INITIAL STUDY AND MITIGATED NEGATIVE DECLARATION

FOR THE

MANTECA WQCF ALTERNATIVE ENERGY PROGRAMS PROJECT

JANUARY 13, 2016

Prepared for:

City of Manteca
101 West Center Street
Manteca, CA 95337

Prepared by:

De Novo Planning Group
1020 Suncast Lane, Suite 106
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A Land Use Planning, Design, and Environmental Firm

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Proposed Mitigated Negative Declaration

for the

Manteca WQCF Alternative Energy Programs Project

Lead Agency: City of Manteca
1001 West Center Street
Manteca, CA 95337

Project Title: Manteca WQCF Alternative Energy Programs Project

Project Location: The project site is located at 2450 W. Yosemite Avenue, in the western portion of the City of Manteca, at the existing City of Manteca Wastewater Quality Control Facility (WQCF). The WQCF is located south of W. Yosemite Avenue, east of the ACE Train right of way and the French Camp Outlet Canal, west of Airport Way, and north of SR 120.

Project Description: The City of Manteca is seeking environmental approval for three alternative energy programs at its WQCF, which are a solar (photovoltaic) array, a biogas/CNG refueling station (with a truck refueling expansion area), and a food waste receiving facility. These programs were not included in the original WQCF Master Plan Update, and were therefore not analyzed within the associated WQCF Masters Plans EIR (EDAW, 2007). Additionally, an on-site soil excavation source area for the proposed project would be located adjacent to and to the north of the biogas/CNG refueling station and truck refueling expansion area. This soil excavation source area is considered a potential source for extra soil needs.

Findings:

In accordance with the California Environmental Quality Act, City of Manteca has prepared an Initial Study to determine whether the Manteca WQCF Alternative Energy Programs Project may have a significant adverse effect on the environment. The Initial Study and Proposed Mitigated Negative Declaration reflect the independent judgment of City of Manteca staff. On the basis of the Initial Study, City of Manteca hereby finds:

> *Although the proposed project could have a significant adverse effect on the environment, there will not be a significant adverse effect in this case because the project has incorporated specific provisions to reduce impacts to a less than significant level and/or the mitigation measures described herein have been added to the project. A Mitigated Negative Declaration has thus been prepared.*

The Initial Study, which provides the basis and reasons for this determination, is attached and/or referenced herein and is hereby made a part of this document.

_____ _____

Date

Proposed Mitigation Measures:

The following Mitigation Measures are extracted from the Initial Study. These measures are designed to avoid or minimize potentially significant impacts, and thereby reduce them to an insignificant level. A Mitigation Monitoring and Reporting Program (MMRP) is an integral part of RTP project implementation to ensure that program level mitigation is properly implemented by the City of Manteca and the implementing agencies. The MMRP will describe actions required to implement the appropriate mitigation for each CEQA category including identifying the responsible agency, program timing, and program monitoring requirements. Based on the analysis and conclusions of the Initial Study, the impacts of proposed projects and/or programs would be mitigated to less-than-significant levels with the implementation of the mitigation measures presented below.

Mitigation Measure 1*: To the extent feasible, solar panels that are installed shall utilize anti-reflective coatings and incorporate stippling/dimpling, to reduce the effect of daytime glare.*

Mitigation Measure 2*: The City will pay the required City agricultural mitigation fee to offset the conversion of Important Farmland. Consistent with Chapter 13.42 of the Manteca Municipal Code, a $2,000 agricultural mitigation fee will be assessed for every acre of Important Farmland that would be developed as part of the proposed project. Consistent with goals of the City's Right to Farm ordinance, this mitigation measure would reduce the occurrence of conflicts between nonagricultural and agricultural land uses from development pressure by preserving agricultural lands located within the project vicinity. The total fee will be calculated by the City of Manteca.*

Mitigation Measure 3*: Prior to the commencement of grading activities or other ground disturbing activities on the project site, the project applicant shall arrange for a qualified biologist to conduct a follow-up preconstruction survey for western burrowing owls. If no owls or owl nests are detected, then construction activities may commence. If burrowing owls or occupied nests are discovered, then the following shall be implemented:*

- *During the breeding season (February 1 through September 1) occupied burrows shall not be disturbed and shall be provided with a 75 meter protective buffer until and unless the SJCOG Technical Advisory Committee (TAC), with the concurrence of the Permitting Agencies' representatives on the TAC; or unless a qualified biologist approved by the Permitting Agencies verifies through non-invasive means that either: 1) the birds have not begun egg laying, or 2) juveniles from the occupied burrows are foraging independently and are capable of independent survival. Once the fledglings are capable of independent survival, the burrow can be destroyed. They should only be destroyed by a qualified biologist using passive one-way eviction doors to ensure that owls are not harmed during burrow destruction. Methods for removal of burrows are described in the California Department of Fish and Game's Staff Report on Burrowing Owls (October, 1995)*

- *During the non-breeding season (September 1 through January 31) burrowing owls occupying the project site should be evicted from the project site by passive relocation as described in the California Department of Fish and Game's Staff Report on Burrowing Owls (Oct., 1995)*

Implementation of this mitigation shall occur prior to grading or site clearing activities.

Mitigation Measure 4*: If any prehistoric or historic artifacts, human remains or other indications of archaeological resources are found during grading and construction activities, an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards in prehistoric or historical archaeology, as appropriate, shall be consulted to evaluate the finds and recommend appropriate mitigation measures.*

Mitigation Measure 5*: The following mitigation measures shall be implemented:*

a) Construction activities (excluding activities that would result in a safety concern to the public or construction workers) shall be limited to between the hours of 7:00 a.m. and 7:00 p.m. Construction activities shall be prohibited on Sundays and federal holidays.

b) Construction equipment shall be properly maintained and equipped with noise-reduction intake and exhaust mufflers and engine shrouds, in accordance with manufacturers' recommendations.

c) Construction equipment staging areas shall be located at the furthest distance possible from nearby noise-sensitive land uses.

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INITIAL STUDY

PROJECT TITLE

Manteca WQCF Alternative Energy Programs

LEAD AGENCY NAME AND ADDRESS

City of Manteca
101 West Center Street
Manteca, CA 95337

CONTACT PERSON AND PHONE NUMBER

Greg Showerman, Public Works Deputy Director - Engineering
Public Works Department
City of Manteca
(209) 456-8400

PROJECT SPONSOR'S NAME AND ADDRESS

City of Manteca
101 West Center Street
Manteca, CA 95337

PURPOSE OF THE INITIAL STUDY

An Initial Study (IS) is a preliminary analysis which is prepared to determine the relative environmental impacts associated with a proposed project. It is designed as a measuring mechanism to determine if a project will have a significant adverse effect on the environment, thereby triggering the need to prepare an Environmental Impact Report (EIR). It also functions as an evidentiary document containing information which supports conclusions that the project will not have a significant environmental impact or that the impacts can be mitigated to a "Less Than Significant" or "No Impact" level. If there is no substantial evidence, in light of the whole record before the agency, that the project may have a significant effect on the environment, the lead agency shall prepare a Negative Declaration (ND). If the IS identifies potentially significant effects, but: (1) revisions in the project plans or proposals would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur, and (2) there is no substantial evidence, in light of the whole record before the agency, that the project as revised may have a significant effect on the environment, then a Mitigated Negative Declaration (MND) shall be prepared.

This Initial Study has been prepared consistent with CEQA Guidelines Section 15063, to determine if the proposed Manteca WQCF Alternative Energy Programs (project) may have a significant effect upon the environment. Based upon the findings and mitigation measures contained within this report, a Mitigated Negative Declaration (MND) will be prepared.

PROJECT LOCATION AND SETTING

PROJECT LOCATION

The project site is located at 2450 W. Yosemite Avenue, in the western portion of the City of Manteca, at the existing City of Manteca Wastewater Quality Control Facility (WQCF). The WQCF is located south of W. Yosemite Avenue, east of the ACE Train right of way and the French Camp Outlet Canal, west of Airport Way, and north of SR 120.

The project's regional location is shown in Figure 1 and the project area and site boundary are shown in Figure 2.

EXISTING SITE USES

The project site is proximate to the existing City of Manteca Water Quality Control Facility on land owned by the City of Manteca. The proposed solar array would be located on agricultural land that is currently fallow, in the northwestern portion of the project site. The proposed biogas/CNG refueling station (including the truck refueling expansion area) and the food waste receiving facility would be installed at the northeastern portion of the project site, adjacent to existing infrastructure associated with the Water Quality Control Facility, as shown in the site plan in Figure 3.

SURROUNDING LAND USES

Lands to the north and east of the project site consist primarily of light industrial land uses. There is a trucking facility and an electronics manufacturing facility to the north of the site, beyond W. Yosemite Avenue. Additionally, there are scattered residences located to the east and northeast of the site, beyond the site's immediate boundaries. The land to the south of the site consists of public/quasi-public land uses, including a large Big League Dreams sports parks facility. Vacant land and additional low density residential uses exist west of the project site, beyond the ACE train railroad track, which runs along the western edge of the project site.

GENERAL PLAN AND ZONING DESIGNATIONS

The project site is currently designated Public/Quasi-Public (PQP) by the City of Manteca General Plan Land Use Designations Map and is zoned Public/Quasi-Public (PQP) by the City's zoning map.

PROJECT DESCRIPTION

The City of Manteca is seeking environmental approval for three alternative energy programs at its WQCF, which are a solar (photovoltaic) array, a biogas/CNG refueling station (with a truck refueling expansion area), and a food waste receiving facility. These programs were not included in the original WQCF Master Plan Update, and were therefore not analyzed within the associated WQCF Masters Plans EIR (EDAW, 2007). Additionally, as shown in Figure 3, an on-site soil excavation source area for the proposed project would be located adjacent to and to the north of the biogas/CNG refueling station and truck refueling expansion area. This soil excavation source area is considered a potential source for extra soil needs.

Solar (photovoltaic) array: The proposed project includes the installation of a ground mounted, single axis tracking 1 MW, California Electric Code compliant, photovoltaic power generation system (a solar array) to be located at the Water Quality Control Facility. The installation will be connected to the site's 17 kV electrical loop near the transformers on the eastern side of the Ultra Violet facility.

The proposed solar power generation system will occupy approximately 5.5 acres on the northwest corner of the WQCF property. Although the area covered by the solar panels is about 5.5 acres, the only ground disturbance will be by driven steel H-piles that will support the photovoltaic panels. There will also be some electrical conduits either at or below grade.

Biogas/CNG refueling station: The second proposed project component, the biogas/CNG refueling station, would utilize the biogas that the WQCF currently burns into the atmosphere through a flare. The biogas/CNG refueling station would utilize this excess biogas to power a portion of the City's municipal solid waste trucks, thereby reducing the cost and carbon footprint of City operations. With fats, oils, and greases incorporated into the digestion process, it is anticipated that this operation could reduce the fuel demand by 323 Available Diesel Gallon Equivalents (DGE) or more when fully operational, and would increase proportionally with the growth of the various waste streams. To meet demand as more municipal vehicles are converted to natural gas fuel, biogas would be augmented by compressed Natural Gas, as needed. Total facility capacity would be 500 diesel gallon equivalents (City of Manteca, 2015).

In the near-term it is anticipated that the proposed biogas/CNG refueling station would provide service to as many as 4 CNG fueled municipal trucks daily, eventually expanding to serve as many as 40 CNG fueled municipal trucks daily. The proposed biogas/CNG compressors, storage cylinders and related ancillary components would require a concrete pad with an approximate footprint of 90 feet by 60 feet to be located north of the WQCF digester improvements. The proposed scrubber/dewatering facilities would require a concrete pad with an approximate footprint of 60 feet by 40 feet to be located adjacent to and north of the WQCF digester improvements.

