for any state standard. An “attainment” designation for an area signifies that pollutant concentrations do not violate the standard for that pollutant in that area. A “nonattainment” designation indicates that a pollutant concentration violated the standard at least once.

The SJVAB is in “severe” nonattainment for the state 1-hour ozone standard; “extreme” nonattainment for the revoked federal 1-hour ozone standard; “extreme” nonattainment for the federal 8-hour ozone standard; attainment of the federal PM\textsubscript{10} standard; nonattainment of the state PM\textsubscript{10} standard; “serious” nonattainment for the federal PM\textsubscript{2.5} standard; and nonattainment for the state PM\textsubscript{2.5} standard (ARB 2015; EPA 2016a; 2016b). Concentrations of all other pollutants meet state and federal standards. The SJVAPCD is required to enact plans designed to bring the basin back to attainment status for ozone and PM\textsubscript{2.5}.

**Criteria Air Pollutants**

Ozone is not emitted directly into the environment, but is generated from complex chemical reactions between reactive organic gases (ROG), or non-methane hydrocarbons, and oxides of nitrogen (NO\textsubscript{x}) that occur in the presence of sunlight. ROG and NO\textsubscript{x} generators in Merced County include motor vehicles, recreational boats, other transportation sources, and industrial processes. Ozone exposure causes eye irritation and damage to lung tissue in humans. Ozone also harms vegetation, reduces crop yields, and accelerates deterioration of paints, finishes, rubber products, plastics, and fabrics. Research also shows that children exposed to unhealthful levels of ozone suffer decreased lung function growth and increased asthma.

PM\textsubscript{10}, or particulate matter, is a complex mixture of primary or directly emitted particles, and secondary particles or aerosol droplets formed in the atmosphere by precursor chemicals. According to the National Emissions Inventory (2011), approximately 53 percent of PM\textsubscript{10} emissions are due to dust (EPA 2015b). The main sources of fugitive dusts are unpaved roads, construction, and paved roads. Additional sources of PM\textsubscript{10} include fuel combustion, mobile sources, industrial processes, agriculture, fires, solvents, and miscellaneous sources. Health studies link particulate pollution to sudden death in infants as well as adults with heart and lung ailments, shortening lives by years. Exposure to airborne particles also aggravates respiratory illnesses like asthma, bronchitis, emphysema, and pneumonia.

PM\textsubscript{2.5} is atmospheric particulate matter having a particle size less than 2.5 microns (\textmu m) in diameter. These particles are so small they can be detected only with an electron microscope. Sources of fine particles include all types of combustion, including motor vehicles, power plants, residential wood burning, forest fires, agricultural burning, and some industrial processes. These small particles can be inhaled into the lungs and have the potential to cause health-related impacts in sensitive persons.

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2 As of the date of this Initial Study, the U.S. Environmental Protection Agency has proposed to revise the attainment status of the SJVAB for the federal 1-hour ozone standard to “attainment.”
Air Quality Monitoring

The SJVAB’s air quality monitoring network provides information on ambient concentrations of air pollutants. The SJVAPCD operates several monitoring stations in the SJVAB, including two stations in Merced County, where the air quality data for ozone, PM$_{2.5}$, and PM$_{10}$ were obtained. Table 3 compares a five-year summary of the highest annual criteria air pollutant emissions collected at these monitoring stations with applicable SAAQS, which are more stringent than the corresponding NAAQS. Due to the regional nature of these pollutants, ozone, PM$_{2.5}$, and PM$_{10}$ are expected to be fairly representative of the project site.

As indicated in Table 3, the O$_3$, PM$_{2.5}$ and PM$_{10}$ federal and state standards have been exceeded in Merced County over the past five years, with the exception of the federal PM$_{10}$ standard, which was not exceeded.

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ozone (O$_3$) 1-hour:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monitoring location:</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Merced County – S Coffee Avenue</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum Concentration (ppm)</td>
<td>0.102</td>
<td>0.100</td>
<td>0.100</td>
<td>0.100</td>
<td>0.102</td>
</tr>
<tr>
<td>Days Exceeding State Standard (1-hr avg. 0.09 ppm)</td>
<td>2</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Ozone (O$_3$) 8-hour:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monitoring location:</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Merced County – S Coffee Avenue</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum Concentration (ppm)</td>
<td>0.088</td>
<td>0.086</td>
<td>0.092</td>
<td>0.088</td>
<td>0.090</td>
</tr>
<tr>
<td>Days Exceeding State Standard (8-hr avg. 0.070 ppm)</td>
<td>41</td>
<td>25</td>
<td>31</td>
<td>44</td>
<td>34</td>
</tr>
<tr>
<td>Days Exceeding National Standard (8-hr avg. 0.075 ppm)</td>
<td>19</td>
<td>9</td>
<td>15</td>
<td>22</td>
<td>14</td>
</tr>
<tr>
<td>PM$_{10}$:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monitoring location:</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Merced County – 2334 M Street</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Days Exceeding State Standard (Daily Standard 50 µg/m$^3$)</td>
<td>49.0</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Maximum State 24-Hour Concentration (µg/m$^3$)</td>
<td>75.0</td>
<td>89.4</td>
<td>80.5</td>
<td>92.7</td>
<td>52.4</td>
</tr>
<tr>
<td>Days Exceeding Federal Standard (Daily Standard 150 µg/m$^3$)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>*</td>
</tr>
<tr>
<td>Maximum Federal 24-Hour Concentration (µg/m$^3$)</td>
<td>73.9</td>
<td>89.4</td>
<td>77.4</td>
<td>88.3</td>
<td>73.9</td>
</tr>
<tr>
<td>PM$_{2.5}$:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monitoring location:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Merced County – 2334 M Street</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Days Exceeding National 2006 Standard (Daily Standard 35 µg/m$^3$)</td>
<td>6.6</td>
<td>12.6</td>
<td>35.5</td>
<td>18.2</td>
<td>15.2</td>
</tr>
<tr>
<td>Maximum National 24-Hour Concentration (µg/m$^3$)</td>
<td>43.5</td>
<td>48.4</td>
<td>68.9</td>
<td>53.7</td>
<td>60.8</td>
</tr>
</tbody>
</table>

Notes: Underlined values in excess of applicable standard / ppm = parts per million / µg/m$^3$ = micrograms per cubic meter.

*Insufficient data to determine the value; **2015 is the latest year of data available as of preparation of this chapter (April 2016).


ENVIRONMENTAL ANALYSIS

Air Quality Assessment

The SJVAPCD’s Guide for Assessing and Mitigating Air Quality Impacts (GAMAQI) (SJVAPCD 2015) has established thresholds for certain criteria pollutants for determining whether a project would have a significant air quality impact. Construction and operational emissions are calculated separately. The SJVAPCD significance thresholds are presented in Table 4.
Table 4  SJVAPCD Significance Thresholds – Criteria Pollutants

<table>
<thead>
<tr>
<th>Pollutant/Precursor</th>
<th>Construction Emissions (tons/year)</th>
<th>Operational Emissions</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Permitted Equipment and Activities (tons/year)</td>
<td>Non-Permitted Equipment and Activities (tons/year)</td>
<td></td>
</tr>
<tr>
<td>Reactive Organic Gases (ROG)</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Oxides of Nitrogen (NO\textsubscript{X})</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>PM\textsubscript{10}</td>
<td>15</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>PM\textsubscript{2.5}</td>
<td>15</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>Carbon Monoxide (CO)</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Sulfur Oxide (SO\textsubscript{x})</td>
<td>27</td>
<td>27</td>
<td>27</td>
</tr>
</tbody>
</table>

Notes: The significance of the impacts of the emissions from construction, operational non-permitted equipment and activities, and operational permitted equipment and activities are evaluated separately. The thresholds of significance are based on a calendar year basis. For construction emissions, the annual emissions are evaluated on a rolling 12-month period.

Source: San Joaquin Valley Air Pollution Control District “Guidance for Assessing and Mitigating Air Quality Impacts” 2015.

Air quality impacts would result from both the construction and operational phases of the Sussex Estates project.

To streamline the process of assessing significance of criteria pollutant emissions from commonly encountered projects, the SJVAPCD has developed the screening tool, Small Project Analysis Level (SPAL). Using project type and size, the SJVAPCD has pre-quantified emissions and determined a size below which it is reasonable to conclude that a project would not exceed applicable thresholds of significance for criteria pollutants. According to the SPAL requirements, no quantification of ozone precursor emissions is needed for projects less than or equal to the size thresholds, by vehicle trips and by project type. If other emission factors such as toxic air contaminants, hazardous materials, asbestos, or odors are apparent, these emissions must be addressed.

The proposed project would involve the subdivision of an existing parcel into six lots for single-family residential units. The single-family housing land use category identified in the SPAL has a 152-unit project size threshold (SJVAPCD 2012). The proposed subdivision project would not exceed the SPAL threshold for this project type since there would be six residential lots. Therefore, the project qualifies to complete the SPAL approach, and no quantification of ozone precursor emissions would be required. Project specific emissions of criteria pollutants are not expected to exceed District significance thresholds of 10 tons/year of NO\textsubscript{X}, 10 tons/year ROG, and 15 tons/year of PM\textsubscript{10}.

**Question (a) Air Quality Plan: Less-than-significant Impact with Mitigation.** As stated above in the discussion of the regulatory environment, the SJVAPCD has attainment plans in place that identify strategies to bring regional emissions into compliance with federal and state air quality standards. The proposed subdivision project criteria air emissions would not be expected to exceed thresholds set by SJVAPCD based on project size and proposed operations. Also, the proposed residential uses would be consistent with the Merced County Agricultural Residential land use...
designation of the General Plan. The project would be consistent with the Agricultural-Residential zoning designation.

The proposed project would be subject to SJVAPCD Rules and Regulations. Because the proposed subdivision project would include less than 50 residential units, District Rule 9510 (Indirect Source Review) would not apply. To ensure project compliance with applicable SJVAPCD Rules and Regulations, however, the following mitigation measure would be required:

**Mitigation Measure AQ-1:** Prior to the issuance of the first grading permit, the applicant shall provide to the County a receipt of a SJVAPCD approved Dust Control Plan or Construction Notification form in compliance with Regulation VIII – Fugitive Dust PM$_{10}$ Prohibitions. The subdivision project may be subject to additional rules, including, but not limited to Rule 8021 (Construction, Demolition, Excavation, Extraction, and Other Earthmoving Activities), Rule 4601 (Architectural Coatings), and Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations). The project applicant will be required to implement measures of applicable SJVAPCD Rules and Regulations as noted.

Implementation of Mitigation Measure AQ-1 would require compliance with applicable Rules and Regulations of the SJVAPCD as described above, and ensure the proposed project would not conflict with or obstruct implementation of any SJVAB attainment plan or the SIP. Therefore, a less-than-significant impact would result, and no additional mitigation would be necessary.

**Questions (b)(c) Air Quality Standards/Cumulative Increase in Criteria Pollutants: Less-than-significant Impact:** Implementation of the proposed subdivision project would result in construction and operational emissions, including ROG, CO, SO$_2$, NO$_x$, and fugitive dust. Construction includes development of six individual lots and a cul-de-sac. Construction activities would include site grading; installation of a building pad; a domestic well, septic tank, and leach field at each of the six residential lots; and future construction of a single-family residence at each lot. Construction activities resulting in air emissions include employee commute trips, exhaust from construction equipment, fugitive dust from earthmoving activities and vehicle movement on the project site, evaporative emissions from paving of roadway surfaces, and the application of architectural coatings to the buildings. Construction of the proposed lots is scheduled to begin upon project approval and would be constructed in a single phase. Operation activities resulting in air emissions include vehicular trips generated by the residential uses; area sources (architectural coating, consumer products, and landscaping); and energy use.

Based on SJVAPCD project screening criteria and the guidance outlined in the GAMAQI, the size of the project indicates that it would qualify as a SPAL project, and would not exceed the SJVAPCD’s emission thresholds for criteria pollutants during construction or operation.

Although the proposed project would not exceed SJVAPCD significance thresholds, the applicant would still be required to comply with Regulation VIII and all applicable SJVAPCD Rules and Regulations. A summary of control measures for construction and other earthmoving activities that would generate fugitive dust are included in Regulation VIII as follows:
Pre-Activity:
• Pre-water site sufficient to limit VDE to 20% opacity, and
• Phase work to reduce the amount of disturbed surface area at any one time.

During Active Operations:
• Apply water or chemical/organic stabilizers/suppressants sufficient to limit VDE to 20% opacity; or
• Construct and maintain wind barriers sufficient to limit VDE to 20% opacity. If utilizing wind barriers, control measure B1 above shall also be implemented.
• Apply water or chemical/organic stabilizers/suppressants to unpaved haul/access roads and unpaved vehicle/equipment traffic areas sufficient to limit VDE to 20% opacity and meet the conditions of a stabilized unpaved road surface.

Temporary Stabilization During Periods of Inactivity:
• Restrict vehicular access to the area; and
• Apply water or chemical/organic stabilizers/suppressants, sufficient to comply with the conditions of a stabilized surface. If an area having 0.5 acres or more of disturbed surface area remains unused for seven or more days, the area must comply with the conditions for a stabilized surface area as defined in section 3.53 of Rule 8011.

Speed Limitations and Posting of Speed Limit Signs on Uncontrolled Unpaved Access/Haul Roads on Construction Sites:
• Limit the speed of vehicles traveling on uncontrolled unpaved access/haul roads within construction sites to a maximum of 15 miles per hour.
• Post speed limit signs that meet State and federal Department of Transportation standards at each construction site’s uncontrolled unpaved access/haul road entrance. At a minimum, speed limit signs shall also be posted at least every 500 feet and shall be readable in both directions of travel along uncontrolled unpaved access/haul roads.

Wind Generated Fugitive Dust Requirements:
• Cease outdoor construction, excavation, extraction, and other earthmoving activities that disturb the soil whenever VDE exceeds 20% opacity. Indoor activities such as electrical, plumbing, dry wall installation, painting, and any other activity that does not cause any disturbances to the soil are not subject to this requirement.
• Continue operation of water trucks/devices when outdoor construction excavation, extraction, and other earthmoving activities cease, unless unsafe to do so.

Compliance with Regulation VIII and all other applicable SJVAPCD Rules and Regulations as described above and required in Mitigation Measure AQ-1 would ensure that the proposed construction-related emissions are reduced, and would not exceed SJVAPCD significance criteria.

Because project construction and operation emissions of criteria pollutants are not expected to exceed SJVAPCD significance thresholds, and the proposed project would comply with applicable SJVAPCD Rules and Regulations as required in Mitigation Measure AQ-1, the project would not emit air pollutants that would violate any air quality standard or contribute to an existing air quality violation, or result in a cumulatively considerable net increase in any criteria pollutant. A less-than-significant impact would result, and no additional mitigation would be necessary.

Questions (d)(e) Sensitive Receptors/Odors: Less-than-significant Impact. Sensitive receptors are defined as areas where young children, chronically ill individuals, the elderly, or people who are more sensitive than the general population reside. Existing land uses and facilities immediately surrounding the project site include single-family residences to the north, south, east, and west; undeveloped parcels to the north and east; and an almond orchard to the east.
During construction, some odors and hazardous pollutants could result from vehicles and equipment using diesel fuels. Construction vehicles would be required to limit idling time compliant with the ARB guidelines. Cancer risk associated with diesel exhaust exposure is typically associated with chronic exposure. Because the level of overall emissions would be low, and the duration of emissions would be temporary, cancer risk and odors from diesel exhaust during construction would be considered less than significant. The proposed project, as a subdivision, is not expected to result in the generation of significant odors or hazardous air pollutants.

Because no substantial levels of air emissions would occur during construction or operation activities, and no adverse levels of toxic air emissions would occur, the proposed project would not expose sensitive receptors to substantial air pollutant concentrations or create objectionable odors. This would be a less-than-significant impact, and no mitigation would be necessary.
IV. BIOLOGICAL RESOURCES

Would the project:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service?

<table>
<thead>
<tr>
<th>Potentially Significant Impact</th>
<th>Less than Significant Impact with Mitigation</th>
<th>Less than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service?

<table>
<thead>
<tr>
<th>Potentially Significant Impact</th>
<th>Less than Significant Impact with Mitigation</th>
<th>Less than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

<table>
<thead>
<tr>
<th>Potentially Significant Impact</th>
<th>Less than Significant Impact with Mitigation</th>
<th>Less than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

<table>
<thead>
<tr>
<th>Potentially Significant Impact</th>
<th>Less than Significant Impact with Mitigation</th>
<th>Less than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>✓</td>
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</table>

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

<table>
<thead>
<tr>
<th>Potentially Significant Impact</th>
<th>Less than Significant Impact with Mitigation</th>
<th>Less than Significant Impact</th>
<th>No Impact</th>
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<tr>
<td></td>
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</tbody>
</table>

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

<table>
<thead>
<tr>
<th>Potentially Significant Impact</th>
<th>Less than Significant Impact with Mitigation</th>
<th>Less than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>✓</td>
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</tbody>
</table>

Research on the biological resources associated with the proposed project included: 1) a query of the California Natural Diversity Database (CNDDB) to identify occurrences of special-status species; 2) a query of federally listed Threatened and Endangered species from the U.S. Fish and Wildlife Service (USFWS) and the California Native Plant Society’s (CNPS) Electronic Inventory; and 3) a review of the USFWS National Wetland Inventory (NWI) map to identify the presence of wetlands within the project area. The results of the database search and location analysis were used to determine if any sensitive resources had been previously reported within or in the immediate local vicinity of the project site.