It is anticipated that in the near-term the maximum biogas temporarily stored at the proposed facilities would be approximately 475 cubic feet or 360 DGE at a maximum pressure of 4,500 pound per square foot, increasing to approximately 1,900 cubic feet or 1,440 DGE of temporary storage at build out. Each of these facilities would require associated underground plumbing to convey the gas. Along with the fueling equipment pads, an asphaltic concrete paved parking area for fueling the vehicles will be constructed. Initially, the associated parking area would occupy approximately 0.45 acres north of the WQCF digester improvements, adjacent the compressor and fuel storage pad. Eventually at build out, this would be incrementally expanded as demand increases to cover an associated parking area covering a total of approximately 1.5 acres.

Food waste receiving facility: The third and final component of the proposed project would the food waste receiving station. Currently, food waste is comingled with other municipal solid wastes collected in the City of Manteca. The municipal solid waste is conveyed to the Lovelace

Transfer station for disposal at a landfill. Currently, the City is developing a program to divert food waste from the municipal solid waste at the Lovelace Transfer Station. The recovered food waste would comprise a slurry that would then be conveyed for proper disposal.

According to the City, food waste is one of the easier organic materials to recover from the solid waste stream in sufficient quantities to meet AB 1826 regulatory reduction requirements. Additionally, recovered food waste can be utilized to produce biogas through digestion. It is anticipated that through biogas generation, along with meeting its regulatory requirements, the City can recover any energy expended in the process plus some additional energy to offset other municipal operations.

This food waste receiving station would dispose of the recovered food waste through co-digestion in the existing WQCF digesters. Co-digestion is the process of blending two or more different waste streams together for anaerobic digestion, which will generate biogas as a byproduct. Where Publically Owned Treatment Works (POTWs), such as the WQCF, are already generating biogas from municipal sludge digestion processes and sufficient capacity is available, it is typically more feasible and cost effective to co-digest food waste with wastewater sludge to increase biogas production. The introduction small quantities, relative to the sludge, of food waste can greatly improve the biogas production above that of an equivalent increase in sludge digestions, while avoiding significant risk of upset of the sludge digestion processes required for sludge stabilization (City of Manteca, 2015).

The WQCF digestion process currently generates on average approximately 107,000 cubic feet per day (cfd) of biogas or 2.7 million metric British thermal units per hour (MMBTU/hr). This volume of biogas, once purified for usage as vehicle fuel, is estimated equivalent to approximately 190 Available Diesel Gallon Equivalents per Day (DGE/d).

It is anticipated that approximately 1,500 wet tons of food waste could be recovered annually from the Phase I diversion, and an additional 1,432 wet tons of food waste can be recovered annually from Phase II diversion. These volumes of recovered food waste could increase biogas production through co-digestion at the WQCF by approximately 17,951 cfd or 68 DGE/d from Phase 1, and an additional 17,143 cfd or 65 DGE/d from Phase II. The volume of digestion capacity utilized for co-digestion of recovered food waste is estimated to be less than 1 % of the existing digestion capacity at the WQCF at the time this food waste recovery and co-digestion project would begin.

The proposed food waste receiving facility would provide the means to off-load the covered or sealed transfer tanks used to convey the recovered food waste from the Lovelace Transfer Station, and deliver the food waste slowly, in a controlled manner, into the WQCF digesters. The Project would consist of the installation or construction at the WQCF of the facilities necessary to receive, pump, and convey the food waste slurry into WQCF digesters for co-digestion. Some of the necessary elements of the food waste receiving facility to be installed would include: a receiving pad area; asphalt pavements, pumps, plumbing, valving, instrumentation and controls; electrical power; a recycled water supply connection for tank flushing and facilities cleaning; drainage collection systems; safety, security and accessibility measures; earthwork grading and drainage facilities; concrete facilities pad and pavements; traffic striping and

signage; secure access gating and security fencing; and other ancillary elements needed to support the facility (City of Manteca, 2015).

PROJECT OBJECTIVES

The primary objective of the 1 Megawatt Solar Photovoltaic Net Energy Metering System is to offset operating energy costs. Currently, the WQCF incurs approximately $1,150,000 annually in electric utility costs payable to PG&E. Once completed, the Solar Photovoltaic project would offset the electric costs by about one-third or about $385,000 annually (City of Manteca).

The objective for the biogas/CNG refueling station is to offset operating vehicle fuel costs and associated greenhouse gas emissions. In the near-term it is anticipated that the proposed biogas/CNG refueling station would provide service to as many as 4 CNG fueled solid waste trucks daily, eventually expanding to serve as many as 20 CNG fueled solid waste trucks daily (City of Manteca, 2015).

The objective of the food waste receiving station is to generate additional energy for the WQCF. Moreover, Assembly Bill (AB) 1826 mandated that organic waste generated in the municipality be diverted from disposal in landfills incrementally over the next few years. AB 1826 requires the diversion of organic waste in the solid waste stream from commercial generator of 8 cubic yards (cuyd) of organic waste per week by April 1, 2016 (Phase I); and from commercial generator of 4 cuyd of organic waste per week by April 1, 2017 (Phase II). The ultimate state goal is to eliminate organic material disposal in landfills. Additionally, AB 341 requires the City to divert 75% of its municipal solid waste from landfill disposal by 2020. Meet phased compliance requirements for diversions under AB1826. The construction and operation of the food waste receiving station would help the City comply with AB 1826.

REQUESTED ENTITLEMENTS AND OTHER APPROVALS

The City of Manteca is the Lead Agency for the proposed project, pursuant to the State Guidelines for Implementation of the California Environmental Quality Act (CEQA), Section 15050. This document will be used by the City of Manteca to take the following actions:

- Adoption of the Mitigated Negative Declaration (MND)
- Adoption of the Mitigation Monitoring and Reporting Program (MMRP)
- Development Review

The following agencies may be required to issue permits or approve certain aspects of the proposed project:

- Central Valley Regional Water Quality Control Board (CVRWQCB) - Storm Water Pollution Prevention Plan (SWPPP) approval prior to construction activities.
- San Joaquin Valley Air Pollution Control District (SJVAPCD) - Approval of construction-related air quality permits.
- San Joaquin Council of Governments (SJCOG) - Review of project application to determine consistency with the San Joaquin County Multi-Species Habitat, Conservation, and Open Space Plan (SJMSCP).

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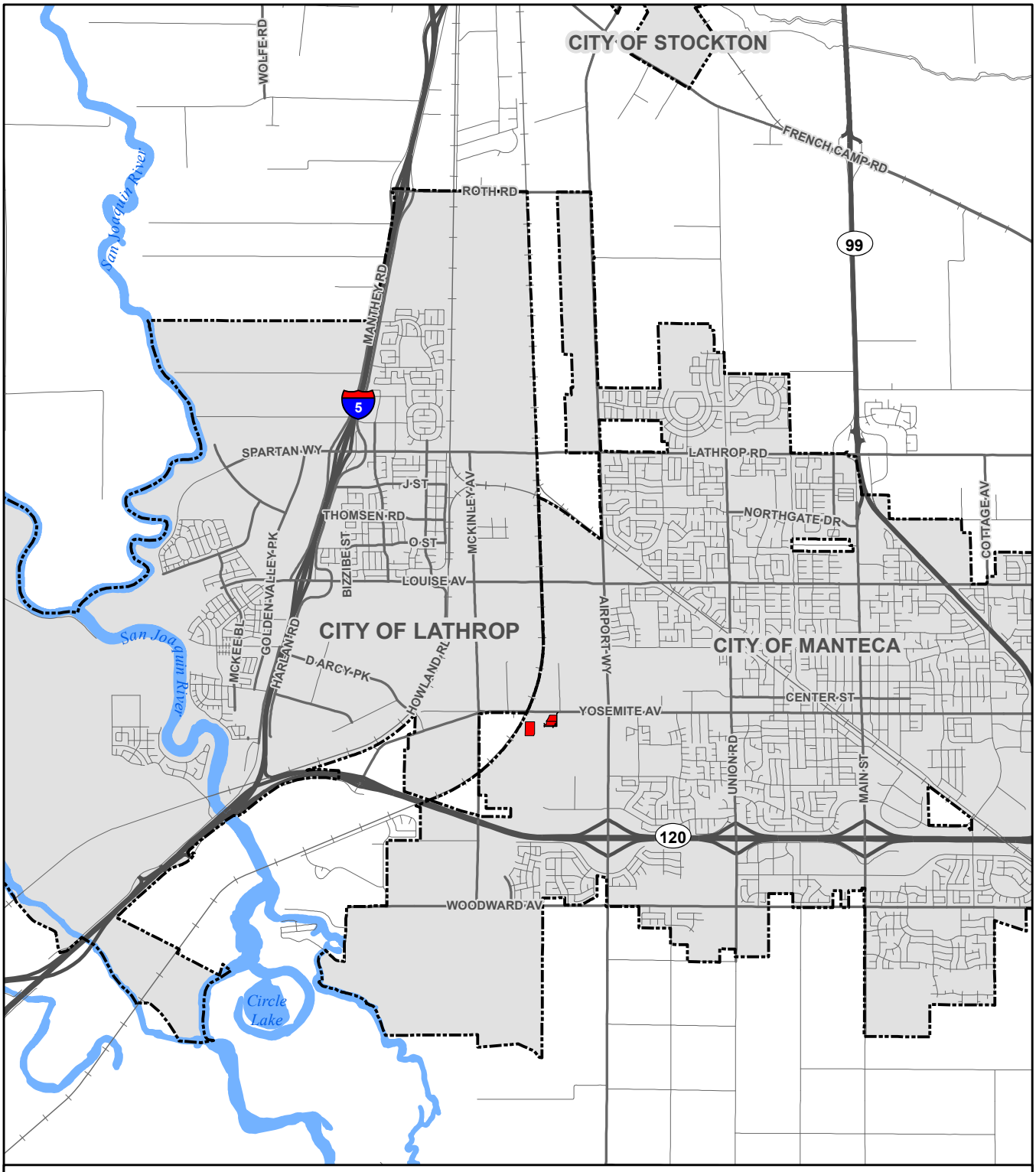

MANTECA WQCF ALTERNATIVE ENERGY PROGRAMS IS/MND

Figure 1: Regional Map

Legend

- Proposed Improvements
- City Boundary

N

0 0.5 1

Miles

Sources: San Joaquin County GIS. Map date: January 13, 2016.

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MANTECA WQCF ALTERNATIVE ENERGY PROGRAMS IS/MND

Figure 2: Aerial Photo

Legend

Proposed Improvements

City of Manteca

N

0 300 600

Feet

1:12,000

Sources: San Joaquin County GIS. ArcGIS Online BING Aerial Imagery map service. Map date: January 13, 2016.

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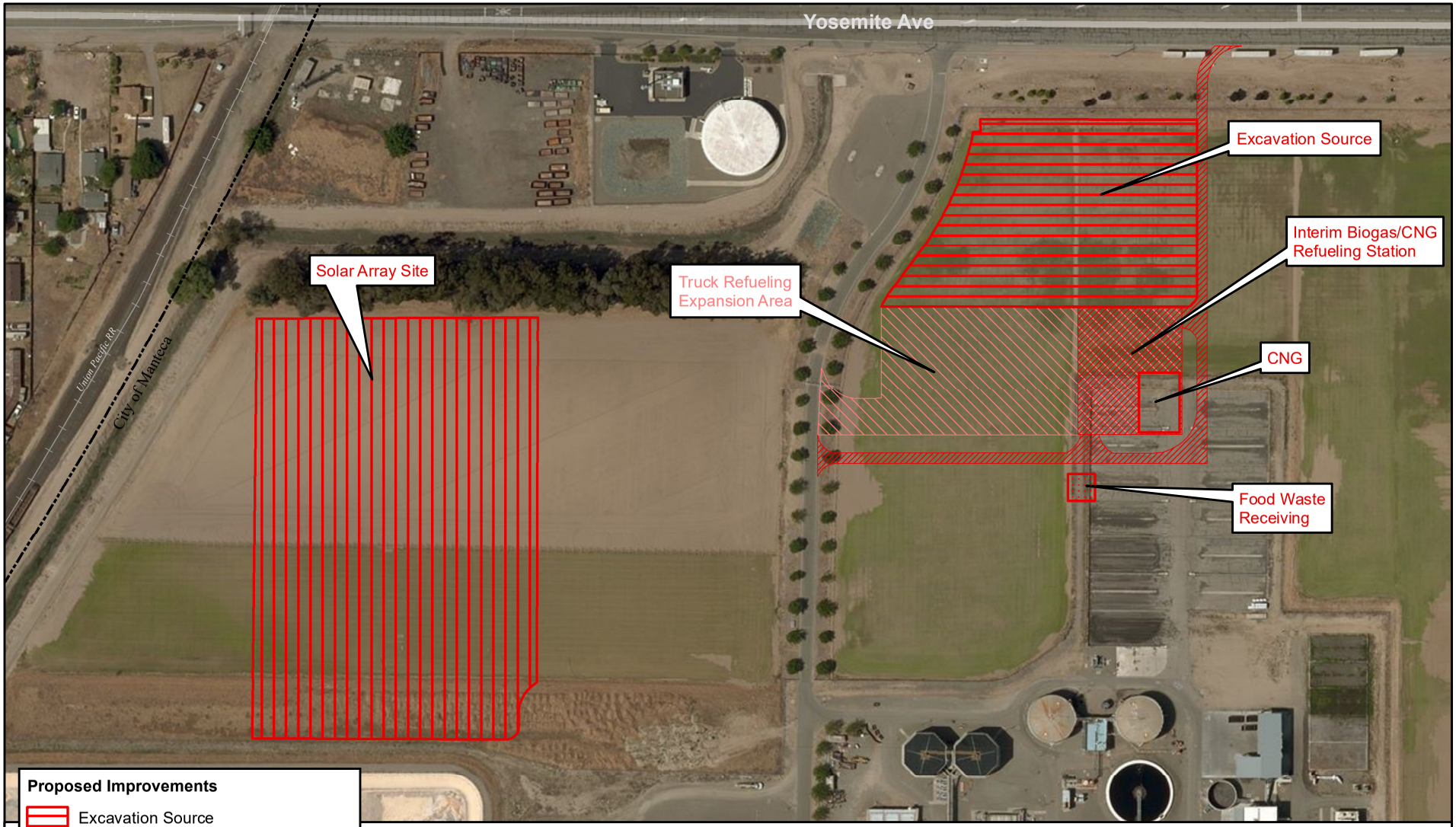

Sources: City of Manteca Department of Public Works; San Joaquin County GIS. ArcGIS Online BING Aerial Imagery map service. Map date: January 13, 2016.

MANTECA WQCF ALTERNATIVE ENERGY PROGRAMS IS/MND

Figure 3: Site Plan

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ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

	Aesthetics		Agriculture and Forest Resources		Air Quality
	Biological Resources		Cultural Resources		Geology/Soils
	Greenhouse Gasses		Hazards and Hazardous Materials		Hydrology/Water Quality
	Land Use/Planning		Mineral Resources		Noise
	Population/Housing		Public Services		Recreation
	Transportation/Traffic		Utilities/Service Systems		Mandatory Findings of Significance

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 MITIGATED 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

EVALUATION INSTRUCTIONS:

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section XVII, "Earlier Analyses," may be cross-referenced).
5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
    a) Earlier Analysis Used. Identify and state where they are available for review.
    b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
    c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances).

Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9) The explanation of each issue should identify:
   a) The significance criteria or threshold, if any, used to evaluate each question; and
   b) The mitigation measure identified, if any, to reduce the impact to less than significance

EVALUATION OF ENVIRONMENTAL IMPACTS:

In each area of potential impact listed in this section, there are one or more questions which assess the degree of potential environmental effect. A response is provided to each question using one of the four impact evaluation criteria described below. A discussion of the response is also included.

- Potentially Significant Impact. This response is appropriate when there is substantial evidence that an effect is significant. If there are one or more "Potentially Significant Impact" entries, upon completion of the Initial Study, an EIR is required.
- Less than Significant With Mitigation Incorporated. This response applies when the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact". The Lead Agency must describe the mitigation measures and briefly explain how they reduce the effect to a less than significant level.
- Less than Significant Impact. A less than significant impact is one which is deemed to have little or no adverse effect on the environment. Mitigation measures are, therefore, not necessary, although they may be recommended to further reduce a minor impact.
- No Impact. These issues were either identified as having no impact on the environment, or they are not relevant to the Project.

ENVIRONMENTAL CHECKLIST

This section of the Initial Study incorporates the most current Appendix "G" Environmental Checklist Form, contained in the CEQA Guidelines. Impact questions and responses are included in both tabular and narrative formats for each of the 18 environmental topic areas.

I. AESTHETICS

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

RESPONSES TO CHECKLIST QUESTIONS

Response a): Less than Significant. There are no scenic vistas located on or adjacent to the project site, and the project site is not designated as a scenic vista by the City of Manteca General Plan. Therefore, the implementation of the proposed project would not have a significant adverse effect on a scenic vista. This is a **less than significant** impact.

Response b): No Impact. There are two Officially Dedicated California Scenic Highway segments in San Joaquin County, which extend a total length of 16 miles (Caltrans, 2011). The first designated scenic highway is the portion of I-580 between I-205 and I-5, which offers views of the Coast Range to the west and the Central Valley's urban and agricultural lands to the east. The second scenic highway is the portion of I-5 that starts at I-205 and continues south to Stanislaus County, which allows for views of the surrounding agricultural lands and the Delta-Mendota Canal and California Aqueduct.

The project site is not visible from any of the above-referenced scenic highways. Additionally, development of the proposed project would not result in the removal of any trees, rock outcroppings, or buildings of historical significance, and would not result in changes to any of the viewsheds from the designated scenic highways. There is **no impact**.

Response c): Less than Significant. The proposed project would be located on a site that includes the City of Manteca Water Quality Control Facility. Although there are some residences nearby, the proposed project would install alternative energy infrastructure in an area that is

predominantly designed for public/quasi-public uses and is already partially developed for such uses. Therefore, the proposed project would be visually compatible with the surrounding land uses and would not significantly degrade the existing visual quality of the site or the surrounding area. This is a **less than significant** impact.

Response d): Less than Significant with Mitigation. Daytime glare can occur when the sunlight strikes reflective surfaces such as windows, vehicle windshields and shiny reflective building materials. The proposed project would introduce reflective solar panels across a 5.5 acre area in the northwest portion of the WQCF site. These panels have the potential to reflect glare to nearby residences located to the east and/or west of the project site. Although, in general, solar panels produce less glare and reflection than do standard window glass, installation of the solar array may result in increases in daytime glare.

New nighttime lighting may be required for the proposed project. However, the increase in lighting that would be expected to occur from development of the proposed project would be minimal. The existing WQCF already maintains appropriate lighting for nighttime purposes, much of which would also provide necessary lighting for the proposed project area. The lighting that currently exists at the site is in compliance with the City of Manteca Municipal Code and has been previously analyzed in the approved City of Manteca Wastewater Quality Control Facility and Collection System Master Plans Update Project. Furthermore, the City of Manteca addresses light issues on a case-by-case basis during project approval and typically adds requirements as a condition of project approval to shield and protect against light spillover from one property to the next. The limited need for additional lighting to be added to the WQCF site as part of the proposed project, as well as restrictions on lighting as provided in the City Municipal Code and through City additional review, would ensure that the proposed project would not add a new source of substantial light that would adversely affect views in the area.

The implementation of the following Mitigation Measure requires the proposed project to take actions to sufficiently reduce the potential impact of glare from the solar panels on neighboring residents. The implementation of the following Mitigation Measure would reduce this impact to a **less than significant** level.

Mitigation Measures

Mitigation Measure 1*: To the extent feasible, solar panels that are installed shall utilize anti-reflective coatings and incorporate stippling/dimpling, to reduce the effect of daytime glare.*

II. AGRICULTURE AND FOREST RESOURCES

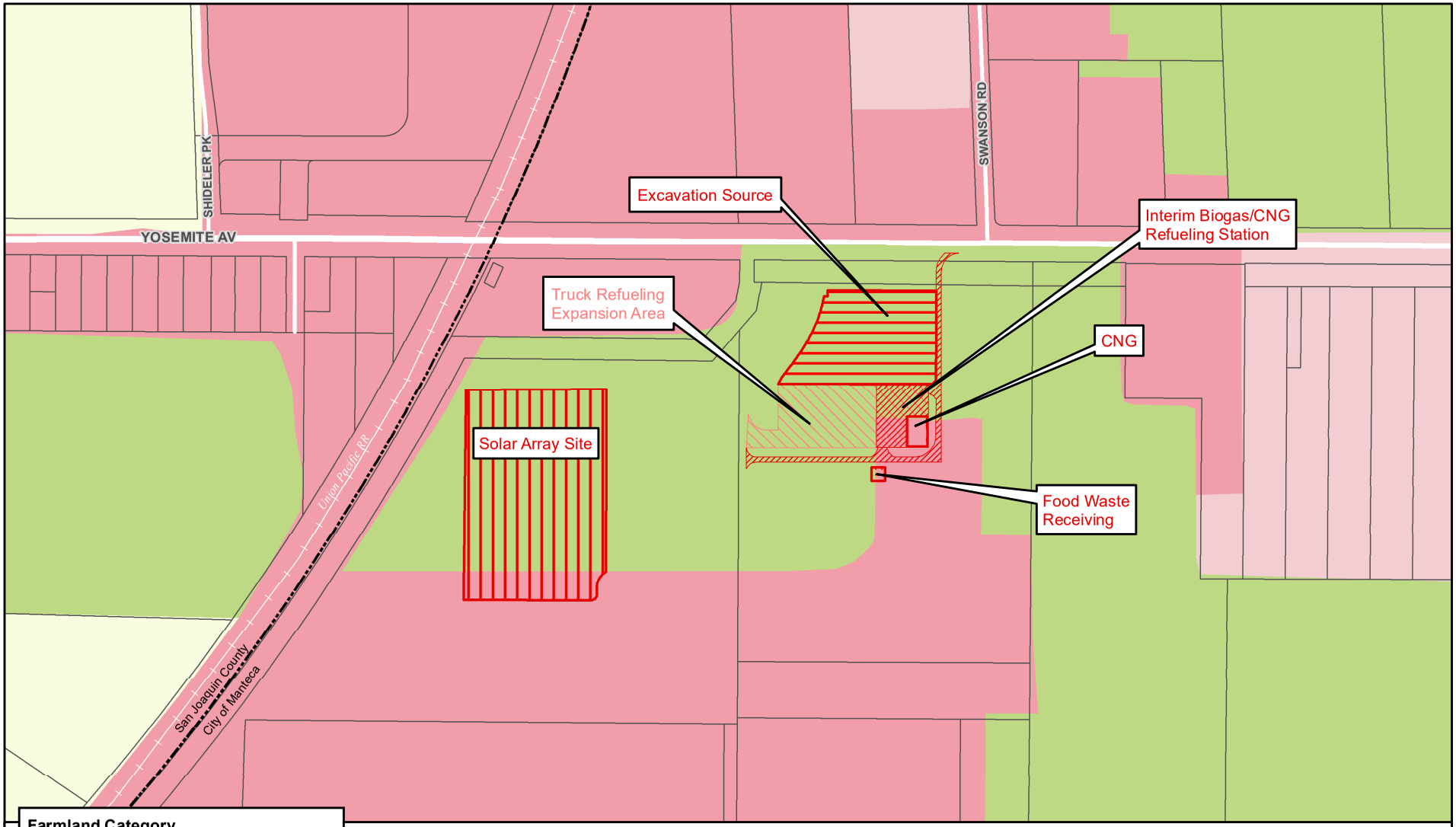
	Potentially Significant Impact	***Less Than Significant with Mitigation Incorporation***	***Less Than Significant Impact***	***No Impact***
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?		X		
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 1222(g)) or timberland (as defined in Public Resources Code section 4526)?				X
d) Result in the loss of forest land or conversion of forest land to non-forest use?				X
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?			X	

RESPONSES TO CHECKLIST QUESTIONS

Response a): Less than Significant with Mitigation. The 210-acre WQCF property is designated by the California Department of Conservation FMMP as Urban and Built-up Land and Farmland of Statewide Importance. As shown in Figure 4, portions of the proposed project would be developed on land that is mapped as Farmland of Statewide Importance. Therefore, implementation of the proposed project would cause a loss of Farmland of Statewide Importance. The implementation of the following Mitigation Measure would reduce this impact to a **less than significant** level.