The field component of the biological assessment was conducted on January 27, 2016 at 11:30 a.m. Planning Partners staff conducted the site visit and all investigations for Special Status Species. Conditions during the survey were overcast, approximately 57° F, with a light wind.
ENVIRONMENTAL SETTING

The proposed site of the Sussex Estates subdivision is located to the west of Buhach Road, on a parcel that lies behind existing homes on Cardiff Lane to the south, and behind undeveloped lots on Noah Drive and an existing home on Essex Drive to the north. The project site consists of fallow land with flat topography. The project site has been disked and does not support historical flora and fauna. There are no native trees on the project site. No streams, marshes or vernal pools occur on the property. There are no developed uses on the project site.

During the walking survey of the project site conducted by Planning Partners staff, the following species were identified on or in the vicinity of the project site.

- American Crow \( \textit{Corvus brachyrhynchos} \)
- Red-tailed Hawk \( \textit{Buteo lineatus} \)
- Northern Flicker \( \textit{Colaptes auratus} \)
- Western Scrub-Jay \( \textit{Aphelocoma californica} \)
- Mourning Dove \( \textit{Zenaida macroura} \)
- Townsend’s Solitaire \( \textit{Myadestes townsendii} \)
- White Crowned Sparrow \( \textit{Zonotrichia leucophrys} \)
- Chipping Sparrow \( \textit{Spizella passerine} \)

For a complete listing of special-status species that may occur or could potentially be affected by activities in the project location, see Appendix A.

REGULATORY SETTING

The following discussion summarizes the various federal, state, and local environmental laws and regulations that apply to this project under the California Environmental Quality Act (CEQA).

Federal

\textbf{Section 404 of the Clean Water Act} - The U.S. Army Corps of Engineers (Corps) regulates the discharge of dredged or fill material into waters of the United States. Waters of the United States include wet environments such as wetlands, rivers, creeks, tidal and ocean waters, lakes, and ponds. The Corps does not regulate all water bodies and wetlands; excluded are isolated waters and waters that do not have a significant nexus to navigable waters.

Any discharge requiring a Section 404 permit also requires Section 401 Water Quality Certification from the California Regional Water Quality Control Board (CRWQCB). Discharges into state waters not requiring a Corps permit require obtaining Waste Discharge Requirements from the CRWQCB.

\textbf{Federal Endangered Species Act} - The Endangered Species Act (ESA) provides a process to protect federally listed threatened and endangered species. The ESA is administered by the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS). Section 9 of FESA prohibits the “take” of species listed under FESA, except when authorized by a permit; take is defined as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” In addition, special management considerations or protections may apply to specific portions of the geographical area occupied by a species at the time of its listing (designated as Critical Habitat). All project sponsors, except federal agencies, are required to consult...
with USFWS and National Oceanic and Atmospheric Administration (NOAA) Fisheries on actions that may have direct or indirect impacts on species listed under FESA, and to obtain a permit under Section 10 of FESA for any “take” of such a species that might result from implementing the proposed project. Violations involving take can result in criminal or civil penalties.

**Migratory Bird Treaty Act** - The Migratory Bird Treaty Act (MBTA) prohibits the killing, possessing, or trading of migratory birds except as specified in Department of Interior regulations. Under a similar provision in the California Department of Fish and Game Code, it is unlawful to take, possess, or destroy any birds of prey or owls, or to take, possess, or destroy the nest or eggs of these birds except as provided in the Code or associated regulations.

**State of California**

**California Endangered Species Act** - The California Department of Fish and Wildlife (CDFW) administers the California Endangered Species Act (CESA), which is similar to the federal ESA. CESA requires state agencies to consult with CDFW when preparing CEQA documents to assure that the proposed action does not jeopardize any listed species. CDFW has also developed a list of Species of Special Concern, which includes species in California whose numbers, reproductive success, or habitat may be threatened.

**Section 1600 of the Fish and Game Code** – CDFW administers Section 1600 of the Fish and Game Code. The CDFW must be notified for any project that may impact the bed, channel, or bank of any river, stream, or lake designated by CDFW.

**California Native Plant Society** - The California Native Plant Society (CNPS) maintains a list of plant species native to California that have low population numbers, limited distribution, or are otherwise threatened with extinction. Potential impacts to CNPS-listed plants are considered under CEQA review.

**Merced County**

**Merced County General Plan.** Goal #1 of the Natural Resources Element of the 2030 Merced County General Plan states: “Preserve and protect, through coordination with the public and private sectors, the biological resources of the County.” There are several policies in the Natural Resources Element that address protection, preservation, and enhancement of biological resources of the County, and additional policies in the General Plan that also seek to protect natural resources. Relevant policies have been used to guide the evaluation of potential effects to biological resources, and in the assessment of environmental significance conclusions, and the development of mitigation measures.

The Merced County General Plan also contains an Open Space Action Plan (OSAP). The OSAP includes implementation programs to ensure that areas designated as sensitive or significant resources in the Open Space and Conservation Chapter of the General Plan are protected, managed, or preserved in a manner compatible with the resources of the specified area. One of the primary implementing tools of the County’s OSAP is the Open Space Development Review System. The system is basically a process for assessing the appropriateness of proposed developments, including their compatibility with surrounding environmental constraints and resources.

These goals and policies were considered in the evaluation of the proposed project.
ENVIRONMENTAL SETTING

Special-Status Plant and Wildlife Species

This section summarizes an evaluation of the potential presence of special-status species within the project site. The special-status species evaluation considers those species identified as having relative scarcity and/or declining populations by the USFWS or CDFW. Special-status species include those formally listed as threatened or endangered, those proposed for formal listing, candidates for federal listing, and those classified as species of special concern by CDFW. Also included are those plant species considered to be rare, threatened, or endangered in California by the CNPS, and those plant and animal taxa meeting the criteria for listing under Section 15380 of the State CEQA Guidelines. The evaluation of special status species includes three steps: identification of those special status species known to occur in the project vicinity; a field study of the project site; and an assessment of the existing habitats on the site and in the vicinity available for special status species.

To identify those special status species that are known to occur in the vicinity of the project site, a record search of the CNDDB was conducted on January 12, 2016 (CNDDB 2016) to identify all documented sightings of special-status plant and wildlife species within the Atwater, California and surrounding eight 7.5-Minute Topographic Quadrangles. For the results of the records search and a complete listing of special-status species that may occur or could potentially be affected by activities in the project location, see Appendix A.

Special-Status Wildlife Species

While no special status species of invertebrates were observed on the site during the January 2016 walking survey, various common invertebrate species may occur or could potentially be affected by activities in this location. Four invertebrate species have been documented in the nine-quadrangle area surrounding the project site. Three of these species require vernal pool habitat. Since no vernal pool habitat is present on the site, none of these species were detected. The fourth species, Valley Elderberry Longhorn Beetle (desmocerus californicus dimorphus) requires the presence of elderberry bushes. Since no elderberry bushes are present on the site, none of this species was detected.

Three amphibian, four reptile, and two fish species have been recorded in the vicinity of the project site, most of which are associated with water features such as vernal pools, ponds, marshes, and streams. No vernal pool habitat or other appropriate water features are present on the site or in its vicinity, and none of these species were detected during the site survey.

Eight vertebrate species, all birds, were recorded in the project area during the walking survey. None of the observed species appear on the list of special status species resulting from the records search. The grasslands and ornamental trees in neighborhood surrounding the site support common species, winter resident birds, neotropical migrants, and raptors.

The results of the CNDDB records search show that seven bird species have been recorded in the vicinity of the project site. Three of the species are raptors, and would require foraging habitat. The burrowing owl would require embankments or deep friable soils for nesting. The merlin and the tricolored blackbird would require habitat with available water features. Because the project site is annually disked for fire and weed control, and there is no native plant growth or other vegetation, the site is devoid of foraging habitat. There are no nesting habitats on site, such as trees, embankments, or aqueous habitat that would support nesting activities.
Five special status **mammal** species have been recorded in the vicinity of the project site. Two species, San Joaquin kit fox and American badger, could forage or den on the project site; however, no individuals of these species nor signs of dens, tracks, or scat were observed during field surveys. The residential “infill” nature of the project site and the lack of movement corridors in the vicinity of the site would preclude denning and foraging on the site. While three species of bats would find appropriate habitat in the vicinity of the project site, the site itself features no trees or other nesting habitat for those species.

**Special-Status Plant Species**

Occurrences of twenty-eight special status **plant** species have been recorded in the region of the project, many associated with vernal pools. No vernal pools are located on the project site. No individuals of any of the special status plant species were found during surveys of the project site.

The land on the subject property is disturbed and does not support historical flora and fauna. The project site does not support extensive wild plant diversity or cover, and there is no native vegetation.

**Sensitive Habitats**

The past and continuing disturbance of the site, including farming, leveling, and discing, has prohibited the development of sensitive habitats. A review of the USFWS National Wetland Inventory Map was done to identify the presence of wetlands within the vicinity of the project. No potentially jurisdictional wetlands or wetlands of the United States were identified on the project site.

The land on the subject property has been historically disturbed with annual disking. It does not support jurisdictional wetlands or wetlands of the United States.

**Sensitive Natural Communities**

Sensitive natural communities are those that are considered rare within the region, support sensitive plant or wildlife species, or function as corridors for wildlife movement. Two sensitive natural communities were identified by the CNDDB and CNPS lists for the Atwater nine-quadrangle area and the USFWS Species List for the Atwater quadrangle. The two sensitive natural communities that have been recorded within the nine-quadrangle area surrounding the project site are: northern claypan vernal pool and northern hardpan vernal pool.

The land on the subject property has been historically disturbed with annual disking. It does not support the either of these sensitive natural communities.

**Local Habitat Conservation Plans**

No Habitat Conservation Plan, Natural Community Conservation Plan, or other local, regional, or state habitat conservation plan has been approved for the project area by Merced County.
ENVIRONMENTAL ANALYSIS

Question a: Special-Status Species. Less-than-Significant Impact. The project site has been disturbed by previous and continuing disking activities, and there is no native or non-native vegetation on the site. There is no riparian or vernal pool habitat, nor any wetlands or wetland habitat. The site does not support any special-status species and does not contain any suitable habitat for sensitive wildlife species listed by state and/or federal regulatory agencies and known to occur in the vicinity of the proposed project. For these reasons, implementation of the proposed project would have a less-than-significant impact on special-status species. No mitigation would be necessary.

Questions (b) (c): Riparian Habitat/Wetlands: Less-than-Significant Impact. Implementation of the proposed project would not result in the modification of wetlands or result in the loss of riparian or vernal pool habitat, since no such resources are located within the project area. This would be a less-than-significant impact. The National Wetland Inventory map does not depict any wetlands on the project site, and none were observed during the field surveys (USFWS 2015). No marshes or vernal pools occur on the project site.

Therefore, there would be no impacts to wetlands, riparian and vernal pool habitat, jurisdictional waters of the U.S., or other sensitive habitat types or sensitive natural communities with implementation of the proposed project. This would be a less-than-significant impact, and no mitigation would be necessary.

Question (d) Migratory Wildlife: Less-than-Significant Impact. Implementation of the proposed Sussex Estates project would not interfere with a wildlife movement corridor, migratory patterns, or wildlife within a nursery site, since the site is located in an area of predominantly residential uses without habitat connections to any non-developed areas. There are no creeks, valleys, or other wildlife movement corridors on the project site. Therefore, the proposed Sussex Estates project would result in a less-than-significant effect on regional wildlife movements. As there would be a less-than-significant impact, no mitigation measures would be required.

Question (e) Conflict with Policy/Ordinance: Less-than-Significant Impact. The Merced County General Plan contains an Open Space Action Plan (OSAP). The Open Space Development Review System (OSDRS) is one of the primary implementing tools of the County’s Open Space Action Plan. Through such a review system, daily planning and permit approval decisions should reflect and implement the adopted policies and development standards of the 2030 General Plan. The system is intended for utilization both by developers in the design and building of projects, and by planners and decision makers in the review of projects for conformance with County policy. The system is basically a process for assessing the appropriateness of proposed developments, including their compatibility with surrounding environmental constraints and resources. This system of review is required of all projects for which a building permit or other entitlement is necessary such as a land division or use permit, as well as during policy and ordinance amendment. For the consistency of the proposed Sussex Estates project with the OSDRS, see Table 5.
Table 5  Consistency of the Proposed Sussex Estates Project with the Merced County General Plan Open Space Development Review System

<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
<th>Discussion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Basic Land Use Category, Zone Code Consistency and Community Service Availability Determination</td>
<td>Yes</td>
<td>The proposed project is consistent with the Merced County Rural Residential Center land use designation of the General Plan, and the Agricultural-Residential zoning designation. As evaluated in this Initial Study, the Sussex Estates project impact to public services and facilities has been found to be less than significant.</td>
</tr>
<tr>
<td>2. Open Space Inventory Map and Data Base Review</td>
<td>Yes</td>
<td>While the project site is currently fallow and qualifies as de facto open space, the project site has been designated and planned by Merced County for residential uses. Implementation of the project would not result in the loss of an identified or protected open space resource.</td>
</tr>
<tr>
<td>3. Demonstration by the permit applicant of consultation with the California Department of Fish and Wildlife, the Central Valley Regional Water Quality Control Board, the State Water Resources Control Board, the U.S. Fish and Wildlife Service, National Marine Fisheries Service, and/or the Army Corps of Engineers, and any water purveyor serving the project area, as appropriate, to evaluate resources that could be affected by the proposed action; and proof of issuance of permits by these agencies, as required.</td>
<td>Yes</td>
<td>Through development of the CEQA and planning review processes, consultation with applicable agencies has been conducted on behalf of the project applicant. Where mitigation measures have been suggested by resource agencies, they have been included in the Initial Study.</td>
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<tr>
<td>4. Environmental Determination</td>
<td>Yes</td>
<td>With issuance of the Notice of Intent to Adopt a Mitigated Negative Declaration, an environmental determination was made that the proposed project would not have a significant effect on the environment. This Initial Study/Mitigated Negative Declaration represents the record supporting the determination.</td>
</tr>
<tr>
<td>5. Land Use and Sensitive Resource Compatibility Determination</td>
<td>To be determined by the Planning Commission</td>
<td>The proposed project is located in an urbanizing area of Merced County. Adjacent land uses include residential and agricultural uses. The project would be consistent with the requirements of the Merced County Zoning Ordinance with implementation of mitigation measures. Impacts on adjacent residences from air quality, cultural resources, geology and soils, hydrology and water quality, and utilities were identified for the project. These impacts were found to be less than significant following mitigation. The Merced County Planning Commission will make the ultimate compatibility finding.</td>
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As set forth in Table 5, the project would be consistent with the requirements of the OSDRS process, and there would be no conflict with local policies protecting biological resources. No significant impact would result, and no mitigation would be necessary.

**Question (f) Conflict with Adopted Plan: No Impact.** No approved Habitat Conservation Plans, Natural Community Conservation Plans, or other local, regional, or state habitat conservation plans that include the proposed project are in place. Therefore, the proposed project would not conflict with such plans. There would be no impact, and no mitigation measures would be required.

<table>
<thead>
<tr>
<th>Impact Level</th>
<th>Significant with Mitigation</th>
<th>Less than Significant with Mitigation</th>
<th>Less than Significant Impact</th>
<th>No Impact</th>
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<tbody>
<tr>
<td>V. CULTURAL RESOURCES</td>
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<td>Would the project:</td>
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<tr>
<td>a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?</td>
<td>✓</td>
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<tr>
<td>b) Cause a substantial adverse change in the significance of an archaeological resource as defined in Section 15064.5?</td>
<td>✓</td>
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<tr>
<td>c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?</td>
<td>✓</td>
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<tr>
<td>d) Disturb any human remains, including those interred outside of formal cemeteries?</td>
<td>✓</td>
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</table>

Records of the known cultural resources found in Merced County are included in the files of the Office of Historic Preservation, California Historical Resources Information System. The Central California Information Center (CCIC), housed at California State University, Stanislaus, locally administers these records. A cultural resources records search was conducted at the CCIC for the project site and surrounding area to determine its historic and cultural sensitivity (Napton 2016). The records search may be inspected at the Merced County Community and Economic Development Department, 2222 ‘M’ Street, Merced, CA 95340, California, Monday through Friday during standard business hours. The following information summarizes cultural resources with the potential to occur within the proposed project area.

**ENVIRONMENTAL SETTING**

A cultural resource survey and field inspection of the project site was conducted by Dr. Lew Napton, Ph.D. on February 6, 2016. This inspection confirmed that the surface of the project area had been reduced to agricultural grade, and featured no vegetation. There were no discolored areas that might have been the remains on anthropically-affected deposits. (Napton 2016)

**Paleontological Resources**

The project site is situated in an area not known to have produced significant paleontological resources, although fossils have been found along Black Rascal Creek east of the project area. An extensive and deep mantle of marine and eroded continental deposits of fossilized organic material covers the project area. Over the course of many centuries these deposits buried fossil-bearing rock formations. The extensive outwash deposits along the courses of rivers, such as the Merced and San...
Environmental Analysis

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Joaquin, include localities where remains of Pleistocene and Tertiary fauna and flora could be found. The occurrence of finding fossil remains is unpredictable. (Napton 2016)

Archaeological Resources

Regional archeological investigations have led to identification of three major cultural phases in the Central Valley. From earliest to latest these are the Windmiller, Cosumnes, and Hotchkiss cultural phases. The archaeology of Merced County has not been reviewed comprehensively, however, investigations have been undertaken along the Merced River, and in western Merced County. Research in the Pacheco Pass-San Luis Reservoir area resulted in the identification of four local archaeological phases: the Positas, Pacheco, Gonzaga, and Panoche. This sequence remains the most firmly established local cultural chronology pertaining to western Merced County. (Napton 2016)

Ethnographic Background

The project area is located within the former territory of the Penutian-speaking Yokuts, a tribe that at the time of contact occupied an area extending east from the crest of the Coast (Diablo) Range well into the foothills of the Sierra Nevada, north to the American River, and south to the upper San Joaquin River. The principal area occupied by the Yokuts is west of the confluence of the Merced and San Joaquin Rivers. The project area lies within the territory formerly occupied by the Northern Valley Yokuts. Given the ethnographic literature pertaining to the project region and its surrounding area, including early ethnographic documentation, the literature suggests that imperishable features and artifacts could be found during cultural resource reconnaissance of this area of Merced County. (Napton 2016)

Historical Resources

Regionally, the historical setting dates to when the Spanish entered California in the 1700s and rapidly spread northward along the coast. The Spanish presence in the Central Valley, however, was limited to occasional forays in search of fugitive Native American neophytes. American exploration of the Central Valley began with the arrival of explorers and traders, including Jedediah Smith, Ewing Young, and J. R. Walker. In 1844, John Frémont and his party, heading south, crossed present-day Merced County. Following John Marshall’s discovery of gold in the tailrace of Sutter’s Mill in January of 1848, miners flocked to California. News of the find brought thousands of Argonauts to the Valley and the adjacent Sierra Nevada “Mother Lode” region. One of the indirect consequences of the Gold Rush was the presence in the Central Valley of ferry operators, storekeepers, innkeepers, and others who supplied miners with goods and services. (Napton 2016)

During the 1850s, the more productive parts of the Central Valley were settled and later, in 1872, the Central Pacific Railroad entered Merced County. The railroad connected the San Joaquin Valley with markets in the north and south, and importantly, the east. By 1874, much of Merced County was under cultivation. As managed irrigation and flood control developed in the Central Valley in 1888, most of the Valley floor was broken up into numerous small farms. The Valley began to take on its present densely settled, highly productive character. U.S. 99 was paved through the county in about 1913, later resulting in an expanded network of paved roads, which represent the on-going trend toward increased urbanization, urban centers, and reduction of agricultural land.

Locally, the historical setting of Merced County was established as the southwest part of Mariposa County. The City of Merced began as "Bear Creek" and railroad surveyors platted the townsite. In 1872, Merced was selected as the county seat. The historical context of the general project area has
been documented, but provides no specific information regarding historic occupation of the proposed project site.

**Records Search**

Records of known cultural resources found in Merced County are included in the California Historical Resources Information System (CHRIS) files of the Office of Historic Preservation. These records are locally administered by the Central California Information Center (CCIC) housed at California State University, Stanislaus. Results of the February 2016 records search show that no cultural resources had been reported found within or adjacent to the proposed Sussex Estates project site.

**REGULATORY FRAMEWORK**

State and federal legislation requires the protection of historical and cultural resources. In 1971, President’s Executive Order No. 11593 required that all federal agencies initiate procedures to preserve and maintain cultural resources by nomination and inclusion on the National Register of Historic Places. In 1980, Governor’s Executive Order No. B-64-80 required that state agencies inventory all “significant historic and cultural sites, structures, and objects under their jurisdiction which are over 50 years of age and which may qualify for listing on the National Register of Historic Places.” Section 15064.5(b)(1) of the CEQA Guidelines specifies that projects that cause “…physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historic resource would be materially impaired” shall be found to have a significant impact on the environment.

For the purposes of CEQA, a historical resource is a resource listed in, or determined eligible for listing in the California Register of Historical Resources. When a project could impact a site, it needs to be determined whether the site is an historical resource, which is defined as any site which:

(A) Is historically or archeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political or cultural annals of California; and,

(B) Meets any of the following criteria:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. Is associated with the lives of persons important in our past;
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
4. Has yielded, or may be likely to yield, information important in prehistory or history.

**Native American Consultation**

Assembly Bill (AB) 52 was signed by California Governor Jerry Brown on September 25, 2014, and requires lead agencies to consider the effects of projects on tribal cultural resources, and to conduct consultation with federally and non-federally recognized Native American Tribes early in the environmental planning process. AB 52 requires that the lead agency must consult with California Native American Tribes who are traditionally and culturally affiliated with the geographic area of the
proposed project, and who have requested such consultation in writing. As of the date of this Initial Study (May 2016), no tribes have requested such consultation with Merced County (Guerrero pers. comm. 2016).

The Recreation and Cultural Resources Element of the 2030 Merced County General Plan contains Policy RCR-2.10 regarding tribal consultation. The policy prescribes consultation regarding proposed development project and land use policy changes consistent with Planning and Zoning Law at Government Code Section 65351, and the OPR Tribal Consultation Guidelines (2005). A letter was written, dated February 5, 2016, to the Native American Heritage Commission (NAHC), West Sacramento requesting information regarding sacred lands in the project area, and contact information for Native Americans with interests in the region of the proposed project.

On behalf of Merced County, interested Native Americans as identified by the NAHC were contacted regarding the proposed Sussex Estates project. One tribe, the Picayune Rancheria of the Chukchansi Indians, replied to this contact, and requested additional information regarding the project’s location. Additional locational information was submitted to the Picayune Rancheria on May 9, 2016. As of the date of circulation of this Initial Study, no additional communication has been received from the Rancheria.

**Environmental Analysis**

**Questions (a)(b)(c)(d): Less-than-significant Impact with Mitigation.** The entire project area has been previously graded, reducing the probability of finding paleontological sites, and is not within an area where paleontological resources would likely be exposed. The project area also lacks any unique geologic features, since the project area consists of a fallow field.

The records search for the project site indicated that no known cultural resources are present within the project area. Therefore, the project would have no adverse effects on known cultural resources. Also, because the project area lacks any unique geologic features, the proposed project would not adversely affect these resources. The CCIC report no recommendations for further study (Napton 2016).

However, significant cultural remains can also exist below the plow zone in Merced County, and these resources may be unearthed during construction at the project site. Through Resolution 97-01, Merced County has imposed conditions relating to undiscovered cultural resources pursuant to Section 5097.98 of the State Public Resources Code, and Section 7050.5 of the State Health and Safety Code. The following mitigation measure would be required to minimize potential impacts to historical, archaeological, or paleontological resources, unique geologic features, or human remains.

**Mitigation Measure CUL-I:** The project applicant and construction contractor shall implement a plan to address the discovery of unanticipated buried cultural or paleontological resources. If buried cultural resources such as chipped or ground stone, midden deposits, historic debris, building foundations, human bone, or paleontological resources are inadvertently discovered during ground-disturbing activities, work shall stop in that area and within 100 feet of the find until a qualified archaeologist or paleontologist can assess the significance of the find and, if necessary, develop responsible treatment measures in consultation with Merced County and other appropriate agencies.
Mitigation Measure CUL-2: The project applicant and construction contractor shall implement a plan to address discovery of human remains. If remains of Native American origin are discovered during proposed project construction, it shall be necessary to comply with state laws concerning the disposition of Native American burials, which fall within the jurisdiction of the Native American Heritage Commission (NAHC). If any human remains are discovered or recognized in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:

- The County coroner has been informed and has determined that no investigation of the cause of death is required; and
- If the remains are of Native American origin:
  - The most likely descendants of the deceased Native Americans have made a recommendation to the landowner or person responsible for the excavation work for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC 5097.98; or
  - The NAHC has been unable to identify a descendant, or the descendant failed to make a recommendation within 24 hours after being notified.

According to the California Health and Safety Code, six or more human burials at one location constitute a cemetery (Section 8100), and disturbance of Native American cemeteries is a felony (Section 7052). Section 7050.5 requires that construction or excavation be stopped in the vicinity of discovered human remains until the coroner can determine whether the remains are those of a Native American. If the remains are determined to be Native American, the coroner must contact the NAHC.

Because the records search conducted for the project site yielded no positive results, and because no resources have been discovered during previous disturbances of the project site, with implementation of the above mitigation measures, the proposed project would result in a less-than-significant impact to paleontological resources, unique geologic features, and human remains. No additional mitigation would be required.
VI. GEOLOGY AND SOILS

Would the project:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:
   i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?
   ii) Strong seismic ground shaking?  
       CEQA Not Applicable.
   iii) Seismic-related ground failure, including liquefaction?
   iv) Landslides?

b) Result in substantial soil erosion or the loss of topsoil? ✓

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on-or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

  CEQA Not Applicable.

d) Be located expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

  CEQA Not Applicable.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

ENVIRONMENTAL SETTING

Geology

The proposed project site is located within the Great Central Valley of California. The Central Valley is composed primarily of alluvial deposits from erosion of the Sierra Nevada located to the east and from the Coastal Ranges located to the west. The topography of the project site is generally flat, with an approximate elevation of 141 - 143 feet above mean sea level (MSL). The proposed project site is not located within a mapped fault hazard zone, and there is no record or evidence of faulting on the project site (DOC 2016). The site is located in Seismic Damage Zone II, indicating a moderate severity level with moderate probable damage in event of severe seismic activity (Merced County 2013b).

Soils

The Natural Resources Conservation Service (NRCS) provides agricultural ratings for soils in the project area in its Merced County Soil Survey. The soils in the area of the project site as classified by the NRCS include Atwater loamy sand, imperfectly drained variant, 0 to 3 percent slopes; and Snelling sandy loam, deep over hardpan, imperfectly drained variant, 0 to 1 percent slopes. For more information on the soils found on the project site, refer to Table 2 in Section II, Agriculture and Forestry Services, and Table 6 in Section XVII, Utilities and Service Systems, of this Initial Study. (NRCS 2016)
Soil properties can influence the development of building sites, including site selection, structural design, construction, performance after construction, and maintenance. Soil properties that affect the load-supporting capacity of an area include depth to groundwater, ponding, flooding, subsidence, shrink-swell potential, and compressibility. The Atwater loamy sand and Snelling sandy loam soil types would be very limited in terms of depth to the saturated zone and flooding (1.0), but these issues could be effectively managed through proper engineering and construction practices. (NRCS 2016)

**Septic Systems**

As proposed, each of the six residential lots within the Sussex Estates project would be served by an individual OWTS. As set forth in Table 6, soils on the project site are not optimal for successful operation of an OWTS because the site contains only soils that are very limited. “Very limited” indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected. (NRCS 2016)

The soils within the project site would present limitations related to the installation of the OWTS facilities. For additional information on the suitability of on-site soils for septic systems, refer to Section XVII, *Utilities and Service Systems*.

**Regulatory Framework**

Merced County regulates the effects of soils and geological constraints on urban development primarily through enforcement of the California Building Code (CBC), which requires the implementation of engineering solutions for constraints to urban development posed by slopes, soils, and geology.

**Environmental Analysis**

The following analysis is based upon Appendix G of the State CEQA Guidelines as used by Merced County. Because Appendix G has not been modified in response to the ruling of the California Supreme Court, the evaluation below follows the order of the questions posed by Appendix G. For traditionally evaluated impacts that are not now appropriate CEQA topics, the environmental conclusion has been replaced with the phrase “CEQA Not Applicable.” A discussion of the potentially hazardous condition follows, including recommended conditions of approval where appropriate. For additional information, see page 12 of this Initial Study.

**Question (a.i) Faults: CEQA Not Applicable.** The project site is not located within a mapped fault hazard zone, and there is no record or evidence of faulting on the project site (DOC 2016). Because no fault traces underlie the project site, no hazardous conditions would result from implementation of the project. Additionally, the implementation of the project would not lead to offsite effects related to fault hazards, nor would any existing offsite hazards be exacerbated.

**Question (a.ii) Seismic Ground Shaking: CEQA Not Applicable.** The State Division of Mines and Geology has published a map of maximum expectable earthquake intensities for California. The proposed Sussex Estates subdivision is located within Zone II (Merced County 2013b). In the event an earthquake would occur within Zone II, it would be expected to result in damage of moderate severity. Merced County requires that all new construction comply with the seismic safety
requirements of the CBC. Compliance with the CBC would reduce risks on the project site from seismic ground shaking to levels considered acceptable for the state and region. Therefore, no hazardous conditions related to ground shaking would occur with the implementation of the project. Additionally, the implementation of the project would not lead to offsite effects related to hazards related to seismic ground shaking, nor would any existing offsite hazards be exacerbated.

**Question (a.iii) Ground Failure/Liquefaction: CEQA Not Applicable.** While the County has not recognized any specific areas subject to liquefaction hazard, there is the potential for occurrence where unconsolidated sediments and a high water table coincide. Probable areas for liquefaction hazards include the county’s wetland areas and areas with high groundwater or near levees. Groundwater levels within the project region ranged from 20 to 50 feet below ground surface in 2002 (Merced County 2013c). According to the California Department of Water Resources well records for the project vicinity, groundwater levels have decreased by more than 10 feet during the period from 2005 to 2015 (DWR 2016). While the proposed project would not likely be exposed to the effects of liquefaction, building standards imposed by Merced County and compliance with CBC requirements would further reduce this potential hazardous condition. Also, the project area is not noted for unstable geologic formations susceptible to ground failure (Merced County 2013d), and the site is generally level. Given the existing topography and soil structure, and required compliance with seismic safety requirements according to the CBC, building failure or damage due to liquefaction or unstable geological features at this location are considered unlikely. Therefore, potential geologic hazards such as ground failure and liquefaction would not result in hazardous conditions for the project. Additionally, the implementation of the project would not lead to offsite effects related to hazards from ground failure or liquefaction, nor would any existing offsite hazards be exacerbated.

**Question (a.iv) Landslides: CEQA Not Applicable.** The project site is generally flat and is not located near steep slopes with unstable soils that may be susceptible to landslides. Also, the greater project area is not noted for unstable geologic formations susceptible to landslides (Merced County 2013b). Therefore, the project would not be exposed to potential geologic hazards, including the risk of loss, injury, or death involving a landslide.

**Question (b) Soil Erosion: Potentially Significant Impact.** For an evaluation of potential impacts associated with soil erosion and stormwater runoff that could result from implementation of the proposed project, see Section IX, *Hydrology and Water Quality*, Questions (a)(f), of this Initial Study.

**Question (c) Unstable Soils: Less-than-significant Impact.** Soils present in the area of the proposed project have building limitations, but these limitations could be minimized by project engineering and design (NRCS 2016). Further, the project area is not noted for unstable geologic formations susceptible to landslide or ground failure (Merced County 2012c). The project site has been previously graded, and topography within the project area is relatively level. Given the existing topography, and because the area of the proposed construction is not considered unstable or susceptible to ground failure, the construction of the proposed project would not result in soil instability.

Subsidence is the settling or sinking of parts of the earth’s surface layer. In some areas, subsidence can result from excessive extraction of groundwater. The project site is not located within a known area of subsidence (Merced County 2013b). Because no water is currently used on the project site, water use by the proposed project would represent a new source of local demand. For these reasons, water use could adversely affect water supply and contribute to overdraft conditions in this area of...
Merced County. For additional information regarding this effect and required mitigation, see Section XVII, *Utilities and Service Systems*, of this Initial Study.

Other potential effects from unstable or expansive soils would be minimized following compliance with the Merced County and CBC building standards, including the submittal of a soils report. For these reasons, potential impacts from landslides, lateral spreading, or unstable soils would be less than significant, and no additional mitigation would be necessary.

**Question (d) Expansive Soils: CEQA Not Applicable.** Expansive soils are soils that expand when water is added, and shrink when they dry out. The project site soils have some building limitations due to shrink-swell potential (NRCS 2016). The Merced County building code requires a soils report for most residential structures within Merced County. Compliance with the CBC requirements would reduce risks on the project site from shrink-swell potential to levels considered acceptable for the state and region, and the proposed project would not be exposed to geologic hazards from expansive soils. Additionally, the implementation of the project would not lead to offsite effects related to hazards from expansive soils, nor would any existing offsite hazards be exacerbated.