Mitigation Measures

Mitigation Measure 2*: The City will pay the required City agricultural mitigation fee to offset the conversion of Important Farmland. Consistent with Chapter 13.42 of the Manteca Municipal Code, a $2,000 agricultural mitigation fee will be assessed for every acre of Important Farmland that would be developed as part of the proposed project. Consistent with goals of the City's Right to Farm ordinance, this mitigation measure would reduce the occurrence of conflicts between nonagricultural and agricultural land uses from development pressure by preserving agricultural lands located within the project vicinity. The total fee will be calculated by the City of Manteca.*



Sources: City of Manteca Department of Public Works; San Joaquin County GIS; California Department of Conservation Farmland Mapping and Monitoring Program: San Joaquin County 2014. Map date: January 13, 2016.

MANTECA WQCF ALTERNATIVE ENERGY PROGRAMS IS/MND

Figure 4: Important Farmlands Map

De Novo Planning Group
A Land Use Planning, Design, and Environmental Firm

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Response b): No Impact. The project site is not under a Williamson Act Contract, nor are any of the parcels immediately adjacent to the project site under a Williamson Act Contract. Therefore, implementation of the proposed project would not conflict with a Williamson Act Contract. The project site is currently zoned Public/Quasi-Public by the City's Zoning Map. As such, the proposed project would not conflict with any agricultural zoning or Williamson Act Contract. There is **no impact**.

Responses c) and d): No Impact. The project site is located in an area predominantly consisting of public/quasi-public uses and commercial and residential development. There are no forest resources on the project site or in the vicinity of the project site. Therefore, there is **no impact**.

Response e): Less than Significant. As described under Responses (a) and (b) above, the proposed project is not currently used for agricultural purposes; however, there is Farmland of Statewide Importance at the proposed project site that would be developed. With implementation of Mitigation Measure 2, there would be **a less than significant** impact related to this environmental topic.

III. AIR QUALITY

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Conflict with or obstruct implementation of the applicable air quality plan?		X		
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?		X		
c) Result in a cumulatively considerable net increase of any criteria 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)?		X		
d) Expose sensitive receptors to substantial pollutant concentrations?			X	
e) Create objectionable odors affecting a substantial number of people?			X	

EXISTING SETTING

The project site is located within the boundaries of the San Joaquin Valley Air Pollution Control District (SJVAPCD). This agency is responsible for monitoring air pollution levels and ensuring compliance with federal and state air quality regulations within the San Joaquin Valley Air Basin (SJVAB) and has jurisdiction over most air quality matters within its borders.

RESPONSES TO CHECKLIST QUESTIONS

Responses a), b), c): Less than Significant with Mitigation. Air quality emissions would be generated during construction of the proposed project and during operation of the proposed project. Operational emissions would come primarily from vehicle emissions from vehicle trips generated by the proposed project and from the use of maintenance equipment.

SJVAPCD Small Project Analysis Level (SPAL)

The SJVAPCD has established CEQA Small Project Analysis Level (SPAL) screening thresholds, which are based on District New Source Review (NSR) offset requirements for stationary sources. Projects that fit the descriptions and are less than the project sizes provided are deemed to have a less than significant impact on air quality due to criteria pollutant emissions and as such are excluded from quantifying criteria pollutant emissions for CEQA purposes. As a conservative assumption, the Industrial Park land use category was chosen for the purposes of the SPAL screening thresholds. According to the SPAL screening thresholds, Industrial Park projects that are less than 370,000 square feet in project size would have a less than significant impact on air quality due to criteria pollutant emissions. The developed portion of the proposed project would be a maximum of approximately 7.7 acres (335,412 square feet), which is smaller

than the 370,000 square foot threshold. With adherence to applicable regulations (including *SJVAPCD Rule 9510*, as described below), the proposed project would have a less than significant impact with regard to operational emissions. Further discussion of construction-related air quality impacts and operational air quality impacts are addressed (separately) below.

Construction-Related Emissions

The SJVAPCD's approach to analysis of construction impacts is to require implementation of effective and comprehensive control measures, rather than to require detailed quantification of emission concentrations for modeling of direct impacts. PM_{10} emitted during construction can vary greatly depending on the level of activity, the specific operations taking place, the equipment being operated, local soils, weather conditions, and other factors, making quantification difficult. Despite this variability in emissions, experience has shown that there are a number of feasible control measures that can be reasonably implemented to significantly reduce PM_{10} emissions from construction activities. The SJVAPCD has determined that, on its own, compliance with Regulation VIII for all sites and implementation of all other control measures indicated in Tables 6-2 and 6-3 of the *Guide for Assessing and Mitigating Air Quality Impacts* (as appropriate) would constitute sufficient mitigation to reduce construction PM_{10} impacts to a level considered less than significant.

Construction would result in numerous activities that would generate dust. The fine, silty soils in the project area and often strong afternoon winds exacerbate the potential for dust, particularly in the summer months. Impacts would be localized and variable. Construction impacts would last for a period of several months. The initial phase of project construction would involve grading associated with the installation of the solar array, the biogas/CNG refueling station and the food waste receiving station.

Construction activities that could generate dust and vehicle emissions are primarily related to grading, soil excavation, and other ground-preparation activities in order to prepare the project site for the solar array, the Biogas/CNG station, and the food waste receiving station.

Control measures are required and enforced by the SJVAPCD under Regulation VIII. The SJVAPCD considers construction-related emissions from all projects in this region to be mitigated to a less than significant level if SJVAPCD-recommended PM_{10} fugitive dust rules and equipment exhaust emissions controls are implemented. The proposed project would be required to comply with all applicable measures from SJVAPCD Rule VIII.

Operational Emissions

For the purposes of this operational air quality analysis, actions that violate Federal standards for criteria pollutants (i.e., primary standards designed to safeguard the health of people considered to be sensitive receptors while outdoors and secondary standards designed to safeguard human welfare) are considered significant impacts. Additionally, actions that violate State standards developed by the CARB or criteria developed by the SJVAPCD, including thresholds for criteria pollutants, are considered significant impacts.

SJVAPCD Rule 9510 Indirect Source Review

District Rule 9510 requires developers of large residential, commercial and industrial projects to reduce smog-forming (NOx) and particulate (PM_{10} and $PM_{2.5}$) emissions generated by their projects. The Rule applies to many project types, including to projects which, upon full build-out, will include more than 25,000 feet of light industrial space or 100,000 square feet of heavy industrial space. Project developers are required to reduce:

- 20 percent of construction-exhaust nitrogen oxides;
- 45 percent of construction-exhaust PM_{10};
- 33 percent of operational nitrogen oxides over 10 years; and
- 50 percent of operational PM_{10} over 10 years.

Developers are encouraged to meet these reduction requirements through the implementation of on-site mitigation; however, if the on-site mitigation does not achieve the required baseline emission reductions, the developer will mitigate the difference by paying an off-site fee to the District. Fees reduce emissions by helping to fund clean-air projects in the District. The proposed project would be required to consult with the SJVAPCD regarding the applicability of Rule 9510 Indirect Source Review including the fees. The proposed project is a clean-air project and may be eligible to receive funds from other projects that have paid into the program. Overall, the proposed project will serve as on offset or reduction in emissions by creating an alternative energy source for use locally. Therefore, the proposed project would have a **less than significant** impact related to these potential impacts.

Response d): Less than Significant. Sensitive receptors are those parts of the population that can be severely impacted by air pollution. Sensitive receptors include children, the elderly, and the infirm. In addition to the existing residences located to the west of the project site, the closest school is a high school (Sierra High School) located approximately 0.8 miles east of the project site.

Implementation of the proposed project would not expose these sensitive receptors to substantial pollutant concentrations. Air emissions would be generated during the construction and operational phases of the project. The construction phase of the project would be temporary and short-term, and the implementation of all State, Federal, and SJVAPCD requirements would greatly reduce pollution concentrations generated during construction activities. Additionally, operational emissions would be minimal and would have a negligible effect on nearby sensitive receptors.

Operation of the proposed project would result in emissions from vehicle trips and the occasional use of additional maintenance equipment. However, as described under Response a) – c) above, the proposed project would not generate significant concentrations of air emissions. Therefore, impacts to sensitive receptors would be negligible and this is a **less than significant** impact.

Response e): Less than Significant. Operation of the proposed project would not generate notable odors. The proposed project is solar array, a biogas/CNG refueling station and associated parking, and a food waste receiving station, which are compatible with the surrounding land uses. Odors may occur from construction equipment, but these odors would be short-lived. Additionally, mild odors may be generated by the biogas/CNG refueling station, the truck refueling expansion area, and the food waste receiving station, but these stations are located in an area away from sensitive receptors. This is a **less than significant** impact and no mitigation is required.

IV. BIOLOGICAL RESOURCES

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
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 U.S. Fish and Wildlife Service?		X		
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?				X
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?			X	
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?			X	
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?			X	
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?			X	

RESPONSES TO CHECKLIST QUESTIONS

Response a): Less than Significant with Mitigation. Special-status invertebrates that occur within the San Joaquin County region include: longhorn fairy shrimp, vernal pool fairy shrimp, and midvalley fairy shrimp, which requires vernal pools and swale areas within grasslands; and the valley elderberry longhorn beetle, which is an insect that is only associated with blue elderberry plants, oftentimes in riparian areas and sometimes on land in the vicinity of riparian areas. The project site does not contain essential habitat for these special status invertebrates. Implementation of the proposed project would have a **less than significant** impact on these species. No mitigation is necessary.

Special-status reptiles and amphibians that occur within the region include: the western pond turtle, which requires aquatic environments located along ponds, marshes, rivers, and ditches; the California tiger salamander, which is found is grassland habitats where there are nearby

seasonal wetlands for breeding; the silvery legless lizard, which is found in sandy or loose loamy soils under sparse vegetation with high moisture content; San Joaquin whipsnake, which requires open, dry habitats with little or no tree cover with mammal burrows for refuge; the Alameda whipsnake, which is restricted to valley-foothill hardwood habitat on south-facing slopes; the California horned lizard, which occurs in a variety of habitats including, woodland, forest, riparian, and annual grasslands, usually in open sandy areas; the foothill yellow-legged frog, which occurs in partly shaded and shallow streams with rocky soils; the California red legged frog, which occurs in stream pools and ponds with riparian or emergent marsh vegetation; and the western spadefoot toad, which requires grassland habitats associated with vernal pools. The project site does not contain essential habitat for these special status reptiles and amphibians. Implementation of the proposed project would have a **less than significant** impact on these species. No mitigation is necessary.

Numerous special-status plant species are known to occur in the region. Many of these special status plant species require specialized habitats such as serpentine soils, rocky outcrops, slopes, vernal pools, marshes, swamps, riparian habitat, alkali soils, and chaparral, which are not present on the project site. The project site is located in an area that was likely valley grassland prior to human settlement, and there are several plant species that are found in valley and foothills grasslands areas. These species include large-flowered fiddleneck, bent-flowered fiddleneck, big-balsamroot, big tarplant, round-leaved filaree, Lemmon's jewelflower, and showy golden madia. Human settlement has involved a high frequency of ground disturbance associated with the historical farming activities in the region, including the project site. The project site does not contain these special-status plant species. Implementation of the proposed project would have a **less than significant** impact on these species. No mitigation is necessary.