**Question (e) Septic: Potentially Significant Impact.** For an evaluation of the wastewater management system proposed by the project, including the adequacy of onsite soils to support an OWTS, see Section XVII, *Utilities and Service Systems*, Questions (a)(b)(e), of this Initial Study.

### VII. GREENHOUSE GAS EMISSIONS

Would the project:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

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### ENVIRONMENTAL SETTING

Global Warming is a public health and environmental concern around the world. As global concentrations of atmospheric greenhouse gases increase, global temperatures increase, weather extremes increase, and air pollution concentrations increase. Global warming and climate change has been observed to contribute to poor air quality, rising sea levels, melting glaciers, stronger storms, more intense and longer droughts, more frequent heat waves, increases in the number of wildfires and their intensity, and other threats to human health (IPCC 2013). With the exception of 1998, the 10 warmest years in the 136-year record of global temperatures all have occurred since 2000, with 2015 ranking as the warmest year on record (NOAA 2016). Hotter days facilitate the formation of ozone, increases in smog emissions, and increases in public health impacts (e.g., premature deaths, hospital admissions, asthma attacks, and respiratory conditions) (EPA 2015a). Averaged global combined land and ocean surface temperatures have risen by roughly 0.85°C from 1880 to 2012 (IPCC 2013). Because oceans tend to warm and cool more slowly than land areas, continents have warmed the most. If greenhouse gas emissions continue to increase, climate models predict that the
average temperature at the Earth’s surface is likely to increase by over 1.5°C by the year 2100 relative to the period from 1850 to 1900 (IPCC 2013).

The Greenhouse Effect (Natural and Anthropogenic)

The Earth naturally absorbs and reflects incoming solar radiation and emits longer wavelength terrestrial (thermal) radiation back into space. On average, the absorbed solar radiation is balanced by the outgoing terrestrial radiation emitted to space. A portion of this terrestrial radiation, though, is itself absorbed by gases in the atmosphere. The energy from this absorbed terrestrial radiation warms the Earth’s surface and atmosphere, creating what is known as the “natural greenhouse effect.” Without the natural heat-trapping properties of these atmospheric gases, the average surface temperature of the Earth would be below the freezing point of water (IPCC 2007). Although the Earth’s atmosphere consists mainly of oxygen and nitrogen, neither plays a significant role in this greenhouse effect because both are essentially transparent to terrestrial radiation. The greenhouse effect is primarily a function of the concentration of water vapor, carbon dioxide, methane, nitrous oxide, ozone, and other trace gases in the atmosphere that absorb the terrestrial radiation leaving the surface of the Earth (IPCC 2007). Changes in the atmospheric concentrations of these greenhouse gases can alter the balance of energy transfers between the atmosphere, space, land, and the oceans. Radiative forcing is a simple measure for both quantifying and ranking the many different influences on climate change; it provides a limited measure of climate change as it does not attempt to represent the overall climate response (IPCC 2007). Holding everything else constant, increases in greenhouse gas concentrations in the atmosphere will likely contribute to an increase in global average temperature and related climate changes (EPA 2015c).

Greenhouse Gases

Naturally occurring greenhouse gases include water vapor, carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and ozone (O₃). Several classes of halogenated substances that contain fluorine, chlorine, or bromine are also greenhouse gases, but they are, for the most part, emitted solely by human activities. There are also several gases that, although they do not have a direct radiative forcing effect, do influence the formation and destruction of ozone, which does have such a terrestrial radiation absorbing effect. These gases, referred to here as ozone precursors, include carbon monoxide (CO), oxides of nitrogen (NOₓ), and non-methane volatile organic compounds (NMVOC). Aerosols (extremely small particles or liquid droplets emitted directly or produced as a result of atmospheric reactions) can also affect the absorptive characteristics of the atmosphere.

Carbon is stored in nature within the atmosphere, soil organic matter, ocean, marine sediments and sedimentary rocks, terrestrial plants, and fossil fuel deposits. Carbon is constantly changing form on the planet through a number of processes referred to as the carbon cycle, which includes but is not limited to degradation and burning, photosynthesis and respiration, decay, and dissolution. When the carbon cycle transfers more carbon to the atmosphere this can lead to global warming. Over the last 300 years atmospheric levels of carbon have increased by more than 30 percent, of which approximately 65 percent is attributable to fossil fuel combustions and 35 percent is attributed to deforestation and the conversion of natural ecosystems to agricultural use (Pidwirny 2006). Carbon stored in plants and rocks is referred to as being sequestered. Within the United States, forest sequestration of carbon offsets approximately 11 percent of the fossil fuel GHG emissions each year (USDA 2010).
California Greenhouse Gas Emissions

California carbon dioxide equivalent emissions were approximately 459.28 million metric tons in 2013. While there has been an increase in GHG emissions from 2010 levels of 456.02 million metric tons, there has been an overall decrease from 2004 emissions of 495.34 million metric tons. Of GHG emissions from within California, over 36 percent is from transportation and over 19 percent is from electric power. Agriculture, including fuel use by agricultural support activities, comprises nearly 8 percent of the state’s GHG emissions (ARB 2015a). Agricultural activities are the dominant source of GHG emissions within Merced County (69 percent of total 2010 emissions in unincorporated Merced County, and 42 percent of total 2010 countywide emissions, including the incorporated cities). Transportation activities are the second leading source of GHG emissions (23 percent in unincorporated Merced County and 39 percent in total Merced County during 2010) (Merced County 2013c).

REGULATORY FRAMEWORK

The U. S. EPA is the federal agency responsible for implementing the CAA. The U.S. Supreme Court ruled on April 2, 2007 that CO₂ is an air pollutant as defined under the CAA, and that EPA has the authority to regulate emissions of GHGs. However, there are no federal regulations or policies regarding GHG emissions thresholds applicable to the proposed project at the time of this Initial Study.

The ARB is the agency responsible for coordination and oversight of state and local air pollution control programs in California, and for implementing the CCAA. Various statewide and local initiatives to reduce the state’s contribution to GHG emissions have raised awareness that, even though the various contributors to and consequences of global climate change are not yet fully understood, global climate change is under way, and there is a real potential for severe adverse environmental, social, and economic effects in the long-term. Because every nation emits GHGs, and therefore makes an incremental cumulative contribution to global climate change, cooperation on a global scale will be required to reduce the rate of GHG emissions to a level that can help to slow or stop the human-caused increase in average global temperatures and associated changes in climatic conditions.

There are numerous laws that have been signed into effect in California in efforts to reduce GHG emissions. AB 1493 (signed in 2002) requires that the ARB develop and adopt, by January 1, 2005, regulations that achieve “the maximum feasible reduction of GHG emissions emitted by passenger vehicles and light-duty trucks and other vehicles determined by the ARB to be vehicles whose primary use is noncommercial personal transportation in the state.” To meet the requirements of AB 1493, in 2004 the ARB approved amendments to the California Code of Regulations adding GHG emissions standards to California’s existing standards for motor vehicle emissions. In 2009, the ARB adopted amendments to the “Pavley” regulations that reduce GHG emissions in new passenger vehicles from 2009 through 2016.

Executive Order S-3-05, which was signed by Governor Schwarzenegger in 2005, proclaims that California is vulnerable to the impacts of climate change. It declares that increased temperatures could reduce the Sierra’s snowpack, further exacerbate California’s air quality problems, and potentially cause a rise in sea levels. To combat those concerns, the Executive Order established total greenhouse gas emission targets. Specifically, emissions are to be reduced to the 2000 level by 2010, the 1990 level by 2020, and to 80 percent of the 1990 level by 2050 (20 percent reduction).
In September 2006, then-Governor Schwarzenegger signed AB 32, the California Climate Solutions Act of 2006. AB 32 established regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and a cap on statewide GHG emissions. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020. In 2011, the ARB adopted the cap-and-trade regulation. The cap-and-trade program covers major sources of GHG emissions in the State such as refineries, power plants, industrial facilities, and transportation fuels. The cap-and-trade program includes an enforceable emissions cap that will decline over time. The State will distribute allowances, which are tradable permits, equal to the emissions allowed under the cap.

The initial main strategies and roadmap for meeting the 1990 emission level reductions are outlined in a Scoping Plan approved in December 2008 and updated every five years (the Scoping Plan was updated in May 2014). The Scoping Plan includes regulations and alternative compliance mechanisms, such as monetary and non-monetary incentives, voluntary actions, and market-based mechanisms, such as a cap-and-trade program. The Climate Change Scoping Plan contains the main strategies California will implement to achieve a reduction of 80 million metric tons (MMT) of carbon dioxide equivalent (CO\textsubscript{2}e) emissions, or approximately 16 percent, from the state’s projected 2020 emission level of 507 MMT of CO\textsubscript{2}e under a business-as-usual scenario. The Climate Change Scoping Plan also includes a breakdown of the amount of GHG reductions the ARB recommends for each emissions sector of the state’s GHG inventory. (ARB 2014b)

Senate Bill (SB) 97, signed August 2007, acknowledges that climate change is a prominent environmental issue that requires analysis under CEQA. This bill directs the State Office of Planning and Research to develop guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions. These guidelines were adopted in December 2009 and were made effective March 18, 2010. The amendments include an explicit requirement that EIRs analyze GHG emissions resulting from a project when the incremental contribution of those emissions may be cumulatively considerable.

Executive Order B-30-15, signed April 2015, establishes a California greenhouse gas reduction target of 40 percent below 1990 levels by 2030. The 2030 target acts as an interim goal on the way to achieving reductions of 80 percent below 1990 levels by 2050, a goal set by former Governor Schwarzenegger in 2005 with Executive Order S-3-05. The Executive Order requires state agencies consider “full life-cycle cost accounting” when making future planning and investment decisions. To help state agencies incorporate climate change impacts into planning and investment decisions, the Executive Order requires the Governor’s Office of Planning and Research to establish a technical, advisory group on the issue.

The California Green Building Standards Code (CALGreen Code)(California Code of Regulations, Title 24, Part 11) is a part of the California Building Standards Code that comprehensively regulates the planning, design, operation, and construction of newly constructed buildings throughout the state. Both mandatory and voluntary measures are included in the CALGreen Code. Mandatory measures for non-residential structures include standards for light pollution reduction, energy efficiency, and water conservation, among others.

**SIGNIFICANCE THRESHOLDS**

On December 17, 2009, the SJVAPCD adopted the policy “District Policy – Addressing GHG Emissions Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency”. The guidance was
developed to assist Lead Agencies, project applicants, permit applicants, and interested parties in assessing and reducing the impacts of project specific GHG emissions on global climate change. In accordance with this guidance, a project would be considered to have a less-than-significant cumulatively considerable impact on climate change if the project:

- Implements SJVAPCD adopted Best Performance Standards (BPS);
- Complies with an approved GHG plan or mitigation program; or
- Demonstrates a 29 percent reduction\(^3\) in GHG emissions from business-as-usual (BAU).

The analysis for the proposed project does not use any of the above criteria for determining the significance of GHG emissions, for the following reasons: (1) There are no adopted BPS for a land use development project; (2) Merced County does not have an adopted GHG reduction plan or climate action plan; (3) The California Supreme Court\(^4\) questioned the use of Scoping Plan targets for individual projects without adequate explanation. Therefore, this analysis does not use demonstration of a 29 percent reduction in GHG emissions from BAU emissions to determine that a project would have a less than cumulatively significant impact consistent with GHG emission reduction targets established in the ARB’s AB 32 Scoping Plan.

The SJVAPCD guidance does not limit the lead agency from establishing its own methodology in determining the significance of project-related greenhouse gas emissions and global climate change impacts. Further, the State CEQA Guidelines specify that thresholds adopted by other agencies may be considered by lead agencies when determining project significance.

This analysis uses the commonly adopted numeric threshold for land use projects of 1,100 metric tons CO\(_2\)e per year for both construction and operation emissions. If emissions exceed 1,100 metric tons of CO\(_2\)e per year, then a significant impact would result. The project proponent would be required to either mitigate below the 1,100 threshold or implement all feasible mitigation for a project.

**ENVIRONMENTAL ANALYSIS**

**Question (a) Greenhouse Gas Emissions: Less-than-significant Impact.** Greenhouse gas emissions would be generated from the proposed subdivision project during construction and operation. Temporary GHG emissions would occur during construction activities, predominantly from heavy-duty construction equipment exhaust and worker commute trips. Operational GHG emissions would result from energy use associated with heating, cooling, and lighting the single-family residences; emissions associated with landscaping and maintenance activities; and from mobile sources associated with resident vehicle trips. Indirectly, project operations would also result in greenhouse gas emissions from wastewater treatment, water conveyance to the project site, and solid waste disposal.

\(^3\) The California Attorney General (AG) has expressed opposition to SJVAPCD strategy, claiming it leaves a number of unanswered questions, and the AG’s office issued a letter dated November 4, 2009 stating that the proposed approach would “not withstand legal scrutiny and may result in significant lost opportunities for the Air District and local governments to require mitigation of GHG emissions.” The AG stated that the threshold does not take into account the need for new development to be more GHG-efficient than existing development to achieve AB 32 goals, given that past and current sources of emissions, which are substantially less efficient than this average, will continue to exist and emit.

\(^4\) Center for Biological Diversity v. Department of Fish and Wildlife (2015) 62 Cal.4th 204.
While the SJVAPCD has developed a screening tool to streamline the process of assessing the significance of criteria pollutant emissions, a similar tool has not been established for GHG emissions. Because of this, Merced County has chosen to use a numeric threshold for land use projects of 1,100 metric tons CO$_2$e per year for both construction and operation emissions as established by the neighboring Sacramento Metropolitan Air Quality Management District (SMAQMD).

The SMAQMD CEQA Guide includes GHG operational screening levels for land use projects below 1,100 metric tons of CO$_2$e per year (SMAQMD 2014). For single-family housing, the screening level is 57 dwelling units based on California Emissions Estimator Model (CalEEMod.2013.2) results for a project in Sacramento. The proposed six-lot subdivision is well below this screening level, and GHG emissions from both construction and operation from the Sussex Estates project would not be expected to exceed the established threshold of significance of 1,100 metric tons of CO$_2$e per year. Because the proposed subdivision project would not exceed significance thresholds, the project’s contribution to greenhouse gas emissions is not expected to be substantial, and a less-than-significant impact would result with project implementation.

The single-family residences would be required to meet the Energy Code and Green Building Standards Code. No additional project details regarding energy efficiency measures are available. With implementation of energy efficiency regulatory measures, and the proposed subdivision project operations would be considered energy efficient.

**Question (b) Conflict with a GHG Reduction Plan: Less-than-significant Impact.** Merced County has not adopted a Climate Action Plan, nor any greenhouse gas reductions measures, other than enforcing the provisions of the Green Building Standards Code and the Title 24, Energy Code. As stated above, the project would be required to meet requirements of the Green Building Standards Code and the Title 24, Energy Code. Therefore, the project would not conflict with implementation of an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. This impact would be less-than-significant.
VIII. HAZARDS AND HAZARDOUS MATERIALS

Would the project:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

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b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

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c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

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d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

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e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

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f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

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g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

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h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

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Implementation of the proposed project would result in the construction of a residential cul-de-sac and six single-family residential lots within the proposed site. No chemicals or hazardous materials would be routinely stored or handled on site.

Database Review

A database search of various environmental agency lists was conducted for the project site and the surrounding area to identify potential hazardous contamination sites. Based on the database search, the project site is not listed as a hazardous waste site according to the EPA’s Envirofacts website database (EPA 2016c). Also, the project site is not listed on the California Department of Toxic Substance Control’s (DTSC) Hazardous Waste and Substances Sites List (known as the Cortese List) (DTSC 2016), or the U.S. EPA’s Superfund National Priorities List (EPA 2016d).
REGULATORY FRAMEWORK

Both federal and state laws include provisions for the safe handling of hazardous substances. The federal Occupational Safety and Health Administration (OSHA) administers requirements to ensure worker safety. Construction activity must also be in compliance with the California Occupational Safety and Health Administration regulations (Occupational Safety and Health Act of 1970).

ENVIRONMENTAL ANALYSIS

The following analysis is based upon Appendix G of the State CEQA Guidelines as used by Merced County. Because Appendix G has not been modified in response to the ruling of the California Supreme Court, the evaluation below follows the order of the questions posed by Appendix G. For traditionally evaluated impacts that are not now appropriate CEQA topics, the environmental conclusion has been replaced with the phrase “CEQA Not Applicable.” A discussion of the potentially hazardous condition follows, including recommended conditions of approval where appropriate. For additional information, see page 12 of this Initial Study.

Questions (a)(b) Transport of Hazardous Materials/Accident Conditions: Less-than-significant Impact. Construction activities for the proposed project would involve the use, storage, transport, and disposal of oil, gasoline, diesel fuel, paints, solvents, and other hazardous materials. Following construction, no hazardous materials would routinely be used. Construction activity must be in compliance with the California OSHA regulations. Compliance with these requirements would reduce the risk of hazards related to the routine transport, use, or disposal of hazardous materials to a less-than-significant level. The risk of hazards to the public or to environmental conditions related to accident conditions would also be reduced to a less-than-significant level.

Question (c) One-Quarter Mile of School: Less-than-significant Impact. There are numerous schools in the community of Atwater, to the north of the project site; however, there are no schools located with one-quarter mile of the proposed project site. As indicated above, no hazardous materials would be stored or handled on the project site. Although hazardous materials may be used in construction and the use of construction equipment could result in hazardous material emissions, the amounts of materials would be minor and equipment used would be temporary. Because there would be no storage or handling of hazardous materials, substances, or waste during ongoing operations, and because emissions of hazardous materials from construction equipment would be minor and temporary, this would be a less-than-significant impact.

Question (d) Hazardous Waste Site: No Impact. As described above, the project site is not identified as a location included on a list of hazardous materials sites compiled by the EPA’s Envirofacts database, the State of California DTSC’s Hazardous Waste and Substance Sites List, or lists compiled by Merced County for county addresses pursuant to Government Code Section 65962.5 (EPA 2016c; EPA 2016d; DTSC 2016). Therefore, no significant impact would occur, and no mitigation would be necessary.

Questions (e)(f) Public/Private Airports: CEQA Not Applicable. The nearest public use airports to the project site are Castle Airport and Merced Regional Airport, located respectively 3.5 miles northeast and 3.5 miles southeast of the proposed subdivision. The project site is not within any safety or overflight zone of either airport (Merced ALUC 2012). There are no private airstrips in the vicinity of the project site. Implementation of the proposed project would result in the construction of a residential cul-de-sac with six single-family residential lots. No aspect of the
The proposed project would result in the creation of a safety hazard for people living or working in the project area. Because the project site is not located in an area for which an Airport Land Use Plan has been prepared, and no aspect of the project would create a safety hazard relative to the public airfield located approximately three miles from the project site. Additionally, the implementation of the project would not lead to offsite effects related to aircraft hazards, nor would any existing offsite hazards be exacerbated.

**Question (g) Interference with an Emergency Response Plan: Less-than-significant Impact.**
The entrance to the proposed cul-de-sac associated with the Sussex Estates project site is less than one-quarter mile to the west of Buhach Road, a major collector roadway. That point on Buhach Road is located approximately 1.25 miles to south of State Highway 99, and approximately 1.0 mile to the north of Highway 140, a principal arterial roadway (Caltrans 2016). The proposed project does not include any modification of existing area roadways or intersections, and implementation of the project would not add significant amounts of traffic that would interfere with emergency response or evacuation. Therefore, the proposed project would result in a less-than-significant impact, and no mitigation would be necessary.

**Question (h) Wildland Fire Hazards: CEQA Not Applicable.** The Fire Hazard Severity Zone map for Merced County indicates that the project site and surrounding area is located in an Urban Unzoned Severity Zone (Merced County 2013f). This zone designates developed areas spatially removed from proximity to wildland fire areas. It is designated as a Local Responsibility Area – Unincorporated, an area not considered a fire risk (CAL FIRE 2007). Therefore, no hazard would occur related to risk of loss, injury, or death due to wildland fire with implementation of the proposed project. Additionally, the implementation of the project would not lead to offsite effects related to wildland fire hazards, nor would any existing offsite hazards be exacerbated.
IX. HYDROLOGY AND WATER QUALITY

Would the project:

a) Violate any water quality standards or waste discharge requirements?
   
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b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?
   
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c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?
   
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d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?
   
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e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?
   
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f) Otherwise substantially degrade water quality?
   
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g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance rate map or other hazard delineation map?
   
   CEQA Not Applicable.

h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?
   
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i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?
   
   CEQA Not Applicable.

j) Inundation by seiche, tsunami, or mudflow?
   
   CEQA Not Applicable.

ENVIRONMENTAL SETTING

The project site is currently fallow, although irrigated pasture and row crops have been grown on the site in the past. There is an apparently abandoned irrigation pipeline indicated by two standpipes located along the south project boundary. An existing stormwater detention basin located immediately north of the project site, east of the intersection of Essex Drive and Sussex Drive, receives stormwater from Noah Drive and Sussex Drive. See Figure 2.
Within the project site currently, all drainage is by sheet flow internally and into surrounding areas. The project site and vicinity are classified by the Federal Emergency Management Agency as lying within Zone X, Other Areas. Lands within this designation have been determined to be outside of the 0.2% annual chance floodplain.\(^5\) (FEMA 2016)

No floodways are identified in the project area. There are no watercourses or wetlands located on the project site. The nearest riparian features are located within the channels of Canal Creek and Black Rascal Creek, located approximately 0.9 and 0.8 miles east and south of the project site respectively; freshwater emergent wetlands are present approximately 0.9 miles to the south southeast (USFWS 2015). No water bodies are located on the site, nor is the site located in an area of important groundwater recharge.

Historic agricultural uses on the project site may once have been served by surface water supplied by an irrigation pipeline (now abandoned). No groundwater wells are present within the project area. As proposed, the Sussex Estates project would be served by individual wells and septic systems on each of the six lots (see Figure 3). For an assessment of the project’s effects on utility systems for water and wastewater, see Section XVII, *Utilities and Service Systems*, of this Initial Study.

The project site is located in the Merced Groundwater Basin, which is one of the four smaller basins in Merced County that comprise the larger San Joaquin River drainage basin and the San Joaquin Valley Groundwater Basin (groundwater system) (Merced County 2013g). Groundwater levels within the project region ranged from 20 to 50 feet below ground surface in 2002 (Merced County 2013c). According to the California Department of Water Resources well records for the project vicinity, groundwater levels have decreased by more than 10 feet during the period from 2005 to 2015 (DWR 2016). Groundwater within the project area has been classified by the U.S. Environmental Protection Agency as having a high sensitivity to contamination (Merced County 2013h).

**REGULATORY SETTING**

In 2013, the State of California approved a General Permit for Waste Discharge requirements for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (MS4). Order No. 2013-0001-DWQ, NPDES No. CAS000004. This MS4 permit applies to the majority of urbanized areas within Merced County east of the San Joaquin River, including the proposed Sussex Estates project site. The provisions of the MS 4 permit have been incorporated into the Merced County Code, as Chapter 9.53, Regulation of Stormwater.

Merced County implements the National Flood Insurance Program through Merced County Code Chapter 18.34, Special Flood Hazard Areas. This Chapter regulates the siting and design of structures within Special Flood Hazard Areas. As defined in the Code (18.34.020), the site of the proposed Sussex Estates campus is not within a Special Flood Hazard Area.

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\(^5\) A 0.2% annual chance flood was formerly described as a 500-year flood. Similarly a 1% change flood was described as a 100-year flood. The labeling was changed to better communicate the potential for a flood to occur in any given year or in successive years.
**ENVIRONMENTAL ANALYSIS**

**Questions (a)(f) Water Quality: Less-than-significant Impact with Mitigation.** Surface and groundwater quality could be adversely affected during both the construction and operational phases of the Sussex Estates project. With implementation of the mitigation measures identified below, the proposed project would not be expected to violate any water quality standards or waste discharge requirements, or substantially degrade water quality during construction or operation.

**Construction**

The majority of the project site has been previously graded and leveled, and no major grading or earth-moving activities would occur. However, because the proposed project would disturb more than one acre, the applicant would be required to obtain a General Construction Activity Storm Water Permit from the State Water Resources Control Board (SWRCB) for stormwater discharges associated with construction activities, which would require the implementation of a Stormwater Pollution and Prevention Plan (SWPPP). The SWPPP must contain Best Management Practices (BMPs) to reduce soil erosion and protect stormwater runoff. To ensure implementation of stormwater requirements and to avoid siltation effects, the following mitigation measure would be required.

**Mitigation Measure HYD-1:** The applicant shall submit permit registration documents for the Construction General Permit Order 2009-0009-DWQ to the SWRCB, and comply with all requirements of the permit. The annual fees are based on total disturbed area of the construction project in acres. A Legally Responsible Person (LRP) shall electronically submit Permit Registration Documents (PRD) prior to building permit issuance in the Stormwater Multi-Application Report Tracking System. PRDs consist of the Notice of Intent, Risk Assessment, Post-Construction Calculations, a Site Map, the SWPPP, a signed certification statement by the LRP, and the first annual fee. All requirements of the site specific SWPPP shall be included in construction documents for the project, and implemented for the duration of construction, including post-construction stabilization.

With implementation of Mitigation Measure HYD-1, the proposed project would not be expected to violate any water quality standards or waste discharge requirements during construction. Compliance with applicable requirements would minimize project impacts to water quality. A less-than-significant impact would result, and no additional mitigation would be necessary.

**Operations**

During operation of the proposed project, the primary uses of water would be for domestic purposes and landscape irrigation. Wastewater is proposed to be treated and disposed of using individual onsite wastewater treatment systems (septic tanks and leachfields) for each of the six lots. For an evaluation of the proposed septic systems, please refer to Section XVII, *Utilities and Service Systems*, Questions (a), (b), and (c).

For a discussion of stormwater generation and management during project operations, see Question (e), below.
Question (b) Groundwater Supply: Less-than-significant Impact with Mitigation. As proposed, domestic water would be provided to each of the six lots by individual wells.

For an evaluation of the proposed project’s effects on water use and supply, including required mitigation, please refer to Section XVII, Utilities and Service Systems, Questions (b) and (d).

Questions (c)(d) Drainage Pattern: Less-than-significant Impact. The project site is relatively flat, and has been previously graded and leveled. Implementation of the project is not expected to involve substantial additional grading or earth-moving activities. No natural surface waterways exist on or adjacent to the project site, and none would be altered by the proposed project. The construction of the proposed Sussex Estates subdivision would not alter the existing drainage pattern of the site in a manner that would result in substantial erosion or siltation, or flooding on- or off-site. A less-than-significant impact would result, and no mitigation would be required.

Question (e) Stormwater Runoff: Less-than-significant Impact with Mitigation. The project site is comprised of a fallow agricultural field that provides a pervious surface. Construction of the proposed residences would convert a relatively small portion of each lot to impervious surfaces (the dwelling, driveways, hardscape). As proposed by the applicant, building envelopes within each lot would be limited to 5,000 square feet (see Figure 3). Construction of the proposed cul-de-sac would also result in an impervious surface. In total, approximately 1.9 acres of the 7.7-acre project site would be converted to impervious surfaces. Additionally, implementation of Mitigation Measure UTIL-1 would prohibit pavement, permanent structures, and vehicle parking or driving, or flood irrigation within the area of each lot developed with a leach field.

As proposed, with project implementation, all stormwater would be collected in a network of storm drains and discharged into a detention basin to the north of the project site. The volume of stormwater generated by the proposed subdivision, the capacity of the basin, and existing flows to the basin are unknown. No treatment facilities to benefit stormwater quality are identified in the subdivision’s application materials.

In 2013, the State of California approved a General Permit for Waste Discharge requirements for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (MS4). Order No. 2013-0001-DWQ, NPDES No. CAS0000004. This obligates the County of Merced to review and potentially regulate new private development projects. The proposed Sussex Estates subdivision is located within the County MS4 (Stormwater Management) area and classified as a “Regulated Project” in the MS4 Permit. Regulated projects are required to be designed and constructed to implement source control measures and Low-Impact Development (LID) standards in order to effectively reduce runoff and pollutants associated with runoff.

These MS4 requirements have been incorporated into Chapter 9.53 of the Merced County Code, which requires development projects to incorporate best management practices in their design to control the volume, rate, and potential pollutant load of stormwater runoff as may be appropriate to minimize the generation, transport and discharge of pollutants. The site plan submitted to support this application does not indicate in detail the type of storm drainage system to be constructed. Because stormwater management facilities have not been designed beyond the location of an existing detention basin and the stormwater collection piping network, the project’s conformance with County stormwater quantity and quality requirements is unknown. The discharge of excessive or contaminated stormwater could adversely affect surrounding developed uses and the natural
environment. This would be a significant impact and mitigation would be necessary. Implementation of Mitigation Measure HYD-2 would assure that all state and local requirements to meet runoff volume and stormwater quality limitations would be met. No residual significant impact would remain, and no additional mitigation would be necessary.

**Mitigation Measure HYD-2:** Prior to the issuance of a building permit to initiate construction of the proposed project, the applicant shall develop an engineered stormwater drainage system to meet the collection, capacity, and quality requirements, and Low Impact Development requirements and Best Management Practices set forth in Merced County regulations (Merced County Code §9.53, Regulation of Stormwater). The Plan shall be submitted to Merced County for review and approval, and facilities identified in the approved plan will be constructed prior to recordation of any Final Subdivision Map.

**Questions (g)(i) Flooding: CEQA Not Applicable.** The Federal Emergency Management Agency (FEMA) provides information on flood hazards for communities based on its Flood Insurance Rate Maps. According to FEMA, the project site and vicinity are classified by the Federal Emergency Management Agency as lying within Zone X, Other Area. Lands within this designation have been determined to be outside of the 0.2% annual chance flood plain. No floodways are identified in the project area. As defined by the Merced County Code, Section 18.34.020, the site of the proposed Sussex Estates subdivision is not within a Special Flood Hazard Area.

Development of the Sussex Estates project would not place persons or structures at risk from flood hazards, or place developed uses in a floodway. Additionally, the implementation of the project would not lead to offsite effects related to flood hazards, nor would any existing offsite hazards be exacerbated.

**Question (h) Impede or Redirect Flood Flows: Less-than-significant Impact with Mitigation.** As noted above, no floodways are located in the project area, and the project site is not within a Special Flood Hazards Area as defined by the Merced County Code, Section 18.34.020. As proposed and mitigated by Mitigation Measure HYD-2, the project would provide an engineered stormwater collection and retention system.

Although six residences would be constructed on the site, no residence would be placed within a floodway, and no flood flows would be redirected or impeded. Additionally, as mitigated by Mitigation Measure HYD-2, the stormwater system would be designed so that drainage from the project area would be managed to meet County standards. Thus, implementation of the proposed project with Mitigation Measure HYD-2 would not impede or redirect flood flows. No residual impact would result, and no additional mitigation would be necessary.

**Question (j) Seiche, Tsunami, Mudflow: CEQA Not Applicable.** The proposed project site is located approximately 75 miles from the Pacific Ocean at an elevation of approximately 141 to 143 feet above MSL and is distant from any large lakes. Mudslides and other forms of mass wasting occur on steep slopes in areas that contain susceptible soils or geology, typically as a result of an earthquake or high rainfall event. The project site is located on relatively flat ground. Therefore, the proposed project would not be exposed to hazards related to a seiche, tsunami, or mudslides. Additionally, the implementation of the project would not lead to offsite effects related to these hazards, nor would any existing offsite hazardous conditions be exacerbated.
X. LAND USE AND PLANNING

Would the project:

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<td>a) Physically divide an established community?</td>
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<td>b) Conflict with applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?</td>
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<td>c) Conflict with any applicable habitat conservation plan or natural community conservation plan?</td>
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ENVIRONMENTAL SETTING

The Sussex Estates project site lies within the Agricultural-Residential (A-R) Zone. The purpose of the agricultural-residential zone is to provide areas for rural residential development with less than a full range of urban services. It is intended that this zone typically serve as a transitional area between more dense urban communities and agricultural uses. (Merced County 2013)

The proposed project site has a Land Use Designation of Agricultural Residential (AR) in the 2030 Merced County General Plan. The AR designation provides for single-family dwellings on large lots in a semi-rural environment with limited public services. It is typically applied to Rural Centers or at the edge of urban areas, and is often used as a buffer between urban and rural land uses. (Merced County 2013)

The Rural Residential Center designation includes existing areas with concentrations of suburban residential parcels on a minimum of one acre, which are typically adjacent to cities. These areas lack public sewer and/or water systems, have a stable or slowly increasing population, and have no commercial services. The project site is located within the McSwain Rural Residential Center in the 2030 Merced County General Plan. (Merced County 2013)

The existing land uses and facilities immediately surrounding the project site include single-family residences to the south, west, and north; and residential and agricultural uses to the east.

ENVIRONMENTAL ANALYSIS

Question (a) Physically Divide a Community: No Impact. The proposed project would involve the construction of a residential cul-de-sac with lots for six single-family residences. The surrounding area is residential in nature. Because the project would result in a continuation of existing residential uses in the area, it would not divide an established community. No adverse effects would result, and no mitigation would be necessary.

Question (b) Land Use Plan Conflict: Less-than-significant Impact. The proposed project involves a site that is designated as a Rural Residential Center in the General Plan and zoned Agricultural Residential in the Zoning Code. The construction of a residential cul-de-sac and home sites would be consistent with both the Zoning Code and the 2030 Merced County General Plan.
Therefore, the proposed project would not conflict with any applicable land use plan, policy, or regulation. Impacts would be less than significant, and no mitigation would be required.