Special-status birds that occur within the region include: tricolored blackbird, Swainson's hawk, northern harrier, and bald eagle, which are associated with streams, rivers, lakes, wetlands, marshes, and other wet environments; loggerhead shrike, and burrowing owl, which lives in open areas, usually grasslands, with scattered trees and brush; and raptors that are present in varying habitats throughout the region.

Swainson's Hawk. The Swainson's hawk is threatened in California and is protected by the California Department of Fish and Wildlife (CDFW) and the Migratory Bird Treaty Act (MBTA). Additionally, Swainson's hawk foraging habitat is protected by the CDFW. Swainson's hawks forage in open grasslands and agricultural fields and commonly nest in solitary trees and riparian areas in close proximity to foraging habitat. The foraging range for Swainson's hawk is ten miles from its nesting location. There are numerous documented occurrences of Swainson's hawk within ten miles of the project site. Although no nesting habitat for this species occur onsite, the project site does serve as foraging habitat for this species. The project will be included in the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan SJMSCP), which is the HCP/NCCP administered by SJCOG. SJCOG will determine whether there is a need for incidental take minimization measures; however, it is noted that there is no suitable nesting habitat on the project site. With coverage under the SJMSCP, impacts to Swainson's

hawk are **less than significant** and no mitigation is required beyond the incidental take and minimization measures that will be issued by SJCOG.

Burrowing Owls. Burrowing owls are a California Species of Special Concern and are protected by the CDFW and the MBTA. Burrowing owls forage in open grasslands and shrublands and typically nest in old ground squirrel burrows. The project site contains suitable, but not high-quality habitat for burrowing owls. The project site is adjacent to other lands that are currently undeveloped that offer foraging and roosting habitat for wintering or breeding owls. Therefore, there is the potential for burrowing owls to occupy the site. While considered unlikely, due to the presence of urban development surrounding the site, this is considered potentially significant impact. The implementation of Mitigation Measure 3 would ensure that burrowing owls are not impacted during construction activities. The implementation of Mitigation Measure 3 would ensure a **less than significant** impact to burrowing owls.

Mitigation Measures

Mitigation Measure 3: *Prior to the commencement of grading activities or other ground disturbing activities on the project site, the project applicant shall arrange for a qualified biologist to conduct a follow-up preconstruction survey for western burrowing owls. If no owls or owl nests are detected, then construction activities may commence. If burrowing owls or occupied nests are discovered, then the following shall be implemented:*

- *During the breeding season (February 1 through September 1) occupied burrows shall not be disturbed and shall be provided with a 75 meter protective buffer until and unless the SJCOG Technical Advisory Committee (TAC), with the concurrence of the Permitting Agencies' representatives on the TAC; or unless a qualified biologist approved by the Permitting Agencies verifies through non-invasive means that either: 1) the birds have not begun egg laying, or 2) juveniles from the occupied burrows are foraging independently and are capable of independent survival. Once the fledglings are capable of independent survival, the burrow can be destroyed. They should only be destroyed by a qualified biologist using passive one-way eviction doors to ensure that owls are not harmed during burrow destruction. Methods for removal of burrows are described in the California Department of Fish and Game's Staff Report on Burrowing Owls (October, 1995)*

- *During the non-breeding season (September 1 through January 31) burrowing owls occupying the project site should be evicted from the project site by passive relocation as described in the California Department of Fish and Game's Staff Report on Burrowing Owls (Oct., 1995)*

Implementation of this mitigation shall occur prior to grading or site clearing activities.

Responses b): No Impact. There is no riparian habitat or other sensitive natural communities located on the project site. As such, the proposed project would have **no impact** on these resources, and no mitigation is required.

Response c): Less than Significant. A wetland is an area that is inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

There are no wetlands located on the project site. Therefore, this is a **less than significant** impact and no mitigation is required.

Response d): Less than Significant. The CNDDB record search did not reveal any documented wildlife corridors or wildlife nursery sites on or adjacent to the project site. Implementation of the proposed project would have a **less than significant** impact. No mitigation is necessary.

Responses e), f): Less than Significant. The project site is located within the jurisdiction of the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan ("Plan" or "SJMSCP") and is located within the Central Zone of the SJMSCP. The San Joaquin Council of Governments (SJCOG) prepared the Plan pursuant to a Memorandum of Understanding adopted by SJCOG, San Joaquin County, the United States Fish and Wildlife Service (USFWS), the California Department of Fish and Wildlife (CDFW), Caltrans, and the cities of Escalon, Lathrop, Lodi, Manteca, Ripon, Stockton, and Tracy in October 1994. On February 27, 2001, the Plan was unanimously adopted in its entirety by SJCOG. The City of Tracy adopted the Plan on November 6, 2001.

According to Chapter 1 of the SJMSCP, its key purpose is to "provide a strategy for balancing the need to conserve open space and the need to convert open space to non-open space uses, while protecting the region's agricultural economy; preserving landowner property rights; providing for the long-term management of plant, fish and wildlife species, especially those that are currently listed, or may be listed in the future, under the Federal Endangered Species Act (ESA) or the California Endangered Species Act (CESA); providing and maintaining multiple use Open Spaces which contribute to the quality of life of the residents of San Joaquin County; and, accommodating a growing population while minimizing costs to project proponents and society at large."

In addition, the goals and principles of the SJMSCP include the following:

- Provide a County-wide strategy for balancing the need to conserve open space and the need to convert open space to non-open space uses, while protecting the region's agricultural economy.
- Preserve landowner property rights.
- Provide for the long-term management of plant, fish, and wildlife species, especially those that are currently listed, or may be listed in the future, under the ESA or the CESA.
- Provide and maintain multiple-use open spaces, which contribute to the quality of life of the residents of San Joaquin County.

- Accommodate a growing population while minimizing costs to project proponents and society at large.

In addition to providing compensation for conversion of open space to non open space uses, which affect plant and animal species covered by the SJMSCP, the SJMSCP also provides some compensation to offset impacts of open space conversions on non-wildlife related resources such as recreation, agriculture, scenic values and other beneficial open space uses. Specifically, the SJMSCP compensates for conversions of open space to urban development and the expansion of existing urban boundaries, among other activities, for public and private activities throughout the County and within Escalon, Lathrop, Lodi, Manteca, Ripon, Stockton, and Tracy.

Participation in the SJMSCP is voluntary for both local jurisdictions and project applicants. Only agencies adopting the SJMSCP would be covered by the SJMSCP. Individual project applicants have two options if their project is located in a jurisdiction participating in the SJMSCP: mitigating under the SJMSCP or negotiating directly with the state and/or federal permitting agencies. If a project applicant opts for SJMSCP coverage in a jurisdiction that is participating under the SJMSCP, the following options are available, unless their activities are otherwise exempted: pay the appropriate fee; dedicate, as conservation easements or fee title, habitat lands; purchase approved mitigation bank credits; or, propose an alternative mitigation plan.

Responsibilities of permittees covered by the SJMSCP include collection of fees, maintenance of implementing ordinances/resolutions, conditioning permits (if applicable), and coordinating with the Joint Powers Authority (JPA) for Annual Report accounting. Funds collected for the SJMSCP are to be used for the following: acquiring Preserve lands, enhancing Preserve lands, monitoring and management of Preserve lands in perpetuity, and the administration of the SJMSCP. Because the primary goal of SJMSCP to preserve productive agricultural use that is compatible with SJMSCP's biological goals, most of the SJMSCP's Preserve lands would be acquired through the purchase of easements in which landowners retain ownership of the land and continue to farm the land. These functions are managed by San Joaquin Council of Governments.

The proposed project is classified as Agricultural Habitat under the SJMSCP. The City of Manteca will process the project through SJCOG to ensure coverage of the project pursuant to the SJMSCP. Therefore, this is a **less than significant** impact and no additional mitigation is required.

V. CULTURAL RESOURCES

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Cause a substantial adverse change in the significance of a historical resource as defined in '15064.5?		X		
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to '15064.5?		X		
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		X		
d) Disturb any human remains, including those interred outside of formal cemeteries?		X		

RESPONSES TO CHECKLIST QUESTIONS

Response a), b), c), d): Less than Significant with Mitigation. There are no known prehistoric period cultural resources, unique paleontological or archeological resources known to occur on, or within the immediate vicinity of the project site. Therefore, it is not anticipated that site grading and preparation activities would result in impacts to cultural, historical, archaeological or paleontological resources. There are no known human remains located on the project site, nor is there evidence to suggest that human remains may be present on the project site

However, as with most projects in California that involve ground-disturbing activities, there is the potential for discovery of a previously unknown cultural and historical resource or human remains.

The implementation of Mitigation Measure 4 would require appropriate steps to preserve and/or document any previously undiscovered resources that may be encountered during construction activities, including human remains. Implementation of this measure would reduce this impact to a **less than significant** level.

Mitigation Measures

Mitigation Measure 4: *If any prehistoric or historic artifacts, human remains or other indications of archaeological resources are found during grading and construction activities, an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards in prehistoric or historical archaeology, as appropriate, shall be consulted to evaluate the finds and recommend appropriate mitigation measures.*

- *If cultural resources or Native American resources are identified, every effort shall be made to avoid significant cultural resources, with preservation an important goal. If significant sites cannot feasibly be avoided, appropriate mitigation measures, such as data recovery*

excavations or photographic documentation of buildings, shall be undertaken consistent with applicable state and federal regulations.

- *If human remains are discovered, all work shall be halted immediately within 50 meters (165 feet) of the discovery, the County Coroner must be notified, according to Section 5097.98 of the State Public Resources Code and Section 7050.5 of California's Health and Safety Code. If the remains are determined to be Native American, the coroner will notify the Native American Heritage Commission, and the procedures outlined in CEQA Section 15064.5(d) and (e) shall be followed.*
- *If any fossils are encountered, there shall be no further disturbance of the area surrounding this find until the materials have been evaluated by a qualified paleontologist, and appropriate treatment measures have been identified.*

VI. GEOLOGY AND SOILS

	Potentially Significant Impact	*Less Than Significant with Mitigation*	*Less Than Significant Impact*	*No Impact*
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? Refer to Division of Mines and Geology Special Publication 42.			X	
ii) Strong seismic ground shaking?			X	
iii) Seismic-related ground failure, including liquefaction?			X	
iv) Landslides?			X	
b) Result in substantial soil erosion or the loss of topsoil?			X	
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?			X	
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?			X	
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?				X

RESPONSES TO CHECKLIST QUESTIONS

Responses a.i), a.ii): Less than Significant. Although no known active faults cross the project site, and the site is not located within an Alquist-Priolo Earthquake Fault Zone, the proposed project would be located in an area that is seismically active. Given the known faults in the region, the project area can be expected to experience earthquakes ranging from 5.0 to 5.9 in magnitude on the Richter scale, and a maximum intensity of VII or VIII on the Modified Mercalli scale. In addition, significant earthquakes from regional fault systems have affected all of San Joaquin County in the past; therefore, the possibility of some level of regional ground shaking in the future is likely.

The State regulates development in California through a variety of tools that reduce hazards from earthquakes and other geologic hazards. The California Building Code (CBC) contains

provisions to safeguard against major structural failures or loss of life caused by earthquakes or other geologic hazards. The City of Manteca's building regulations are included in the City's Municipal Code as chapter 15.04. The proposed project would be required to adhere to the provisions of the CBC, which would reduce hazards from strong seismic ground shaking and other seismic-related effects, including liquefaction.

Since there are no known active faults crossing the project site and the site is not located within an Earthquake Fault Special Study Zone, the potential for ground rupture at the site is considered low. Additionally, since strong seismic ground shaking and seismic-related ground failure would not be expected to occur, and because the project would be required to comply with the CBC requirements, impacts would be **less than significant**.