**Question (c) Habitat Conservation Plan: No Impact.** The project site is not located in an area covered by an adopted Habitat Conservation Plan or Natural Community Conservation Plan; therefore, no conflict with any local conservation program would occur. No significant impact would result, and no mitigation would be necessary.

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**XI. MINERAL RESOURCES**

Would the project:

a) Result in the loss of availability of a known mineral resource that would be of value to the region and residents of the state?

b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

**ENVIRONMENTAL SETTING**

Mineral resources within Merced County consist of aggregate deposits located along the Merced River and adjacent existing and historic watercourses. According to the 2030 Merced County General Plan Background Report, Figure 8-10, the project site is not located in an area of sand and gravel resources (Merced County 2013i).

**ENVIRONMENTAL ANALYSIS**

**Questions (a)(b) Loss of Known or Locally-Important Mineral Resources: No Impact.** No important mineral deposits, Mineral Resource Zones, or existing or previous mines are located in the area or on the project site. Because none of these resources and resource protection zones are present on the project site, no adverse effects would result, and no mitigation would be necessary.
XII. NOISE

Would the project result in:

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Potential noise impacts of the Sussex Estates project can be categorized as those resulting from construction and those from operational activities. Construction noise would have a short-term effect; operational noise would continue throughout the lifetime of the project. Construction associated with the development of the proposed project would increase noise levels temporarily during construction. Operational noise associated with the residential subdivision would be ongoing following occupancy of the six residences.

ENVIRONMENTAL SETTING

Some land uses are considered more sensitive to noise levels than other uses. Sensitive land uses can include residences, schools, nursing homes, hospitals, and some public facilities, such as libraries. Sensitive land uses also may include areas that contain threatened or endangered biological species known to be sensitive to noise. Single-family residences are the only sensitive use in the vicinity of the proposed project. The closest off-site single-family residences are located immediately surrounding the project site.

REGULATORY FRAMEWORK

Merced County General Plan

The Merced County 2030 General Plan Noise Element provides a basis for local policies to control and abate environmental noise, and to protect the citizens of Merced County from excessive noise exposure (Merced County 2013). The fundamental goals of the Noise Element are as follows:

- All citizens of the County free from the harmful effects of excessive noise.
• Noise generating land uses and facilities important to the economic health of the County are not adversely affected by incompatible land uses.

Merced County Noise Ordinance

The County also enforces its Noise Ordinance (Chapter 10.60, Noise Control) in the County Code. This ordinance contains noise level standards for residential and non-residential land uses. Specifically, the County Code prohibits a noise source from exceeding the background sound level by at least 10 dBA during daytime hours (seven a.m. to ten p.m.) and by at least 5 dBA during nighttime hours (ten p.m. to seven a.m.). (Chapter 10.60.030). The County Code (Chapter 10.50.040A.2) prohibits anyone using or operating any loudspeaker, public address system, or similar device between ten p.m. and eight a.m. the following day, such that the sound therefrom creates a noise disturbance across a residential real property line.

According to County Code (Chapter 10.60.040), construction activities that include the operation of any tools or equipment used during construction, drilling, earth moving activities, excavating, or demolition are prohibited from 6:00 p.m. to 7:00 a.m. These hours are so defined because they include a period of time where noise sensitivity is at its lowest. Therefore, because the construction activity associated with the proposed project would occur during the day and would be consistent with the County’s Noise Ordinance, impacts from construction noise would be less than significant, and no mitigation would be necessary.

Operational Noise

The noise environment in the area of the project site includes traffic noise from vehicles on local roadways, and from active agricultural uses located in the vicinity of the project site. The project proposes to construct six new single-family residences, on a project site that is surrounded by similar residential uses. Implementation of the proposed project would not result in a substantial increase in noise over existing conditions. Because the proposed project would not result in a substantial increase in operational noise levels or exceed established noise standards, this would be a less-than-significant impact, and no mitigation would be necessary.
Questions (e)(f) Public Use Airport/Private Airstrip: CEQA Not Applicable. Since the project site is not located in an area for which an Airport Land Use Plan has been prepared, and no public or private airfields are located within two miles of the project area, those people working on construction of the project or residing in the newly established cul-de-sac would not be exposed to adverse levels of noise due to aircraft overflight (Merced County ALUC 2012). Therefore, no significant impact would occur, and no mitigation would be necessary.

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XIII. POPULATION AND HOUSING

Would the project:

a) Induce substantial growth in an area either directly (e.g., by proposing new homes and businesses) or indirectly (for example through extension of roads or other infrastructure)?

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

ENVIRONMENTAL ANALYSIS

Question (a) Growth-Inducement: Less-than-significant Impact. Implementation of the proposed project would result in the construction of a residential cul-de-sac with six lots for single-family residential units. No existing public infrastructure or new infrastructure with the capacity to serve areas beyond the project site would be affected, constructed, or removed.

The project would be constructed in a single phase. In March 2016, the labor force in Merced County totaled 115,500 persons, with an official unemployment rate of 12.5 percent (or 14,400 unemployed persons) (EDD 2016). The increased labor needs of the project can be accommodated by this existing workforce within Merced County, and would not require the importation of workers. Similarly, any additional housing demands caused by project employees could be accommodated by existing and planned housing resources within Merced County.

The population of Merced County on July 1, 2014 was estimated to be 265,069 (DOF 2014). The proposed project would result in the construction of six single-family residences; this would represent a minimal increase in the County’s population. It would not exceed population projections or result in any significant growth inducing effects. The proposed project would not be expected to result in substantial new growth in the project vicinity. Therefore, the proposed project would not result in substantial direct or indirect growth inducement, and a less-than-significant impact would occur.

Questions (b)(c) Housing Displacement/Population Displacement: Less-than-significant Impact. Implementation of the proposed project would result in the construction of a residential cul-de-sac on currently vacant land. The proposed project would not displace substantial numbers of people or existing housing units, and a less-than-significant impact would occur.
XIV. PUBLIC SERVICES

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives of any of the public services:

<table>
<thead>
<tr>
<th>Public Service</th>
<th>Potentially Significant Impact</th>
<th>Less than Significant Impact with Mitigation</th>
<th>Less than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire protection?</td>
<td></td>
<td>✔</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Police protection?</td>
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<td>Schools?</td>
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<tr>
<td>Parks?</td>
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<tr>
<td>Other public facilities?</td>
<td></td>
<td>✔</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ENVIRONMENTAL SETTING

Public services provided in the project area include fire, police, school, library, and park services. The Merced County Fire Department would provide service to the site; the City Fire Departments in Merced and Atwater would provide mutual support. The nearest public library is the Atwater Branch Library in Atwater area, approximately three miles northwest of the project site. The nearest public schools are located in Atwater, to the north of the project site. Police protection in the unincorporated areas of Merced County is provided by the Merced County Sheriff’s Department, whose office is located in downtown Merced. The nearest hospital is Mercy Medical Center in Merced. Park services are discussed in more detail in Section XV, Recreation. Utility services are discussed in more detail in Section XVII, Utilities and Service Systems.

ENVIRONMENTAL ANALYSIS

Question (a) Fire/Police/Schools/Parks/Other Services: Less-than-significant Impact.

Implementation of the proposed project would result in the construction of six single-family residences. The Merced County Fire Code imposes requirements for new buildings constructed in Merced County, including plan checks, address identification, access requirements, and fire flow requirements (Merced County 2015). Compliance with the requirements as set forth by the Fire Department would be required as conditions of approval, and would reduce fire risk and hazard to levels found acceptable by the Merced County Fire Department. Therefore, there would be no increase or change in the demand for fire service that would require the provision of new or physically altered fire facilities.

No feature of the project would result in the need for new or altered facilities for police protection, schools, parks, libraries, or health services. Because only six residences would be constructed, and needed employees would be drawn from the local labor pool, no substantial increase in population is expected to result from the proposed project. No feature of the proposed project would pose unusual police protection demands. Therefore, there would be no substantial increase in the demand for public services such as police facilities, schools, parks, libraries, or health services that would require the construction of new facilities or physically altered facilities. This would be a less-than-significant impact, and no mitigation would be necessary.
XV. **RECREATION**

Would the project:

a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?  

b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

**ENVIRONMENTAL ANALYSIS**

**Question (a)(b) Less-than-significant Impact.** No existing public recreational resources are located on the project site or in the vicinity, and no substantial increase in population would occur with implementation of the proposed project. There would be no substantial increase in the use of existing neighborhood or regional parks or other recreational facilities that would cause or accelerate the physical deterioration of such facilities. The proposed project does not include recreational facilities, nor does it require the construction or expansion of such facilities that might have an adverse physical effect on the environment. This would be a less-than-significant impact.
XVI. TRANSPORTATION/TRAFFIC

Would the project:

a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, street, highways and freeways, pedestrian and bicycle paths, and mass transit? ✓

b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways? ✓

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks? ✓

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? ✓

e) Result in inadequate emergency access? ✓

f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities? ✓

For lots 1, and 3 through 6, access would be provided by an extension of Sussex Drive, and the creation of a new cul-de-sac, Silva Court. Access to lot 2 would be provided by a private driveway from Essex Drive (see Figure 3). Neighborhood access would be provided by Noah Drive and Cardiff Lane. Regional access would be provided by Buhach Road, and State Routes 99 and 140. All streets within the immediate vicinity, except for Buhach Road, are two-lane local streets designed to provide neighborhood access. Buhach Road is designated as a major collector roadway designed to gather traffic from local streets to provide access to regional-serving facilities such as State Routes 99 and 140 (Caltrans 2016).

Merced County has determined that single family residences, such as those proposed to be developed at Sussex Estates, result in 9.5 vehicle trips per day (Merced County undated). Based on the proposed 6 lots, implementation of the proposed Sussex Estates project would result in approximately 57 new vehicle trips per day.

The proposed project has been reviewed by the Merced County Department of Public Works, Road Division. The Division noted no traffic volume or operational concerns associated with the Sussex Estates subdivision. In its response, the Division noted that the project would be subject to standard County roadway improvement requirements as set forth in Chapter 16.08 of the Merced County Code, and that the project proponents would be required to pay impact fees to fund area wide and regional roadway improvements. (Road Division 2015)
No public fixed-or deviated-route bus service is provided to the project area (Transit JPA 2016). No bicycle or pedestrian facilities are developed or planned on the project site or in its vicinity (MCAG 2008; Google Earth 2016). The nearest public use airports to the project site are Castle Airport and Merced Regional Airport, located respectively 3.5 miles northeast and 3.5 miles southeast of the proposed subdivision. The project site is not within any safety or overflight zone of either airport. (Merced ALUC 2012)

Questions (a)(b) Conflict with Transportation Plan/Congestion Management Plan: Less-than-significant Impact. At full buildout, vehicle trips would increase to approximately 57 vehicles per day, split between Sussex Drive/Cardiff Way and Essex Drive/Noah Drive. Because of the existing low levels of traffic in the vicinity, and because new trips generated by the proposed project expansion would be limited, there would be no reduction of the existing Levels of Service on local or regional roadways. Additionally, the proponents of the project would be required to pay impact fees to provide the project’s fair share of area wide and regional improvements necessary to meet future traffic circulation needs. With implementation of required County improvements and payment of impact fees, the proposed project would be consistent with policies to maintain the performance of the circulation system and would not conflict with any applicable congestion management plan. No mitigation would be necessary.

Question (c) Air Traffic: No Impact. The proposed project would not result in the generation of air traffic, and the project is not located within boundaries designated by any airport land use plan. There are no private airfields located within two miles of the project area. Castle Airport and the Merced Regional Airport are each located approximately 3.5 miles from the project site. Because the project site is not near a public airport or private airfield, and the project itself would not generate air traffic, the proposed project would not result in an impact on air traffic patterns.

Questions (d)(e) Safety Hazards/Emergency Access: Less-than-significant Impact. According to the Merced County General Plan, freeways and major county roads would be used as primary evacuation routes. Except for an improvement to Essex Drive and connection of the project’s cul-de-sac to Sussex Drive, no modifications to any existing roadway would be proposed either during project construction or operation. Construction of the proposed onsite cul-de-sac would allow for the access of emergency vehicles and would not increase roadway hazards. In addition, the Merced County Fire Department maintains standards for access roadways to provide for adequate emergency access. Project approval would be subject to site plan review by the Merced County Fire Department. Therefore, project implementation would not interrupt emergency access to the proposed project site, and compliance with county roadway and emergency access standards would ensure safety impacts from hazards due to design features are less than significant. No mitigation would be necessary.

Question (f) Public Transit/Bicycle/Pedestrian Facilities: No Impact. There are no existing or planned facilities for transit, bicycles, or pedestrians in the project area. Additionally, there are no policies with respect to alternative modes of transportation that have been adopted as part of the Merced County General Plan that apply to the proposed facility. Therefore, the project would have no effect on alternative modes of transportation, and it would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities. No impact would result, and no mitigation would be necessary.
XVII. UTILITIES AND SERVICE SYSTEMS

Would the project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?
   - Potentially Significant Impact: 
   - Less than Significant Impact with Mitigation: ✓
   - Less than Significant Impact: 
   - No Impact: 

b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?
   - Potentially Significant Impact: 
   - Less than Significant Impact with Mitigation: ✓
   - Less than Significant Impact: 
   - No Impact: 

c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?
   - Potentially Significant Impact: 
   - Less than Significant Impact with Mitigation: ✓
   - Less than Significant Impact: 
   - No Impact: 

d) Have sufficient water supplies available to serve the project from existing water entitlements and resources, or are new or expanded entitlements needed?
   - Potentially Significant Impact: 
   - Less than Significant Impact with Mitigation: ✓
   - Less than Significant Impact: 
   - No Impact: 

e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project’s projected demand in addition to the provider’s existing commitments?
   - Potentially Significant Impact: 
   - Less than Significant Impact with Mitigation: ✓
   - Less than Significant Impact: 
   - No Impact: 

f) Be served by a landfill with sufficient permitted capacity to accommodate the project’s solid waste disposal needs?
   - Potentially Significant Impact: 
   - Less than Significant Impact with Mitigation: 
   - Less than Significant Impact: ✓
   - No Impact: 

g) Comply with federal, state, and local statutes and regulations related to solid waste?
   - Potentially Significant Impact: 
   - Less than Significant Impact with Mitigation: 
   - Less than Significant Impact: ✓
   - No Impact: 

ENVIRONMENTAL SETTING

Water Supply

Potable water in the general area of the proposed Sussex Estates subdivision, including adjacent existing residences, is provided by individual wells on each residential parcel. The project site is located in the Merced groundwater subbasin, and in the Lower Bear Creek watershed. Merced Subbasin groundwater elevations have been monitored by Department of Water Resources (DWR), the Merced Irrigation District (MID), and other entities since the 1950s. This monitoring data indicates that since 1980, average groundwater levels beneath the Merced Subbasin have declined approximately 14 feet, with most of this decline occurring between 1980 and 1996. As such, the Merced Subbasin is considered to be in a state of mild long-term groundwater level decline. Decline in groundwater is normalized over the entire basin; however, local decreases ranged from 5 feet in the southwesterly area to more than 50 feet south of Le Grand, along the Chowchilla River. (MIRWMP 2013)

Even though no urban water provider would serve the proposed Sussex Estates project, future residents would have to comply with existing and future statewide restrictions on water use. For more information regarding state drought requirements, refer to the Regulatory Framework section below.
Historical water use on the site has primarily been for agriculture. Aerial photographs of the project area indicate that as early as 1998, the project site was used for pasture or rowcrops. Based on aerial photographs, agricultural activities appear to have ceased after 2003, and the site has seasonally been disked for weed control since 2004. (Google Earth Pro 2016). Because the project site has been fallowed for an extended period, no water is currently used.

**Wastewater Treatment and Disposal**

No community wastewater services are currently provided to the project site or within the area. The applicant for the Sussex Estates project proposes that the wastewater treatment and disposal needs of each of the six residences be provided by individual Onsite Wastewater Treatment Systems (OWTS) on each lot, consisting of a septic tank and leach field (see Figure 3). A septic tank and leach field would be developed within each of the lots at the time of home construction.

On-site soil properties have the potential to affect the absorption of effluent due to the presence of a hardpan and slow percolation rates. Two soil types are present on the project site as shown in Table 6.

<table>
<thead>
<tr>
<th>Table 6</th>
<th>Suitability of Soils on the Project Site for Septic Tank Absorption Fields</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soil Map Unit</td>
<td>Soil Unit Name</td>
</tr>
<tr>
<td>AgA</td>
<td>Atwater loamy sand, imperfectly drained variant, 0 to 3 percent slopes</td>
</tr>
<tr>
<td>SmA</td>
<td>Snelling sandy loam, imperfectly drained variant, 0 to 1 percent slopes</td>
</tr>
</tbody>
</table>

Source: NRCS 2016

As defined by the NRCS, septic tank absorption fields are areas in which effluent from a septic tank is distributed into the soil through subsurface tiles or perforated pipe. Only that part of the soil between depths of 24 and 60 inches is evaluated by the NRCS. The ratings are based on the soil properties that affect absorption of the effluent, construction and maintenance of the system, and public health. These factors include saturated hydraulic conductivity (Ksat), depth to a water table, ponding, depth to bedrock or a cemented pan, and flooding affect absorption of the effluent. Stones and boulders, ice, and bedrock or a cemented pan interfere with installation. Subsidence interferes with installation and maintenance. Excessive slope may cause lateral seepage and surfacing of the effluent in downslope areas. (NRCS 2016)

Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the specified use. “Not limited” indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. “Somewhat limited” indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. “Very limited” indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected. (NRCS 2016)
As depicted on Figure 3, the leach fields proposed to serve each lot of the Sussex Estates project would be located on Atwater loamy sand or Snelling sandy loam, which are rated as “very limited” by the NRCS.

**Stormwater Infrastructure**

The project site is currently fallow. No engineered stormwater facilities are located on the project site. All drainage is by sheet flow internally and into surrounding areas. As proposed, stormwater from the Sussex Estates site would be directed to an existing detention basin located north of the project site. For additional information regarding the proposed design of stormwater infrastructure and the potential effects of the project on stormwater quality and quantity, please refer to Section IX, *Hydrology and Water Quality*, of this Initial Study.

**Solid Waste Disposal**

Wilton Disposal/Waste Management would provide solid waste disposal services at the project site (Merced County 2016b). The solid waste would be transported to the Highway 59 Landfill operated by the Merced County Association of Governments Regional Waste Management Authority. At existing and planned disposal rates, this landfill would reach capacity in 2065. With implementation of a recently approved expansion plan, the operational life of the landfill would be extended to sometime between 2076 and 2080 (MCRWMA 2015).

**Other Utilities**

Private utilities provide electric, gas, telephone, internet, and cable television services.

**Regulatory Framework**

**Water Supply**

California has suffered an ongoing and increasingly severe drought. On April 1, 2015, the California Governor issued Executive Order B-29-15 setting forth requirements and responsibilities of the State and its various agencies, and water purveyors. (This Executive Order has been modified and extended through January 31, 2017 by Executive Order B-37-16.) Provision 7 directs the State to adopt restrictions to ban the use of potable water for irrigation outside of newly constructed homes and buildings when that water is not delivered by drip or microspray systems. Provision 11 directs the State Water Resources Control Board to update the State Model Water Efficient Landscape Ordinance to increase water efficiency standards for landscaping. (This update was completed in July 2015; Merced County has not adopted this update as of the date of preparation of this Initial Study.) (Governor 2015, 2016) Additionally, the State Water Resources Control Board has issued additional regulations pursuant to the Executive Order. With respect to the proposed project, the State Board prohibits using potable water to wash sidewalks and driveways (SWRCB 2016).
Wastewater Treatment and Disposal

Installation and operation of onsite wastewater treatment systems (OWTS)\(^6\) or similar individual wastewater disposal systems in unfit soils can lead to the degradation of groundwater quality, and ultimately impact all groundwater supplies. A comprehensive body of OWTS design and operational requirements have been adopted by the California SWRCB, a similar set of comprehensive requirements are enforced by the County, and the goals and policies set forth in the 2030 General Plan would avoid or reduce the effect of pollution of groundwater. However, because of existing contamination of groundwater from rural residential development in areas of sandy soils and high groundwater within the county and the potential for continued development in such areas, this impact would be potentially significant.

In June 2012, the SWRCB adopted a Water Quality Control Policy for Siting, Design, Operation, and Maintenance of Onsite Wastewater Treatment Systems, and the policy is now operational. The policy establishes a set of comprehensive regulations for all aspects of siting, construction, and operating OWTS, including individual residential septic systems.

Because California is well known for its extreme range of geological and climatic conditions, the establishment of a single set of criteria for OWTS by the SWRCB would either be too restrictive so as to protect water quality and public health in the most sensitive cases, or would have broad allowances that would not be protective enough of water quality and public health under some circumstances. To accommodate this extreme variance, local agencies may submit management programs (“Local Agency Management Programs”) for approval by the SWRCB, and upon approval then manage the installation of new and replacement OWTS under that program.

According to the SWRCB, OWTS are useful and necessary structures for people who live in a rural setting where they are not served by a centralized sewer or wastewater treatment system. When properly sited, designed, operated, and maintained, OWTS treat domestic wastewater to reduce its polluting impact on the environment and most importantly protect public health. To provide for consistent regulation of OWTS, the SWRCB has placed OWTS into categories, based on their performance and existing conditions in the area of the OWTS. These categories (called tiers in the policy) range from Tier 0 to Tier 4. Tier 1 would apply to the proposed Sussex Estates project. This Tier is defined below.

**Tier 1**

If it is necessary to install a new OWTS, replace or upgrade one, and the local permitting agency does not have an approved Local Agency Management Program, the OWTS must either meet the requirements of Tier 1, or the owner of the OWTS must obtain a waiver of waste discharge requirements or waste discharge requirements from the regional water board.

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\(^6\) As defined by the SWRCB, “Onsite wastewater treatment system(s)” (OWTS) means individual disposal systems, community collection and disposal systems, and alternative collection and disposal systems that use subsurface disposal. The short form of the term may be singular or plural. Septic tanks and leach fields, typically used in rural areas of Merced County are a type of OWTS. OWTS do not include “graywater” systems pursuant to Health and Safety Code Section 17922.12. To provide consistency to the following discussion, the term OWTS will be used even though the state CEQA Guidelines Appendix G uses the term “septic tanks” in the significance criterion set forth in this Initial Study.
The SWRCB policy imposes a range of siting, design, and operational requirements for OWTS, including small residential systems to avoid pollution and maintain public health. In general, these requirements apply only to the upgrade or modification of an existing OWTS, the installation of a new OWTS, and in situations where an OWTS is failing to protect water quality or public health. Within Merced County, new or modified OWTS would be Tier 1 until such time as the County adopted an approved Local Agency Management Program, at which time new or modified OWTS would be regulated under Tier 2. As of the date of preparation of this Initial Study, Merced County has not submitted a Local Agency Management Program to the RWQCB for review (CVRWQCB 2016).

The Merced County Division of Environmental Health (DEH) enforces design standards for the operation and maintenance of on-site sewage disposal systems to minimize potential pollution of groundwater and surface water features (Merced County 1995; 2013; 2014). DEH requires that every occupied structure in the county that cannot be connected to a public wastewater treatment system must construct an OWTS under permit from DEH, consisting of an OWTS with effluent discharging into an approved subsurface disposal field. All systems must meet the minimum design standards of DEH, including location, system dimensions and capacity, soil capability, minimum depth to groundwater, and minimum separation distances between septic systems and wells, streams, and other water bodies. In order to obtain a permit, an applicant must provide DEH with a site plan indicating the dimensions and placement of the disposal field, the results of a percolation test to determine the capability of on-site soils to accept wastewater, and a soils report prepared by a certified professional. DEH expects that their exiting design standards for operation and maintenance OWTS will usually meet the requirements of the Water Quality Control Policy for Siting, Design, Operation, and Maintenance of Onsite Wastewater Treatment Systems.

Even with implementation of these existing standards and regulatory requirements, certain areas of the county may be susceptible to groundwater contamination from OWTS. The unincorporated Atwater Rural Residential Center (RRC) or McSwain area of Merced County lies south of the City of Atwater, and is the site of the proposed Sussex Estates subdivision project. The McSwain area historically has been developed with low density rural residential / agricultural land uses, and is undergoing intensifying residential development, including subdivision projects with one-acre parcels served by well and septic systems. The Atwater RRC is a large area, with over 300 OWTS non-point sources of potential contamination. The predominant soil map units in the area are the “Atwater loamy sand, imperfectly drained variant” and “Atwater loamy sand, deep over hard pan, poorly drained.”

Each residence within the McSwain area is likely to have at least one water supply well. Typical well depths are unknown, but it is likely that they were installed at depths greater than 100 feet as part of standard practice. It is unknown whether any local wells are installed within the shallow unconfined aquifer or within close vicinity to on site wastewater treatment systems. The water table historically has been found to range from 40 to 60 feet below grade.

The CVRWQCB has historically expressed concerns about potential impacts to groundwater quality from un-sewered residential development in this area (CVRWQCB 2004). The RWQCB recommended that such development be connected to nearby wastewater treatment facilities when feasible, or that the potential project and cumulative impacts to groundwater from unsewered development in the vicinity be examined. The RWQCB requested that cumulative effects on groundwater quality consider the existing and proposed development, including development that may occur “by-right.” Figure 4 indicates those areas of the county where contamination from this source might be most likely to occur, depending upon the intensity of development.
Figure 4
Sensitivity of Merced County Groundwater to Contamination

SOURCE: Merced County 2013; Planning Partners 2016
ENVIRONMENTAL ANALYSIS

Questions (a)(b)(e) Wastewater Treatment/Wastewater Treatment Facility: Less-than-significant Impact with Mitigation. As proposed, each of the six proposed residential lots within the Sussex Estates project would be served by an individual OWTS located on each lot. As set forth in Table 6, soils on the project site are not optimal for successful operation of an OWTS because the site contains only soils that are only very limited. “Very limited” indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected. (NRCS 2016)

The proposed systems have been reviewed by the Merced County Division of Environmental Health. All on-site sewage disposal systems to be constructed will be required to conform to Merced County DEH minimum design standards for on-site sewage disposal systems.

Because onsite soils are very limited with respect to wastewater treatment and disposal, operation of the proposed septic systems could result in adverse effects to groundwater quality. This would be a significant impact, and the following mitigation measures as proposed by DEH would be necessary. Implementation of these measures would ensure that each of the proposed OWTS would operate to avoid adverse effects to water quality. Potential water quality impacts would be reduced below a level of significance, and no additional mitigation would be necessary.

Mitigation Measure UTIL-1: OWTS Requirements

1. Each dwelling shall be served by a nitrogen-reducing septic system approved by MCDEH.
2. Each parcel shall have at least one (1) net acre of land suitable for septic system disposal field area. Usually, the septic system setbacks to property lines, setbacks to the on-site well, and 10-foot wide public utility easements are not subtracted when calculating the one net acre. Existing well and septic systems on adjacent parcels, canals, creeks, drainage basins, and other features with significant setbacks may impact the net acreage.
3. Leach field areas, including replacement leach field areas, on all parcels outside of the subdivision and within 100 feet of the subdivision boundary shall be indicated on the subdivision final map.
4. Domestic well locations, including replacement well locations where adequate sites are in doubt, on all parcels within 100 feet of the subdivision boundary shall be indicated on the final subdivision map.
5. Irrigation well locations, including replacement well locations, on all parcels within 300 feet of the subdivision shall be indicated on the final subdivision map.
6. All areas on each subdivision parcel that are within 50 feet of a parcel line adjacent to undeveloped property where the minimum distance to future domestic wells on the undeveloped property cannot be assured shall be indicated on the final subdivision map. These areas may not be useable for septic system leach fields or replacement areas.
7. All other features outside of the subdivision having well and/or septic system setbacks that encroach on the subdivision shall be indicated on the final subdivision map.
8. The final subdivision map shall indicate a well placement area large enough to allow installation of a replacement well at least 30 feet from the original well or shall indicate two exact well locations at least 30 feet apart.
9. The final subdivision map shall designate a leach field area adequate for the initial leach field area and an adjacent replacement leach field area of equivalent size. The size of each area shall be based on soil characteristics, groundwater depth, and the flow generated by the maximum number of bedrooms allowed on the parcel.

10. Wells and septic systems (including replacements) shall be installed only in locations so designated on the final subdivision map.

11. A soils study performed in accordance with the Merced County On-Site Septic System Standards (MCOS) or subsequent ordinance shall determine the feasibility of using on-site septic systems. Observation pits shall be dug at expected leach field areas on at least every 5th parcel, to a depth of at least eight (8) feet. The presence of hardpan shall be determined to a depth of 15 feet. The study shall address all soil conditions potentially affecting septic system function, including but not limited to highest anticipated groundwater, soil permeability, impervious layers, and perched water tables.

12. At least one percolation test in each proposed leach field area shall be required. Percolation tests shall be performed at a depth of three (3) feet in accordance with the MCOS or subsequent ordinance, unless approved otherwise by MCDEH (Merced County Division of Environmental Health). Where restrictive soils are present (i.e. hardpan, slow percolation), multiple percolation tests on each parcel, distributed both horizontally and vertically, may be required by MCDEH to determine if and where acceptable conditions exist.

13. Parcels with restrictive soils may be required to utilize the most permeable soil formations available. A minimum of five (5) feet of permeable soil must be available below the bottom of the proposed disposal system unless otherwise allowed by the MCOS or subsequent ordinance.

14. A special design septic system shall be required where the percolation rate is faster than five (5) minutes per inch (mpi) or slower than 60 mpi.

15. A minimum parcel size of five (5) acres shall be required where the percolation rate is slower than 180 mpi, unless otherwise allowed by the MCOS or subsequent ordinance.

16. The maximum number of bedrooms allowed on a one-acre parcel with restrictive soils is six (6) bedrooms, unless otherwise allowed by the MCOS or subsequent ordinance. For other types of soils, restrictions on the maximum number of bedrooms allowed will be decided on a case-by-case basis.

17. The designated leach field area shall be close enough to the house to allow for leach trenches no deeper than three (3) feet.

18. Each sewer pipe invert stub-out from the house shall be no deeper than 18” below final grade and shallow enough to allow a maximum leach trench depth of three (3) feet.

19. The initial leach field and any replacement leach field shall be installed only in the designated leach field area.

20. Within any leach field area in use there shall be no pavement, no permanent structure, no vehicle parking or driving, and no flood irrigation.

21. Within the leach field area reserved for replacement there shall be no permanent feature that would interfere with installation and proper operation of a leach field (i.e. pavement, permanent structure, permanent utility).
22. Each dwelling shall be served by a nitrogen-reducing septic system approved by MCDEH. The property owner is responsible for the proper operation and any required monitoring of the nitrogen-reducing septic system.

23. Domestic water treatment backwash and wastewater which introduces a chemical or material from the treatment media (i.e. water softener, ionic exchange treatment) shall be plumbed into a dedicated leach line or into the house septic system, but in the latter case only between the septic tank and the first distribution box in the leach field. The location and construction of any leach line dedicated for the waste stream shall be approved by MCDEH. If plumbed into the septic system, the waste stream shall flow through an air gap that is installed as close to the treatment device as is reasonably possible. A ‘P’ trap shall be installed downstream of the air gap.

24. Septic system and domestic well requirements are subject to change. Regulations and policies in place at the time of installation will apply.

25. The applicant/developer shall prepare an 8.5 x 11 inch to-scale site plan of each parcel which indicates the subdivision name and number, the parcel number, the parcel address, the map scale, the MCDEH-approved well and septic system location/areas as shown on the final subdivision map. At the time of filing the final subdivision map, the applicant/developer shall file with the county recorder the site plan and the above conditions numbers 1 through 24, and shall immediately provide a copy of each recorded document to MCDEH.

Questions (b)(d) Water Use/Water Supply: Less-than-significant Impact with Mitigation.

Potable water for the proposed project would be supplied by an individual well serving each lot. There is currently no water used at the project site.

As noted above, groundwater levels are declining in the project area. As proposed, the amount of water consumed by proposed residential uses for each lot would range from 0.4 – 0.5 acre feet per year, although depending upon the amount of landscaping developed on each lot, the use could be higher. Compared to the potential agricultural use of the site, the proposed water demand posed by the project would be less than that required for most agricultural crops grown in Merced County (Merced County 2013). No water conservation measures have been proposed as part of the project. Because no water is currently used on the project site, water use by the proposed project would represent a new source of local demand.

For these reasons, water use could adversely affect water supply and contribute to overdraft conditions in this area of Merced County. This would be a significant impact, and mitigation would be necessary. Implementation of the following measures would ensure that water would be used efficiently, and that the water conservation goals imposed by the State would be met by the project. There would be no residual impact, and no further mitigation would be necessary.

Mitigation Measure UTIL-2: Water Conservation

- All residences with the Sussex Estates subdivision project shall comply with the State Model Water Efficient Landscape Standards or with the requirements of Chapter 18.38, Landscape Standards, of the Merced County Code, whichever is stricter.

- All phases of the Sussex Estates subdivision project shall comply with the requirements of California Executive Order B-29-15, SWRCB Resolution No. 2015-0032, and other State mandated drought requirements as each of the foregoing is issued, adopted, or amended through the date of issuance of building permits for each lot.
Question (c) Stormwater Drainage Facilities: Less-than-significant Impact with Mitigation. The project site is comprised of a fallow agricultural field that provides a pervious surface. Construction of the proposed residences would convert a relatively small portion of each lot to impervious surfaces (the dwelling, driveways, hardscape). As proposed by the applicant, building envelopes within each lot would be limited to 5,000 square feet (see Figure 3). Construction of the proposed cul-de-sac would also result in an impervious surface. In total, approximately 1.9 acres of the 7.7-acre project site would be converted to impervious surfaces. Additionally, implementation of Mitigation Measure UTIL-1 would prohibit pavement, permanent structures, and vehicle parking or driving, or flood irrigation within the area of each lot developed with a leach field.