Responses a.iii), c), d): Less than Significant. Liquefaction normally occurs when sites underlain by saturated, loose to medium dense, granular soils are subjected to relatively high ground shaking. During an earthquake, ground shaking may cause certain types of soil deposits to lose shear strength, resulting in ground settlement, oscillation, loss of bearing capacity, landsliding, and the buoyant rise of buried structures. The majority of liquefaction hazards are associated with sandy soils, silty soils of low plasticity, and some gravelly soils. Cohesive soils are generally not considered to be susceptible to liquefaction. In general, liquefaction hazards are most severe within the upper 50 feet of the surface, except where slope faces or deep foundations are present.

Expansive soils are those that undergo volume changes as moisture content fluctuates; swelling substantially when wet or shrinking when dry. Soil expansion can damage structures by cracking foundations, causing settlement and distorting structural elements. Expansion is a typical characteristic of clay-type soils. Expansive soils shrink and swell in volume during changes in moisture content, such as a result of seasonal rain events, and can cause damage to foundations, concrete slabs, roadway improvements, and pavement sections.

The soils encountered at the site generally consisted of very deep, somewhat excessively drained soils (Delhi loamy sand), which could be subject to subsidence. However, as noted in the Manteca General Plan EIR, the Soil Survey for the area found that subsidence is not a characteristic of the soils that occur within the City, which includes those at the proposed project site. In addition, appropriate design measures would be implemented to avoid, accommodate, replace, or improve any problematic soft or loose soils encountered during construction.

The potential for liquefaction to occur at the project site is considered low. Additionally, the project site is not known to contain expansive soils that would pose a significant risk to structures at the project site. As such, this is a **less than significant** impact and no mitigation is required.

Responses a.iv): Less than Significant. The project site is relatively flat and there are no major slopes in the vicinity of the project site. As such, the project site is exposed to little or no

risk associated with landslides. This is a **less than significant** impact and no mitigation is required.

Response b): Less than Significant. Construction and site preparation activities associated with development of the project site include grading and building construction. During the construction preparation process, existing vegetation would be removed to grade and compact the project site, as necessary. Additionally, the proposed soil excavation source area would be an exposed area where loss of topsoil would be likely to occur. As construction occurs, these exposed surfaces could be susceptible to erosion from wind and water. Effects from erosion include impacts on water quality and air quality. Exposed soils that are not properly contained or capped increase the potential for increased airborne dust and increased discharge of sediment and other pollutants into nearby stormwater drainage facilities. Risks associated with erosive surface soils can be reduced by using appropriate controls during construction and properly revegetating exposed areas.

The proposed project is subject to the requirements of Chapter 13.28 of the Manteca Municipal Code – Stormwater Management and Discharge Control. The purpose of these requirements is to "*establish minimum storm water management requirements and controls to protect and safeguard the general health, safety and welfare of the public residing in watersheds within the city of Manteca".* These requirements are intended to assist in the protection and enhancement of the water quality of watercourses, water bodies, and wetlands in a manner pursuant to and consistent with the Federal Water Pollution Control Act (Clean Water Act, 33 USC Section 1251 et seq.), Porter- Cologne Water Quality Control Act (California Water Code Section 13000 et seq.) and National Pollutant Discharge Elimination System ("NPDES") Permit No. CAS000004, as such permit is amended and/or renewed.

Control measures are also required and enforced by the SJVAPCD under Regulation VIII relative to air quality. The SJVAPCD considers construction-related emissions from all projects in this region to be mitigated to a less than significant level if SJVAPCD-recommended PM_{10} fugitive dust rules and equipment exhaust emissions controls are implemented. The proposed project would be required to comply with all applicable measures from SJVAPCD Rule VIII, as described in Section *III (Air Quality)* of this document.

Adherence to BMPs and the requirements outlined in Chapter 13.28 of the City Municipal Code and compliance with SJVAPCD Regulation VII would ensure impacts associated with erosion are **less than significant** and no additional mitigation is required beyond the existing permit and regulatory requirements that are in place.

Response e): No Impact. The project site does not require an alternative wastewater system such as septic tanks. Implementation of the proposed project would have **no impact** on this environmental issue.

XII. GREENHOUSE GAS EMISSIONS

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gasses?			X	

BACKGROUND DISCUSSION

Various gases in the Earth's atmosphere, classified as atmospheric greenhouse gases (GHGs), play a critical role in determining the Earth's surface temperature. Solar radiation enters Earth's atmosphere from space, and a portion of the radiation is absorbed by the Earth's surface. The Earth emits this radiation back toward space, but the properties of the radiation change from high-frequency solar radiation to lower-frequency infrared radiation.

Naturally occurring greenhouse gases include water vapor (H_2O), carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and ozone (O_3). Several classes of halogenated substances that contain fluorine, chlorine, or bromine are also greenhouse gases, but they are, for the most part, solely a product of industrial activities. Although the direct greenhouse gases CO_2, CH_4, and N_2O occur naturally in the atmosphere, human activities have changed their atmospheric concentrations. From the pre-industrial era (i.e., ending about 1750) to 2011, concentrations of these three greenhouse gases have increased globally by 40, 150, and 20 percent, respectively (IPCC 2013)[1].

Greenhouse gases, which are transparent to solar radiation, are effective in absorbing infrared radiation. As a result, this radiation that otherwise would have escaped back into space is now retained, resulting in a warming of the atmosphere. This phenomenon is known as the greenhouse effect. Among the prominent GHGs contributing to the greenhouse effect are carbon dioxide (CO_2), methane (CH_4), ozone (O_3), water vapor, nitrous oxide (N_2O), and chlorofluorocarbons (CFCs).

Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors (California Energy Commission 2014) [2]. In California, the transportation sector is the largest emitter of GHGs, followed by electricity generation (California Energy Commission 2014).

[1] Intergovernmental Panel on Climate Change. 2013. "Climate Change 2013: The Physical Science Basis, Summary for Policymakers." http://www.climatechange2013.org/images/report/WG1AR5_SPM_FINAL.pdf

[2] California Energy Commission. 2014. California Greenhouse Gas Emission Inventory. http://www.arb.ca.gov/cc/inventory/inventory_current.htm

As the name implies, global climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern, respectively. California produced 459 million gross metric tons of carbon dioxide equivalents ($MMTCO_2e$) in 2012 (California Energy Commission 2014). By 2020, California is projected to produce 509 $MMTCO_2e$ per year.[3]

Carbon dioxide equivalents are a measurement used to account for the fact that different GHGs have different potential to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. This potential, known as the global warming potential of a GHG, is also dependent on the lifetime, or persistence, of the gas molecule in the atmosphere. Expressing GHG emissions in carbon dioxide equivalents takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO_2 were being emitted.

Consumption of fossil fuels in the transportation sector was the single largest source of California's GHG emissions in 2004, accounting for 40.7% of total GHG emissions in the state (California Energy Commission 2006a). This category was followed by the electric power sector (including both in-state and out of-state sources) (22.2%) and the industrial sector (20.5%) (California Energy Commission 2014).

RESPONSES TO CHECKLIST QUESTIONS

Responses a), b): Less than Significant. The primary source of GHGs from the proposed project would result from emissions of CO_2 associated with the construction of the proposed project, and operational worker vehicle trips. The proposed project would require limited grading. However, the solar array would only require driven steel H-piles to support the photovoltaic panels, and the biogas/CNG refueling station and food waste receiving station would be relatively limited in size and scope. Additionally, few operational vehicle trips would be generated by the project.

Moreover, with the installation of the proposed project's alternative energy systems, the proposed project would be expected to generate a net reduction in overall GHGs. The 1 MW solar array system would generate electricity to offset approximately one third of the energy required to operate the WQCF per annum[4]. This renewable energy production would be equivalent to the energy required to power 164 single-family homes[5]. Additionally, there would be a net reduction in GHGs from the use of on-site biogas/CNG at the proposed project refueling station, replacing some facility vehicle gasoline and diesel consumption. The food waste receiving station would also reduce CH_4 emissions, by recycling on-site waste that would otherwise be deposited to landfill.

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[3] California Air Resources Board. 2015. "2020 Business-as-Usual (BAU) Emissions Projection *2014 Edition*". http://www.arb.ca.gov/cc/inventory/data/bau.htm

[4] Email correspondence with City Public Works Deputy Director, Greg Showerman (10/09/2015).

[5] Solar Energy Industries Association, 2015. Accessed on 11/17/2015. Available at: http://www.seia.org/about/solar-energy/solar-faq/how-many-homes-can-be-powered-1-megawatt-solar-energy

The City of Manteca developed a Climate Action Plan (CAP) in October 2013. The CAP provides a baseline emissions inventory for the community, provides forecasts and future year GHG reduction targets, develops a comprehensive set of strategies for reducing GHG emissions community GHG emissions, and describes a set of guidelines for implementation, monitoring, and funding of GHG reduction strategies. The CAP aligns the City of Manteca with the Statewide GHG reduction requirements as set forth in AB32 and SB375, by providing GHG reduction strategies that are expected to reduce community-wide GHG emissions by 15% below 2005 levels by 2020. The proposed project aligns with the strategies as described in the City of Manteca CAP and it functions as an implementation project toward achieving the City's Climate Action Plan.

As described above, the proposed project would not generate GHG emissions that would have a significant impact on the environment or conflict with any applicable plans, policies, or regulations. Based on the expected net reduction in GHG emissions that would occur from the development of the proposed project, and since the proposed project would be consistent with the City CAP, impacts related to greenhouse gases are **less than significant**.

VIII. HAZARDS AND HAZARDOUS MATERIALS

	Potentially Significant Impact	***Less Than Significant with Mitigation Incorporation***	***Less Than Significant Impact***	***No Impact***
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
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?			X	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			X	
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?			X	
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?			X	
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?			X	
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
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?			X	

RESPONSES TO CHECKLIST QUESTIONS

Responses a), b): Less than Significant. The proposed project would develop alternative energy installations in an area characterized by mostly industrial types of uses, with some existing residential, commercial and light industrial uses in the regional vicinity. These alternative energy installations include (1) a solar array, (2) a biogas/CNG refueling station, and (3) a food waste receiving station. The proposed project also includes a truck refueling expansion area and a soil excavation area. The proposed project would not routinely transport, use, or dispose of hazardous materials, or present a reasonably foreseeable release of hazardous materials, with the exception of the movement of biogas and/or CNG to and from the

refueling station, which are flammable materials. The proposed project would be required to comply with all federal, state, and local regulations concerning the handling and transport of biogas and CNG. Compliance with all federal and state regulations and requirements would ensure that the operational phase of the proposed project would not pose a significant hazard to the public or the environment. Implementation of the proposed project would have a **less than significant** impact relative to this issue.

Response c): Less than Significant. The project site is not located within ¼ mile of an existing or proposed school, and would therefore, it would not result in the exposure of any school site to any hazardous materials that may be used or stored at the project site. The closest school in proximity to the project site is Sierra High School, located approximately 0.8 miles east of the project site. As described under Response a), above, the project would not involve a significant hazard to the public or the environment due to the use, storage, transport or handling of hazardous materials. This is a **less than significant** impact and no mitigation is required.

Response d): Less than Significant. According the California Department of Toxic Substances Control (DTSC) there are no Federal Superfund Sites, State Response Sites, or Voluntary Cleanup Sites on the project site. This is a **less than significant** impact, and no mitigation is required.

Responses e), f): Less than Significant. The Federal Aviation Administration (FAA) establishes distances of ground clearance for take-off and landing safety based on such items as the type of aircraft using the airport.

The Stockton Metropolitan Airport is the closest airport to the project site, located approximately 6.7 miles to the north of the site. Since the proposed project is less than two miles from an airport, this is a **less than significant** impact, and no mitigation is required.

Response g): No Impact. The General Plan includes policies that require the City to maintain emergency access routes that are free of traffic impediments. The proposed project does not include any actions that would impair or physically interfere with an adopted emergency response plan or emergency evacuation plan. The project involves the development of alternative energy programs on a site that planned for industrial uses, and would not interfere with any emergency response or evacuation plans. Implementation of the proposed project would result in **no impact** on this environmental topic.