As proposed, with project implementation, all stormwater would be collected in a network of storm drains and discharged into a detention basin to the north of the project site. The volume of stormwater generated by the proposed subdivision, the capacity of the basin, and existing flows to the basin are unknown. As proposed, no treatment facilities to benefit stormwater quality are identified.

For more information on this topic, including the environmental analysis and identified mitigation, see Section IX, Hydrology and Water Quality, Question (c) of this Initial Study.

Questions (f)(g) Landfill Capacity/Solid Waste: Less-than-significant Impact. Winton Disposal/Waste Management would provide the residents of the proposed Sussex Estates project with solid waste removal services. The solid waste collection service would be subject to the normal tariffs and requirements of the service provider, and would not result in the need for any major new facilities or substantial alterations to existing solid waste facilities. Solid waste removed from the project site would be transported to the Highway 59 Landfill disposal site, which has sufficient capacity to accommodate solid waste needs through 2065. Because the proposed project is subject to the normal tariffs and requirements of the service provider, and because the Highway 59 Landfill disposal site has sufficient capacity to serve the project expansion, a less-than-significant impact would occur, and no mitigation would be necessary.
XVIII. MANDATORY FINDINGS OF SIGNIFICANCE

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?


b) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)


c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?


ENVIRONMENTAL ANALYSIS

Question (a) Quality of Environment: Less-than-significant Impact with Mitigation. As discussed above, while the proposed project has the potential to adversely affect air quality, cultural resources, geology and soils, hydrology and water quality, and utilities, any potential impacts would be avoided with implementation of the State, Federal, and County Code requirements, and mitigation measures identified in this Initial Study, and compliance with the policies and programs of the 2030 Merced County General Plan. Compliance with the mitigation measures identified in this Initial Study, State, Federal, and County standards and regulations, and 2030 Merced County General Plan policies that pertain to air quality, cultural resources, geology and soils, hydrology and water quality, and utilities, would reduce potential impacts to a less-than-significant level.

Mitigation Measures

Mitigation Measure AQ-1: Prior to the issuance of the first grading permit, the applicant shall provide to the County a receipt of a SJVAPCD approved Dust Control Plan or Construction Notification form in compliance with Regulation VIII – Fugitive Dust PM10 Prohibitions. The subdivision project may be subject to additional rules, including, but not limited to Rule 8021 (Construction, Demolition, Excavation, Extraction, and Other Earthmoving Activities), Rule 4601 (Architectural Coatings), and Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations). The project applicant will be required to implement measures of applicable SJVAPCD Rules and Regulations as noted.

Mitigation Measure CUL-1: The project applicant and construction contractor shall implement a plan to address the discovery of unanticipated buried cultural or paleontological resources. If buried cultural resources such as chipped or ground stone, midden deposits, historic debris, building foundations, human bone, or paleontological resources are inadvertently
discovered during ground-disturbing activities, work shall stop in that area and within 100 feet of the find until a qualified archaeologist or paleontologist can assess the significance of the find and, if necessary, develop responsible treatment measures in consultation with Merced County and other appropriate agencies.

Mitigation Measure CUL-2: The project applicant and construction contractor shall implement a plan to address discovery of human remains. If remains of Native American origin are discovered during proposed project construction, it shall be necessary to comply with state laws concerning the disposition of Native American burials, which fall within the jurisdiction of the Native American Heritage Commission (NAHC). If any human remains are discovered or recognized in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:

- The County coroner has been informed and has determined that no investigation of the cause of death is required; and
- If the remains are of Native American origin:
  - The most likely descendants of the deceased Native Americans have made a recommendation to the landowner or person responsible for the excavation work for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC 5097.98; or
  - The NAHC has been unable to identify a descendant, or the descendant failed to make a recommendation within 24 hours after being notified.

Mitigation Measure HYD-1: The applicant shall submit permit registration documents for the Construction General Permit Order 2009-0009-DWQ to the SWRCB, and comply with all requirements of the permit. The annual fees are based on total disturbed area of the construction project in acres. A Legally Responsible Person (LRP) shall electronically submit Permit Registration Documents (PRD) prior to building permit issuance in the Stormwater Multi-Application Report Tracking System. PRDs consist of the Notice of Intent, Risk Assessment, Post-Construction Calculations, a Site Map, the SWPPP, a signed certification statement by the LRP, and the first annual fee. All requirements of the site specific SWPPP shall be included in construction documents for the project, and implemented for the duration of construction, including post-construction stabilization.

Mitigation Measure HYD-2: Prior to the issuance of a building permit to initiate construction of the proposed project, the applicant shall develop an engineered stormwater drainage system to meet the collection, capacity, and quality requirements, and Low Impact Development requirements and Best Management Practices set forth in Merced County regulations (Merced County Code §9.53, Regulation of Stormwater). The Plan shall be submitted to Merced County for review and approval, and facilities identified in the approved plan will be constructed prior to recordation of any Final Subdivision Map.
Mitigation Measure UTIL-1: OWTS Requirements

1. Each dwelling shall be served by a nitrogen-reducing septic system approved by MCDEH.

2. Each parcel shall have at least one (1) net acre of land suitable for septic system disposal field area. Usually, the septic system setbacks to property lines, setbacks to the on-site well, and 10-foot wide public utility easements are not subtracted when calculating the one net acre. Existing well and septic systems on adjacent parcels, canals, creeks, drainage basins, and other features with significant setbacks may impact the net acreage.

3. Leach field areas, including replacement leach field areas, on all parcels outside of the subdivision and within 100 feet of the subdivision boundary shall be indicated on the subdivision final map.

4. Domestic well locations, including replacement well locations where adequate sites are in doubt, on all parcels within 100 feet of the subdivision boundary shall be indicated on the final subdivision map.

5. Irrigation well locations, including replacement well locations, on all parcels within 300 feet of the subdivision shall be indicated on the final subdivision map.

6. All areas on each subdivision parcel that are within 50 feet of a parcel line adjacent to undeveloped property where the minimum distance to future domestic wells on the undeveloped property cannot be assured shall be indicated on the final subdivision map. These areas may not be useable for septic system leach fields or replacement areas.

7. All other features outside of the subdivision having well and/or septic system setbacks that encroach on the subdivision shall be indicated on the final subdivision map.

8. The final subdivision map shall indicate a well placement area large enough to allow installation of a replacement well at least 30 feet from the original well or shall indicate two exact well locations at least 30 feet apart.

9. The final subdivision map shall designate a leach field area adequate for the initial leach field area and an adjacent replacement leach field area of equivalent size. The size of each area shall be based on soil characteristics, groundwater depth, and the flow generated by the maximum number of bedrooms allowed on the parcel.

10. Wells and septic systems (including replacements) shall be installed only in locations so designated on the final subdivision map.

11. A soils study performed in accordance with the Merced County On-Site Septic System Standards (MCOS) or subsequent ordinance shall determine the feasibility of using on-site septic systems. Observation pits shall be dug at expected leach field areas on at least every 5th parcel, to a depth of at least eight (8) feet. The presence of hardpan shall be determined to a depth of 15 feet. The study shall address all soil conditions potentially affecting septic system function, including but not limited to highest anticipated groundwater, soil permeability, impervious layers, and perched water tables.

12. At least one percolation test in each proposed leach field area shall be required. Percolation tests shall be performed at a depth of three (3) feet in accordance with the MCOS or subsequent ordinance, unless approved otherwise by MCDEH (Merced County Division of Environmental Health). Where restrictive soils are present (i.e. hardpan, slow percolation),
multiple percolation tests on each parcel, distributed both horizontally and vertically, may be required by MCDEH to determine if and where acceptable conditions exist.

13. Parcels with restrictive soils may be required to utilize the most permeable soil formations available. A minimum of five (5) feet of permeable soil must be available below the bottom of the proposed disposal system unless otherwise allowed by the MCOS or subsequent ordinance.

14. A special design septic system shall be required where the percolation rate is faster than five (5) minutes per inch (mpi) or slower than 60 mpi.

15. A minimum parcel size of five (5) acres shall be required where the percolation rate is slower than 180 mpi, unless otherwise allowed by the MCOS or subsequent ordinance.

16. The maximum number of bedrooms allowed on a one-acre parcel with restrictive soils is six (6) bedrooms, unless otherwise allowed by the MCOS or subsequent ordinance. For other types of soils, restrictions on the maximum number of bedrooms allowed will be decided on a case-by-case basis.

17. The designated leach field area shall be close enough to the house to allow for leach trenches no deeper than three (3) feet.

18. Each sewer pipe invert stub-out from the house shall be no deeper than 18” below final grade and shallow enough to allow a maximum leach trench depth of three (3) feet.

19. The initial leach field and any replacement leach field shall be installed only in the designated leach field area.

20. Within any leach field area in use there shall be no pavement, no permanent structure, no vehicle parking or driving, and no flood irrigation.

21. Within the leach field area reserved for replacement there shall be no permanent feature that would interfere with installation and proper operation of a leach field (i.e. pavement, permanent structure, permanent utility).

22. Each dwelling shall be served by a nitrogen-reducing septic system approved by MCDEH. The property owner is responsible for the proper operation and any required monitoring of the nitrogen-reducing septic system.

23. Domestic water treatment backwash and wastewater which introduces a chemical or material from the treatment media (i.e. water softener, ionic exchange treatment) shall be plumbed into a dedicated leach line or into the house septic system, but in the latter case only between the septic tank and the first distribution box in the leach field. The location and construction of any leach line dedicated for the waste stream shall be approved by MCDEH. If plumbed into the septic system, the waste stream shall flow through an air gap that is installed as close to the treatment device as is reasonably possible. A ‘P’ trap shall be installed downstream of the air gap.

24. Septic system and domestic well requirements are subject to change. Regulations and policies in place at the time of installation will apply.

The applicant/developer shall prepare an 8.5 x 11 inch to-scale site plan of each parcel which indicates the subdivision name and number, the parcel number, the parcel address, the map scale, the MCDEH-approved well and septic system location/areas as shown on the final subdivision map. At the time of filing the final subdivision map, the
applicant/developer shall file with the county recorder the site plan and the above conditions numbers 1 through 24, and shall immediately provide a copy of each recorded document to MCDEH.

Mitigation Measure UTIL-2: Water Conservation

- All residences with the Sussex Estates subdivision project shall comply with the State Model Water Efficient Landscape Standards or with the requirements of Chapter 18.38, Landscape Standards, of the Merced County Code, whichever is stricter.
- All phases of the Sussex Estates subdivision project shall comply with the requirements of California Executive Order B-29-15, SWRCB Resolution No. 2015-0032, and other State mandated drought requirements as each of the foregoing is issued, adopted, or amended through the date of issuance of building permits for each lot.

**Question (b) Cumulative Impacts: Less-than-significant Impact.** While the proposed project could contribute to cumulative impacts associated with increased development in the region, these impacts have previously been evaluated by the County and considered in development of the County’s 2030 General Plan. The 2030 General Plan EIR comprehensively evaluated the potential environmental effects, including the potential countywide and cumulative impacts, of implementing the 2030 General Plan. As discussed in the preceding discussion of tiering, the General Plan EIR is hereby incorporated by reference into this Initial Study pursuant to State CEQA Guidelines Section 15150 as though fully set forth herein.

As discussed in this Initial Study, the Sussex Estates Project has the potential to result in impacts to air quality, cultural resources, geology and soils, hydrology and water quality, and utilities. As set forth in the appropriate topical discussions of this Initial Study, effects to air quality, cultural resources, geology and soils, hydrology and water quality, and utilities are all subject to the proposed mitigation measures identified in this Initial Study, State, Federal, and County standards and regulations, and 2030 Merced County General Plan policies and programs designed to avoid, reduce, or mitigate such effects.

Implementation of the proposed project would result in the subdivision of a 7.71 acre parcel into six single-family residential lots, and the creation of a new cul-de-sac. As viewed within the context of the overall growth and development in the County as outlined in the 2030 Merced County General Plan, the potential impacts of the proposed project are individually limited and not considered “cumulatively considerable.” Additionally, after mitigation, the project has been determined not to have significant project level or cumulative level effects for any environmental issue. Therefore, construction and operation of the proposed project would not make a cumulatively considerable contribution to cumulative impacts, and would result in a less-than-significant impact when viewed in connection to the effects of past and probable future projects.

**Question (c) Human Beings: Less-than-significant Impact with Mitigation.** As demonstrated in the detailed evaluation contained in this Initial Study, because of existing site conditions, County standards, 2030 General Plan programs and policies, and the regulation of potential environmental impacts by other agencies, in addition to mitigation measures included in this Initial Study, the proposed Sussex Estates project would not have the potential to cause substantial adverse effects on human beings. With implementation of the mitigation measures identified in this Initial Study, this would be a less-than-significant impact.
5. **APPLICANT AGREEMENT TO MITIGATION MEASURES**

By the signature below, the project applicant agrees to implement and incorporate the Mitigation Measures identified in this Initial Study as outlined above in Section XVIII, *Mandatory Findings of Significance*, as part of the Sussex Estates Project.

Signed: [Signature]

Printed Name: [Name]

Date: 8/17/16
6. **PREPARERS OF THE INITIAL STUDY**

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Mary Wilson - Assistant Planner  
Dale Nutley – Graphic Artist  
Mary Wilson – Document Preparation

**Technical Consultants**
Napton Consulting Services (Cultural Resources)  
L. Kyle Napton, Ph.D., Principal
7. **LITERATURE CITED**

The following documents were referred to as information sources during preparation of this document. They are available for public review at the web addresses shown after the listing. All documents without an Internet address are available at the County of Merced, Community and Economic Development Department 2222 ‘M’ Street, Merced, California 95340.


California, State of. Executive Department, Office of the Governor (Governor); 2016. Executive Order B-37-16, Making Water Conservation a California Way of Life. Issued May 9, 2016.


Caltrans. See California, State of. Department of Transportation.


CNDDB. See California, State of. Department of Fish and Wildlife.

DTSC. See California, State of. Department of Toxic Substances Control.

EDD. See California, State of. Employment Development Department.

FIRM. See United States, Federal Emergency Management Agency.


Governor. See California State of. Executive Department, Office of the Governor.


_____, 2015. Department of Public Works, Road Division (Road Division). Letter from Sara V. Soto, Road Division, to Pam Navares, Community and Economic Development Department; April 15, 2015.


_____. 2013a. 2030 Merced County General Plan Background Report, Section 4.3, Agricultural Resources, Section 4.3, Conserving Farmland: Regulatory and Compensatory Tools, Figure 4-1, Williamson Act Lands. December 10, 2013.

_____. 2013b. 2030 Merced County General Plan Background Report, Section 10.2, Geological and Seismic, Figure 10-2: Seismic Damage Zones within Merced County. December 10, 2013.

_____. 2013c. 2030 Merced County General Plan Background Report, Chapter 8, Natural Resources, Figure 8-5, Groundwater Depths in Merced County. December 10, 2013.


_____. 2013e. 2030 Merced County General Plan Background Report. 8 – Natural Resources and 12 – Climate Change. December 2013.


_____. 2013g. 2030 Merced County General Plan Background Report, Chapter 8, Natural Resources, Section 8.2 Water Resources. December 10, 201Q3.

_____. 2013h. 2030 Merced County General Plan Background Report, Chapter 8, Natural Resources, Figure 8-6, Sensitivity of Merced County Groundwater to Contamination. December 10, 2013.

_____. 2013i. 2030 Merced County General Plan Background Report. Section 8.3 Energy/Mineral Resources, Figure 8-10, Merced County Aggregate Resources. December 2013.


Merced County Airport Land Use Commission (ALUC); 2012. Merced County Airport Land Use Compatibility Plan; adopted June 21, 2012.

Merced County Association of Governments (MCAG); 2008. Merced County Regional Bicycle Transportation Plan; October 29, 2008.

Merced Irrigation District (MID); 2015. Letter from Mike Morris, Associate Engineer, MID to Pam Navares, Planner I, Merced County regarding MID concerns with the proposed Sussex Estates subdivision. March 17, 2015.


NASA. See United States, National Aeronautics and Space Administration.

NRCS. See United States, Department of Agriculture, Natural Resources Conservation Service.


Sussex Estates Association (Sussex Estates) 2015. Conditional Use Permit application submitted to Merced County on February 11, 2015 as modified; Operational Statement submitted on August 11, 2015; architectural plans submitted on November 16, 2015; engineering plans submitted on November 16, 2015.

SWRCB. See California, State of. State Water Resources Control Board.


8. DETERMINATION

On the basis of this initial evaluation:

I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

X I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A NEGATIVE DECLARATION will be prepared.

I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

I find that the proposed project MAY have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature                                      Date

Pam Navares, Planner I
Merced County Community and Economic Development Department

8/29/16