Response h): Less than Significant. The risk of wildfire is related to a variety of parameters, including fuel loading (vegetation), fire weather (winds, temperatures, humidity levels and fuel moisture contents) and topography (degree of slope). Steep slopes contribute to fire hazard by intensifying the effects of wind and making fire suppression difficult. Fuels such as grass are highly flammable because they have a high surface area to mass ratio and require less heat to reach the ignition point, while fuels such as trees have a lower surface area to mass ratio and require more heat to reach the ignition point.

The proposed project would include design measures to ensure that wildfires would not pose a risk to the fueling facilities. This would include concrete or rock materials surrounding the

facility, which functions as a defensible material. Additionally, the solar array would have gravel/rock material to inhibit vegetation that could ignite a wildlife. Implementation of the proposed project with these basic defensible design measures would ensure that this impact is **less than significant**.

IX. HYDROLOGY AND WATER QUALITY

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Violate any water quality standards or waste discharge requirements?			X	
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a 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)?			X	
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?			X	
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?			X	
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?			X	
f) Otherwise substantially degrade water quality?			X	
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 flood hazard delineation map?			X	
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?			X	
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?			X	
j) Inundation by seiche, tsunami, or mudflow?			X	

RESPONSES TO CHECKLIST QUESTIONS

Responses a): Less than Significant. The proposed project would not add a discernable amount of wastewater to the City's system, and would therefore not produce a volume of

wastewater that would significantly affect the City's ability to treat its wastewater. This is a **less than significant** impact, and no mitigation is required.

Responses b): Less than Significant. The proposed project would not result in the construction of new groundwater wells, nor would it increase existing levels of groundwater pumping. The proposed project is not a facility that would place an increased demand on the City's municipal water system or water supply.

Groundwater recharge occurs primarily through percolation of surface waters through the soil and into the groundwater basin. The addition of significant areas of impervious surfaces (such as roads, parking lots, buildings, etc.) can interfere with this natural groundwater recharge process. The solar array would not be considered impervious surface, since rainwater would flow from the solar panels directly to the underlying soil. The biogas/CNG refueling station and associated parking, and the food waste receiving station would add some impervious surface. However, given the relatively large size of the groundwater basin in the Manteca area, the areas of impervious surfaces added as a result of project implementation would not significantly adversely affect the recharge capabilities of the local groundwater basin. The proposed project would result in **less than significant** impacts related to groundwater and groundwater recharge. No mitigation is required.

Responses c), d), e), f): Less than Significant. Much of the rainwater that falls on natural or undeveloped land slowly infiltrates the soil and is stored either temporarily or permanently in underground layers of soil. When the soil becomes completely soaked or saturated with water or the rate of rainfall exceeds the infiltration capacity of the soil, the rainwater begins to flow on the surface of land to low lying areas, ditches, channels, streams, and rivers. Rainwater that flows off of a site is defined as storm water runoff. When a site is in a natural condition or is undeveloped, a larger percentage of rainwater infiltrates into the soil and a smaller percentage flows off the site as storm water runoff.

The infiltration and runoff process is altered when a site is developed. Buildings, roads, and parking lots introduce asphalt, concrete, and roofing materials to the landscape. These materials are relatively impervious, which means that they absorb less rainwater. As impervious surfaces are added to the ground conditions, the natural infiltration process is reduced. As a result, the volume and rate of storm water runoff increases. The increased volumes and rates of storm water runoff may result in flooding if adequate storm drainage facilities are not provided.

Development of the project site would place minimal impervious surfaces on the project site, where the biogas/CNG refueling station and associated parking, and food waste receiving stations would be located. Development of the project site would potentially increase local runoff, and could introduce constituents into storm water that are typically associated with urban runoff. These constituents could include heavy metals (such as lead, zinc, and copper) and petroleum hydrocarbons. Best management practices (BMPs) will be applied to the proposed site development to limit the concentrations of these constituents in any site runoff that is discharged into downstream facilities to acceptable levels.

Additionally, the proposed project is subject to the requirements of Chapter 13.28 of the Manteca Municipal Code – Stormwater Management and Discharge Control. The purpose of these requirements is to "*establish minimum storm water management requirements and controls to protect and safeguard the general health, safety and welfare of the public residing in watersheds within the city of Manteca".*

These requirements are intended to assist in the protection and enhancement of the water quality of watercourses, water bodies, and wetlands in a manner pursuant to and consistent with the Federal Water Pollution Control Act (Clean Water Act, 33 USC Section 1251 et seq.), Porter- Cologne Water Quality Control Act (California Water Code Section 13000 et seq.) and National Pollutant Discharge Elimination System ("NPDES") Permit No. CAS000004, as such permit is amended and/or renewed.

Adherence to BMPs and the requirements outlined in Chapter 13.28 of the City Municipal Code would ensure that the project is consistent with all applicable plans and regulations related to stormwater conveyance and detention, and would ensure that offsite or onsite flooding does not occur during the design storm event. The potential for the project to exceed the capacity of the stormwater system is a **less than significant** impact.

Responses g), h): Less than Significant. The 100-year floodplain denotes an area that has a one percent chance of being inundated during any particular 12-month period. The risk of a site within the 100-year floodplain being flooded in any century is one percent but statistically the risk is almost 40 percent in any 50-year period.

Floodplain zones are determined by the Federal Emergency Management Agency (FEMA) and used to create Flood Insurance Rate Maps (FIRMs). These tools assist cities in mitigating flooding hazards through land use planning. FEMA also outlines specific regulations for any construction, whether residential, commercial, or industrial within 100-year floodplains.

The project site is located within a FEMA designated 100-year floodplain. However, the proposed project does not include any housing and would not include structures that would impede or redirect flood flows. Additionally, the project site is currently protected from the one percent annual chance or greater flood hazard by a levee system. This is a **less than significant** impact and no mitigation is required.

Responses i), j): Less than Significant. The safety of dams in California is stringently monitored by the California Department of Water Resources, Division of Safety of Dams (DSD). In the unlikely event of a dam failure, there is the potential that the project site could become inundated with water. The DSD is responsible for inspecting and monitoring each dam in perpetuity. The proposed project would not result in actions that could result in a higher likelihood of dam failure at San Luis Reservoir and New Melones Dams. There will always be a remote chance of dam failure that results in flooding of the City of Manteca, including the project site. However, given the regulations provided in the California Dam Safety Act, and the ongoing monitoring performed by the DSD, the risk of loss, injury, or death to people or structures from dam failure is considered **less than significant**.

There are no significant bodies of water near the project site that could result in the occurrence of a seiche or tsunami. Additionally, the project site and the surrounding areas are essentially flat, which precludes the possibility of mudflows occurring on the project site. This is a **less than significant** impact and no mitigation is required.

X. LAND USE AND PLANNING

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Physically divide an established community?				X
b) Conflict with any 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?			X	
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?			X	

RESPONSES TO CHECKLIST QUESTIONS

Responses a): No Impact. The project site is surrounded by residential, public/quasi-public, and light industrial land uses, and would not divide an established community. There is **no impact.**

Responses b): Less than Significant. The project site is currently designated Public/Quasi-Public (PQP) by the City of Manteca General Plan Land Use Designations Map and is zoned Public/Quasi-Public (PQP).

The proposed uses on the project site are consistent with the General Plan designation and Zoning. The project's consistency with other General Plan policies that provide environmental protections are addressed within the relevant sections of this document. This is a **less than significant** impact, and no mitigation is required.

Response c): Less than Signification. As described under the Biological Resources section of this document, the proposed project is classified as Agricultural Habitat under the SJMSCP. The City of Manteca will consult with SJCOG to obtain coverage of the project pursuant to the SJMSCP. Implementation of the proposed project would not be in conflict with the SJMSCP. This is a **less than significant** impact.

XI. MINERAL RESOURCES

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?			X	
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?			X	

RESPONSES TO CHECKLIST QUESTIONS

Responses a), b): Less than Significant. As described in the Manteca General Plan EIR, mineral resources were found not to be significant issues requiring further environmental analysis. The California Division of Mines and Geology identified one location within the City of Manteca General Plan Study Area as a Zone MRZ-2, Significant Mineral Resource Zone. However, this designation does not occur within the project site area. Therefore, the project would not result in the loss of availability of a known mineral resource. This impact is considered **less than significant**.

XII. NOISE

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			X	
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?			X	
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?			X	
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?		X		
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 expose people residing or working in the project area to excessive noise levels?			X	
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				X

RESPONSES TO CHECKLIST QUESTIONS

Response a): Less than Significant. The primary sources of noise currently present in the project area are from noise from the existing WCQF, railroad traffic, and vehicle traffic along Yosemite Avenue. The proposed project is a development of a solar array, biogas/CNG refueling station and associated parking, and a food waste receiving station, which would require periodic maintenance such as the washing of the solar array panels. Construction noise would be temporary, lasting a period of a few months.

The addition of vehicle traffic generated by the proposed project on the local roadway system to existing volumes would be negligible. The operation of the project would not result in a noticeable change in the traffic noise contours of area roadways and long-term increases in traffic source noise levels would not result in the exposure of persons to or generation of noise levels in excess of applicable standards or create a substantial permanent increase in ambient noise levels at existing noise-sensitive receptors.

The City of Manteca's noise ordinance limits noise in an industrial area to 70 dBA at 50 feet. It is not expected that the proposed project would subject on-site personnel to noise levels in excess of this limit. This is a **less than significant** impact.

Response b): Less than Significant. No major stationary sources of groundborne vibration were identified in the project area that would result in the long-term exposure of proposed onsite land uses to unacceptable levels of ground vibration. In addition, the proposed project would not involve the use of any major equipment or processes that would result in potentially significant levels of ground vibration that would exceed these standards at nearby existing land uses. However, construction activities associated with the proposed project would require the use of various tractors, trucks, and potentially jackhammers that could result in intermittent increases in groundborne vibration levels. The use of major groundborne vibration-generating construction equipment/processes (i.e., blasting, pile driving) is not anticipated to be required for construction of the proposed project.

Groundborne vibration levels commonly associated with construction equipment are summarized in Table 2. Based on the levels presented in Table 2, groundborne vibration generated by construction equipment would not be anticipated to exceed approximately 0.09 inches per second ppv at 25 feet. Predicted vibration levels would not be anticipated to exceed recommended criteria for structural damage and human annoyance (0.2 and 0.1 in/sec ppv, respectively) at nearby land uses. As a result, short-term groundborne vibration impacts would be considered **less than significant.**

Table 2: Representative Vibration Source Levels for Construction Equipment

Equipment	*Peak Particle Velocity at 25 Feet (In/Sec)*
Large Bulldozers	0.089
Loaded Trucks	0.076
Jackhammer	0.035
Small Bulldozers	0.003
Source: FTA 2006, Caltrans 2004	

Response c): Less than Significant. Generally, a project may have a significant effect on the environment if it will substantially increase the ambient noise levels for adjoining areas or expose people to severe noise levels. In practice, more specific professional standards have been developed. These standards state that a noise impact may be considered significant if it would generate noise that would conflict with local planning criteria or ordinances, or substantially increase noise levels at noise-sensitive land uses.

Existing noise-sensitive land uses in the project area consist primarily of residential dwellings adjacent to the roadways near to the existing WQCF pipelines for the collection system. The nearest residences to the WCQF are residences along Yosemite Avenue, approximately 650 feet north of the existing facility. The nearest portion of the proposed project, the northwest corner

of the solar array, would be installed approximately 200 feet southeast of the nearest residences.

The proposed project would not directly generate increased noise beyond those activities commonly found in light industrial and industrial park developments (operational vehicle noise, high-powered washing hoses, etc.). The noise directly generated by the project would not differ substantially from the existing ambient noises currently generated by existing WQCF.

The proposed project may indirectly increase ambient noise levels in the project vicinity through the introduction of additional vehicle trips to area roadways, particularly Yosemite Avenue. However, the number of additional vehicles generated by the proposed project would be minimal. This negligible increase in roadway noise would not be perceptible in the project area. Additionally, maintenance activities would not generate a substantial permanent increase in noise in the area. As such, this is a **less than significant** impact.

Response d): Less than Significant with Mitigation. Construction activities at the project site would result in temporary increases in noise levels that could expose adjacent residences to increased noise levels and noise nuisances. Construction activities could create temporary noise levels of up to 90 dBA at distances of 50 feet. Because the project site is surrounded by existing residential neighborhoods, this temporary increase in construction noise is considered potentially significant.

The following mitigation measure would place restrictions on the time of day that construction activities can occur, and includes additional techniques to reduce noise levels at adjacent residences during construction activities. The implementation of this mitigation measure would reduce this temporary impact to a less than significant level.

Mitigation Measures

Mitigation Measure 5*: The following mitigation measures shall be implemented:*

a) *Construction activities (excluding activities that would result in a safety concern to the public or construction workers) shall be limited to between the hours of 7:00 a.m. and 7:00 p.m. Construction activities shall be prohibited on Sundays and federal holidays.*

b) *Construction equipment shall be properly maintained and equipped with noise-reduction intake and exhaust mufflers and engine shrouds, in accordance with manufacturers' recommendations.*

c) *Construction equipment staging areas shall be located at the furthest distance possible from nearby noise-sensitive land uses.*

Response e): Less than Significant. The Stockton Metropolitan Airport is the closest public airport to the project site, located approximately 6.7 miles to the north of the site. The project site is not located within two miles of a public airport. This is a **less than significant** impact, and no mitigation is required.

Response f): No Impact. The project site is not located within two miles of a private airstrip. The closest private airstrip is Sharpe Army Airfield, located approximately 2.1 miles from the project site (to the north). There is **no impact** relative to this topic.

XIII. POPULATION AND HOUSING

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			X	
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X

RESPONSES TO CHECKLIST QUESTIONS

Response a): Less than Significant. Implementation of the project would result in the construction of a solar array, an on-site biogas/CNG refueling station and associated parking, and a food waste receiving station. These alternative energy programs would provide additional on-site sources of energy for some of the WQCF's operations. In particular, the solar array would reduce the WQCF's demand for grid electricity. However, grid-supplied electricity is plentiful; electricity supply is not currently nor projected to be a constraining factor on population growth. Additionally, the biogas/CNG refueling station would marginally reduce demand for petroleum fuel, and the food waste receiving station would reduce waste sent to landfill. However, this reduction would be negligible in relation to the overall supply of petroleum at nearby gas stations and to the area available for landfill waste at Foothill Sanitary Landfill. Therefore, implementation of the proposed project is unlikely to induce population growth, either directly or indirectly. This is a **less than significant** impact.

Responses b), c): No Impact. There are no existing homes or residences located on the project site. There is **no impact** relative to this topic.

XIV. PUBLIC SERVICES

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
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 for any of the public services:				
i) Fire protection?			X	
ii) Police protection?			X	
iii) Schools?				X
iv) Parks?				X
v) Other public facilities?				X

RESPONSES TO CHECKLIST QUESTIONS

Response a): Less than Significant.

i) Fire Protection and Emergency Medical Services: The project area is in the Manteca Fire Department (MFD) service area. As of 2006, MFD's service area covers approximately 60 square miles in southern San Joaquin. The closest fire station to the WQCF site is Fire Station 242, located at 1154 South Union Road, immediately north of State Route (SR) 120 on Union Road, approximately 1.5 miles east of the WQCF site. The proposed project is not expected to place much demand on the MFD based on the type of facilities constructed and the absence of population generation. The Manteca Fire Department would be expected to be able to serve the proposed project without constructing new facilities or hiring additional personnel. Implementation of the proposed project would be a **less than significant** impact.

ii) Police Protection: Police services would be provided to the proposed project area by the Manteca Police Department. The Manteca Police Department is a full service law enforcement agency and operates out of 1001 West Center Street, Manteca, approximately 1.5 miles east of the WQCF site. The proposed project is not expected to place much demand on the Police Department based on the type of facilities constructed and the absence of population generation. The Manteca Police Department is expected to continue to have sufficient staff to serve the proposed project while maintaining acceptable response times. Implementation of the proposed project would be a **less than significant** impact.

iii) Schools: As described in *Section XIII* (*Population and Housing*), implementation of the proposed project would not result in discernable population growth within the City of Manteca.

Therefore, there would be no substantial adverse physical impact to schools. There is **no impact**.

iv) Parks: As described in *Section XIII* (*Population and Housing*), implementation of the proposed project would not result in discernable population growth within the City of Manteca. Therefore, there would be no substantial adverse physical impact to parks. There is **no impact**.

v) Other Public Facilities: Other public facilities in the City of Manteca include libraries, hospitals, and cultural centers such as museums and music halls. Since the proposed project would not generate an increase in population, the proposed project would not increase demand on these facilities. There is **no impact**.

XV. RECREATION

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Would the project 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?				X
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				X

RESPONSES TO CHECKLIST QUESTIONS

Responses a), b): No impact. The proposed Project is the installation of alternative energy systems and associated parking at the City of Manteca WQCF and would not generate a discernable increase in population. Therefore, the proposed project would not increase the use of neighborhood and regional parks, nor would the project require the construction or expansion of recreational facilities. There is **no impact** relative to this topic.

XVI. TRANSPORTATION/TRAFFIC

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?			X	
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?			X	
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?			X	
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X	
e) Result in inadequate emergency access?			X	
f) Result in inadequate parking capacity?			X	
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?			X	

RESPONSES TO CHECKLIST QUESTIONS

Response a), b): Less than Significant. The proposed project would generate construction worker vehicle trips during the construction phase of the project and maintenance vehicle trips during the operational phase of the project. However, the expected increase in traffic to nearby roadways would be miniscule over the lifespan of the proposed project. The construction phase of the project would be short-term in nature and would generate relatively few construction worker vehicles when amortized over the lifespan of the project. The operational phase of the proposed project would generate a small number of maintenance vehicles on a periodic basis, many of which would be maintained on-site, lessening the impact to nearby roadways. Additionally, the proposed project biogas/CNG refueling station would reduce the total number of on-site WQCF vehicles that would travel off-site to refuel. Therefore, the proposed project would have a **less than significant** impact relative to this topic.

Response c): Less than Significant. The proposed project would not result in a change in air traffic patterns. The proposed project is the installation of new alternative energy systems at a site that is already zoned for public/quasi-public uses. The Stockton Metropolitan Airport is the closest public airport to the project site, located approximately 6.7 miles to the north of the site.

The proposed project is not located in any of airport safety zones. This impact is **less than significant,** and no mitigation is required.

Responses d) and e): **Less than Significant.** The proposed project would not alter emergency access corridors or increase traffic hazards beyond those that currently exist. The proposed site plan provides adequate access to the project site, which would accommodate emergency vehicles. Implementation of the proposed project would have a less than significant impact related to emergency access, and would not interfere with an emergency evacuation plan. This is a **less than significant** impact and no mitigation is required.

Response f): Less than Significant. A minimum number of parking spaces would be required. Adequate parking would be provided for the purposes of the proposed project. This is a **less than significant** impact and no mitigation is required.

Response g): Less than Significant. The proposed project would provide an on-site biogas/CNG refueling station, in support of alternative fuels. The proposed project does not conflict with City of Manteca policies supporting alternative transportation. This is a **less than significant** impact.

XVII. UTILITIES AND SERVICE SYSTEMS

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?			X	
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?			X	
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?			X	
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?			X	
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 projects projected demand in addition to the providers existing commitments?			X	
f) Be served by a landfill with sufficient permitted capacity to accommodate the projects solid waste disposal needs?			X	
g) Comply with federal, state, and local statutes and regulations related to solid waste?			X	

RESPONSES TO CHECKLIST QUESTIONS

Responses a) and e): Less than Significant. The proposed project would not generate wastewater. No improvements or expansions to the existing WQCF are required. Implementation of the proposed project would have a **less than significant** impact and no mitigation is required.

Responses b) and d): Less than Significant. A limited amount of water would be required for the proposed project. A small amount of non-potable water would be required to periodically clean the solar array panels. Because non-potable water is generated from spillover from the potable water supply system and secondary effluent from the WQCP, adequate non-potable water supplies would be available. This is a **less than significant** impact and no mitigation is required.

Responses c): Less than Significant. Development of the project site would place a small amount of impervious surfaces to the project site at the biogas/CNG refueling station area and

the food waste receiving station. There would be a minimal need for new storm water drainage facilities. Since the addition of impervious surface would be limited and the need for new storm water facilities would be minimal, the potential for the project to exceed the capacity of the stormwater system is considered **less than significant**.

Responses f) and g): Less than Significant. The approximately 800-acre Foothill Sanitary Landfill, owned by San Joaquin County, is the primary disposal facility accepting the City's solid waste. The Foothill landfill receives approximately 810 tons per day. The landfill is permitted to accept up to 1,500 tons per day, and has a permitted capacity of 51 million tons, of which approximately 45 million tons of capacity remains.

The proposed project would not generate solid waste beyond levels normally found in similar developments, but rather would use solid waste for the project of fuel. It is anticipated that the proposed project would result in a net reduction of solid waste sent to the landfill. This is a **less than significant** impact.

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
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?			X	
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)?			X	
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			X	

RESPONSES TO CHECKLIST QUESTIONS

Responses a), b), c): Less than Significant. The proposed project does not 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. Additionally, the proposed project does not have impacts that are individually limited, but cumulatively considerable. Lastly, the proposed project does not have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly. As described throughout the analysis provided herein, the proposed project would not result in any significant impacts to the environment that cannot be mitigated to a less than significant level through compliance with existing regulations and requirements or through implementation of mitigation measures. Implementation of the proposed project would have a **less than significant** impact relative to these topics.

REFERENCES

California Scenic Highway Mapping System (Caltrans, 2011). Available online at: http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm

California Department Fish and Wildlife Online Quickview Tool in BIOS. Accessed on November 6, 2015. Available online: https://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp

City of Manteca General Plan 2023 (City of Manteca, 2003a).

City of Manteca General Plan 2023 Draft EIR (City of Manteca, 2003b).

City of Manteca Wastewater Quality Control Facility and Collection System Master Plans Update Project EIR (EDAW, 2007).

Correspondence with the City of Manteca Engineer Bret Swain on December 1, 2015 (City of Manteca, 2015).

Department Of Toxic Substances Control Envirostor (DTSC, 2015). Accessed on November 17, 2015. Available online at: http://www.envirostor.dtsc.ca.gov/public/

FEMA 100 Year Floodplain Map. Accessed on November 18, 2015 (FEMA, 2015). Accessed on November 17, 2015. Available online at: http://www.arcgis.com/home/webmap/viewer.html?webmap=2e38c1d9c2494fcfbe21384f3ddfecb4

San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP, 2000). Available online at: http://www.sjcog.org/DocumentCenter/View/5

San Joaquin County Municipal Code (SJCMC, 2014). Accessed on November 17, 2015.

San Joaquin Valley Air Pollution Control District (SJVAPCD, 2004). SJVAPCD Rule VIII. Available online at: https://www.valleyair.org/rules/1ruleslist.htm#reg8

San Joaquin Valley Air Pollution Control District (SJVAPCD, 2005). Rule 9510 Indirect Source Review (ISR). Available online at: https://www.valleyair.org/rules/currntrules/r9510.pdf

San Joaquin Valley Air Pollution Control District (SJVAPCD, 2012). Small Project Analysis Level (SPAL). Available at: https://www.valleyair.org/transportation/CEQA%20Rules/SPALTables61912.pdf

State of California General Plan Guidelines (OPR 2003).

United States Department of Agriculture Natural Resources Conservation Service. Accessed on November 15, 2015 (USDA NDCS, 2015). Available online at: http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx