City of Alameda
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Initial Study and Mitigated Negative Declaration

Alameda Municipal Power Solar Project
Alameda Doolittle Landfill Site
Project No. PLN19-0601

Project Sponsor:

Alameda Municipal Power

Prepared by:

City of Alameda
Planning, Building & Transportation Department

January 2020

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Acronyms and Abbreviations

AADT	annual average daily traffic
AAM	annual arithmetic mean
ADOE	Archaeological Determinations of Eligibility
AFY	acre-feet per annum
AGM	annual geometric mean
AMP	Alameda Municipal Power
AQMP	Air Quality Management Plan
ARB	Air Resources Board
BAAQMD	Bay Area Air Quality Management District
CAA	Clean Air Act
CAAA	Clean Air Act Amendments
CDFW	California Department of Fish and Wildlife
CARB	California Air Resources Board
Caltrans	California Department of Transportation
CCAA	California Clean Air Act
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
cfs	cubic feet per second
CH4	methane
CMP	congestion management program
CNDDB	California Natural Diversity Data Base
CNEL	community noise equivalent level
CNPS	California Native Plant Society
CO	carbon monoxide
CO2	carbon dioxide
CRWQCB, SFBR	California Regional Water Quality Control Board, San Francisco Bay Region
dB(A)	decibels on the A-scale
DEIR	Draft Environmental Impact Report

DTSC	Department of Toxic Substances Control
DWR	Department of Water Resources
EA	Environmental Assessment
EIR	Environmental Impact Report
EPA	U.S. Environmental Protection Agency
EPDC	expected peak day concentration
ESA	Endangered Species Act
g	acceleration due to gravity
GHG	greenhouse gases
GIS	Geographic Information System
gpm	gallons per minute
ISA	Integrated Science Assessment
GWP	global warming potential
HPD	Historic Property Directory
kV	kilovolts
kW	kilowatts
KSD&A	K.S. Dunbar & Associates, Inc.
Ldn	day-night average sound level
Leq	noise equivalent
LUSTIS	Leaking Underground Storage Tank Information System
MBTA	Migratory Bird Treaty Act
MDB&M	Mount Diablo Base and Meridian
MMRP	Mitigation Monitoring and Reporting Program
MT	metric tons
MW	megawatts
MWdc	megawatts measured as direct current
MWh	megawatt hours
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NCPA	Northern California Power Agency
NDDB	Natural Diversity Data Base
NO	nitrogen oxide
NO2	nitrogen dioxide
NOx	oxides of nitrogen

NPL	National Priorities List
NRCS	Natural Resources Conservation Service
O3	ozone
OES	Office of Emergency Services
OHP	Office of Historic Preservation
Pb	lead
Pga	peak ground acceleration
PM	particulate matter
PM10	particulate matter (less than 10 microns in diameter)
PM2.5	particulate matter (less than 2.5 microns in diameter)
ppb	parts per billion
ppm	parts per million
PRC	Public Resources Code
PV	photovoltaic
RCRA	Resource Conservation and Recovery Act
ROG	reactive organic gases also called VOC (volatile organic compounds)
SAAQS	State Ambient Air Quality Standards
SCAQMD	South Coast Air Quality Management District
SIP	State Implementation Plan
SMAQMD	Sacramento Metropolitan Air Quality Management District
SO2	sulfur dioxide
SOx	oxides of sulfur
State Water Board	State Water Resources Control Board
SWIS	Solid Waste Information System
SWPPP	Storm Water Pollution Prevention Plan
TOG	total organic gases
USDA	U.S. Department of Agriculture
USF&WS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Service
µg/m3	micrograms per cubic meter

Executive Summary

Overview of the Proposed Project

The Project consists of the construction and operation of a 2.0 megawatt photovoltaic solar facility on an 11-acre portion of the 33.2-acre site, located northwest of the intersection of Doolittle Drive and Harbor Bay Parkway in the northeastern area of Bay Farm Island in Alameda. The proposed technology type for the solar project is fixed-tilt solar array and will contain approximately 7,500 solar modules on site. The land is currently owned and maintained by the City of Alameda and contains the closed Doolittle solid waste facility, a model airplane field, and a multi-use bicycle pedestrian path around the perimeter. The Doolittle Class III solid waste disposal site began operation in 1953 and was closed in 1985. The property is located within the M-2, General Industrial Zoning and is designated as Parks and Public Open Space by the General Plan and is planned to be the future location of an open space park. The project will require approval of a use permit, lease of city land, and a power purchase agreement. The term of the approvals is anticipated to be for up to 25 years. At the end of the life of the Project all equipment would be removed to allow the City to develop the open space park at this site.



Figure ES-1 Alameda Doolittle Landfill Site

The Chuck Corica Municipal Golf Complex is located approximately 130 feet across Doolittle Drive to the south, and the property line on the northwest edge of Oakland International Airport is 320 feet to the southeast. Amelia Earhart Elementary School is located approximately 1,000 feet to the southwest of the Project and the nearest residence sits west of the Project, opposite Doolittle Drive, approximately 320 feet away. The elevation of the site should serve to screen the Project from the residential area. The land is currently owned and operated by the City and is zoned as industrial (M-2) due to the off-gassing from the existing landfill. The site is shown on the City's latest Land Use Map (edited October 2016) as Parks and Public Open Space.

According to the Oakland International Airport Land Use Compatibility Plan ("ALUCP"), the Project site lies within the Airport Influence Area and is subject to ALUCP airspace protection policies as well as regulations enacted by the Federal Aviation Administration (FAA) and the State of California. The ALUCP for Oakland International Airport presents the criteria, maps, and policies to be utilized by the Alameda County Airport Land Use Commission and other local jurisdictions.

Most of the Project is located within Safety Compatibility Zone 6 Traffic Pattern Zone, while the eastern side is within Zone 4 Outer Approach/Departure Zone. The Project location is classified as an Aviation Easement Zone, which may require limitations on noise or other effects that could impact aircraft operations. The Project also falls within the imaginary surfaces defined for the Oakland International Airport in accordance with Federal Aviation Regulation, also known as FAR, Part 77. The project will be required to comply with current and applicable ALUC and FAA regulations. Solar developers are responsible for understanding and complying with current and applicable FAA regulations.

The site can be accessed at the intersection of Doolittle Drive and Harbor Bay Parkway. There is a public parking lot adjacent to the Project site that is shared with a public recreation area. Material storage will be limited on-site as potential damage to the landfill cap must be minimized. The existing landfill lines must also be considered during site development.

Because the site is already developed, there is no tree clearing required. While solar developers are expected to control vegetation levels as part of the operations and maintenance of the Project, no significant weed abatement or clearing is expected prior to construction. See Figure ES-2 for a photo of the Project site.



Figure ES-2 Photo of Project Site

The Project site is located on a landfill with a low grade at the crown and higher grades at the perimeter of the parcel. Steep slopes are present at both the north and south edges of the property. Because the Project site was previously utilized as a landfill, it is recommended to minimize disturbance of the terrain to mitigate any risk of damaging the existing landfill gas system and/or the landfill cap. Solar developers are responsible for containing the risk of damaging the landfill gas system during construction, operations and maintenance and would be responsible for any damages to the landfill gas system. An independent structural analysis will need to be completed to evaluate the impact of a PV system under resting load, dynamic load (during construction and operations and maintenance), wind conditions, and seismic events.

The current landfill cap is approximately four feet thick, which requires the solar panels to be ballasted and rack mounted (cast-in place concrete anchors at grade). Ballasted rack mounted systems require a fixed-panel design and low site grade as steep slopes pose a risk for the panels to slide. Boundaries of the Project are steeply sloped, so it is recommended that panels only be installed on the flat inner portion of the site.

Because the project site was previously utilized as a landfill, no native plant communities or natural communities of special concern were observed on the project site. The project site primarily consists of vacant, undeveloped land that has been subject to a variety of anthropogenic disturbances from existing landfill activities and site maintenance activities (e.g., weed abatement, gas monitoring). These disturbances have eliminated the natural plant communities that once occurred within the boundaries of the project site.

The project site consists of land cover types that would be classified as disturbed. The project site primarily supports non-native and early successional/ruderal plant species that have established on the site after the cap of dirt was installed on the top of the landfill after landfill operations stopped. The project site is dominated by wild oat (*Avena fatua*). Other plant species observed onsite include fennel (*Foeniculum vulgare*), filaree (*Erodium sp.*), bind weed (*Convolvulus arvensis*), wild radish (*Raphanus raphanistrum*), short-podded mustard (*Hirschfeldia incana*), prickly lettuce (*Lactuca serriola*), curly dock (*Rumex crispus*), cheeseweed (*Malva parviflora*), smilo grass (*Piptatherum miliaceum*), cocklebur (*Xanthium strumarium*), bur clover (*Medicago polymorpha*), and Chilean trefoil (*Acmispon wrangelianus*).

Plant communities provide foraging habitat, nesting/denning sites, and shelter from adverse weather or predation. The project site provides limited habitat for wildlife species except those adapted to a high degree of anthropogenic disturbances and development.

Construction Considerations

The proposed project would involve site preparation, installation and operation of a 2.0-megawatt, as measured by alternating current, (MW_{ac}) non-penetrating, ballasted, fixed-tilt solar photovoltaic (PV) system on 11.2 acres at the project site (Figure ES-3). The installation would include approximately 7,500 thin-film, non-reflective solar panels, which, in combination with 16 utility-scale inverters, would convert sunlight into electricity. This would be fed directly into the utility grid from a point adjacent to the site. A typical installation is shown on Figure ES-4.



Figure ES-3 Proposed Solar Array Layout



Figure ES-4 Typical Solar Array on Landfill

The Project would be built in two phases. Phase I includes the site preparation and installation of approximately half of the pour in place ballasted racking solutions and is expected to last approximately 45 days. No earthwork is anticipated to be needed on the project as the ballasted racking solution can handle most uneven surfaces. Fill will be utilized as needed to correct any major settling pockets on the landfill. Phase 2 of the project includes the installation of the solar equipment including all additional electrical equipment installation and is expected to last approximately 120 days. Total construction from start to finish would therefore take 165 days or approximately 6 months.

The construction workforce consists of pre-qualified laborers, electricians, craftsmen, supervisory, support and management staff. Construction would generally occur between 7:00 AM and 7:00 PM on weekdays, though additional work hours and days may be necessary on an emergency basis any day or on an as-needed basis on Saturdays between 8:00 AM and 5:00 PM to make up for unexpected delays or testing.

Site access during construction and operation would be along existing paved roadways using 18-wheel flatbed trucks. All deliveries and materials would primarily enter by the existing Doolittle Drive onto paved access roads to the Model Airplane Field parking lot and then into the Project site. Construction staging and parking would occur primarily in the laydown area near

the flare station and in part of the Model Airplane Field parking area as needed. Construction and installation would require minimal vegetation removal.

The results of the independent structural analysis will determine the dynamic load requirements during the construction phase. Based on the results of the structural analysis concrete trucks would either pour concrete directly into ballasted tubs or concrete would be loaded onto pumping trucks which would then pour concrete into ballasted tubs in their final location.

The landfill cap will not be disturbed as the contractor would utilize non-penetrating equipment and construction techniques. If subsurface penetrations occur through the low-permeable geomembrane, the layer must be replaced or repaired, in accordance with site design standards and regulatory requirements. As part of the contract and California law, the developer will follow all regulatory requirements for the construction and operation of the photovoltaic system on the landfill. Existing regulatory requirements for the testing, reporting, and maintenance of the landfill will continue to be performed by Public Works and its contractor.

The ballasted fixed tilt ground mount solution is ideal for locations where penetrating the ground is not an option. All inverters and transformers would be mounted on pre-cast concrete pads at grade. Inverters and transformers would be connected by above-grade EMT conduits to the project interconnect. The electrical equipment would pose no electrical shock risk and would be safe for human and wildlife contact, and all electrical conduits would be rated for outdoor use.

Operational Considerations

It is anticipated that Alameda Municipal Power would seek approval of the Project by the City Council in early 2020. It is also anticipated that the life of the use permit would be 25 years.

Site access during operation would be along existing paved roadways.

The Project would be operated by either Alameda Municipal Power or the project developer under the terms of a Power Purchase Contract. Operation and maintenance activities would be minor with a monthly visit to the site by one or two operation and maintenance personnel in a pickup truck for visual inspection and maintenance activities as needed. A crew to wash the panels would also visit the site about twice per year.

End Use of Project Site

As previously discussed, the project site is designated in the City's General Plan as Park and Public Open Space as the City intends to develop a park at this site at the end of the useful life of the solar facility (i.e., 25± years). At the end of life of the Project, the developer will have six months to a year to remove all equipment from the site. The PV panels would be returned to the panel manufacturer for recycling or continued use. The steel in the racking systems would also be recycled.

Impacts and Mitigation Measures

Table ES-1 identifies each potential significant effect and proposed mitigation measures that would reduce or avoid that effect. These proposed mitigation measures could become part of the Mitigation Monitoring and Reporting Program and/or conditions of approval in the required use permit to be issued for the Project. Whichever way the City of Alameda Planning Board proceeds, these mitigation measures would become mandatory and part of the Project.

Table ES-1
Impacts and Mitigation Measures

Environmental Factor:	Biological Resources
Impact:	Potential impacts to nesting birds.
Mitigation Measures:	AMP will include the following mitigation measures in its contract documents for this project. **MM-BIO-1:** ❖ If construction occurs between February 1st and August 31st, a pre-construction clearance survey for nesting birds shall be conducted within three (3) days of the start of any vegetation removal or ground disturbing activities to ensure that no nesting birds will be disturbed during construction. The biologist conducting the clearance survey should document a negative survey with a brief letter report indicating that no impacts to active avian nests will occur. If an active avian nest is discovered during the pre-construction clearance survey, construction activities should stay outside of a no-disturbance buffer. The size of the no-disturbance buffer will be determined by the wildlife biologist and will depend on the level of noise and/or surrounding anthropogenic disturbances, line of sight between the nest and the construction activity, type and duration of construction activity, ambient noise, species habituation, and topographical barriers. These factors will be evaluated on a case-by-case basis when developing buffer distances. Limits of construction to avoid an active nest will be established in the field with flagging, fencing, or other appropriate barriers; and construction personnel will be instructed on the sensitivity of nest areas. A biological monitor should be present to delineate the boundaries of the buffer area and to monitor the active nest to ensure that nesting behavior is not adversely affected by the construction activity. Once the young have fledged and left the nest, or the nest otherwise becomes inactive under natural conditions, construction activities within the buffer area can occur.

Impact after Mitigation Measures:	Less than significant impact with mitigation incorporated.

Areas of Controversy

There are no areas of controversy associated with the Alameda Municipal Power Solar Project.

Issues to be Resolved

AMP must acquire approval of the Project from the Federal Aviation Administration and the Alameda County Airport Land Use Commission.

Document Availability and Contact Personnel

The Initial Study and Mitigated Negative Declaration is available for review at the following location:

City of Alameda
Planning, Building and Transportation Department
2263 Santa Clara Avenue, Room 190
Alameda, California 94501

and can be downloaded at:

https://www.alamedaca.gov/Departments/Planning-Building-and-Transportation/Planning-Division/Major-Planning-Projects

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1 Introduction

1.1 Introduction

This Initial Study and Mitigated Negative Declaration (IS/MND) has been prepared to evaluate potential environmental impacts associated with the proposed *Alameda Municipal Power Solar Project at the Alameda Doolittle Landfill Site* (Project) in accordance with the *California Environmental Quality Act* (CEQA). The project site is located at the former Doolittle landfill site on Bay Farm Island in Alameda. (Figure 1.1-1). The applicant, Alameda Municipal Power, will construct and operate the solar facility. The City of Alameda is the Lead Agency for the purposes of CEQA.

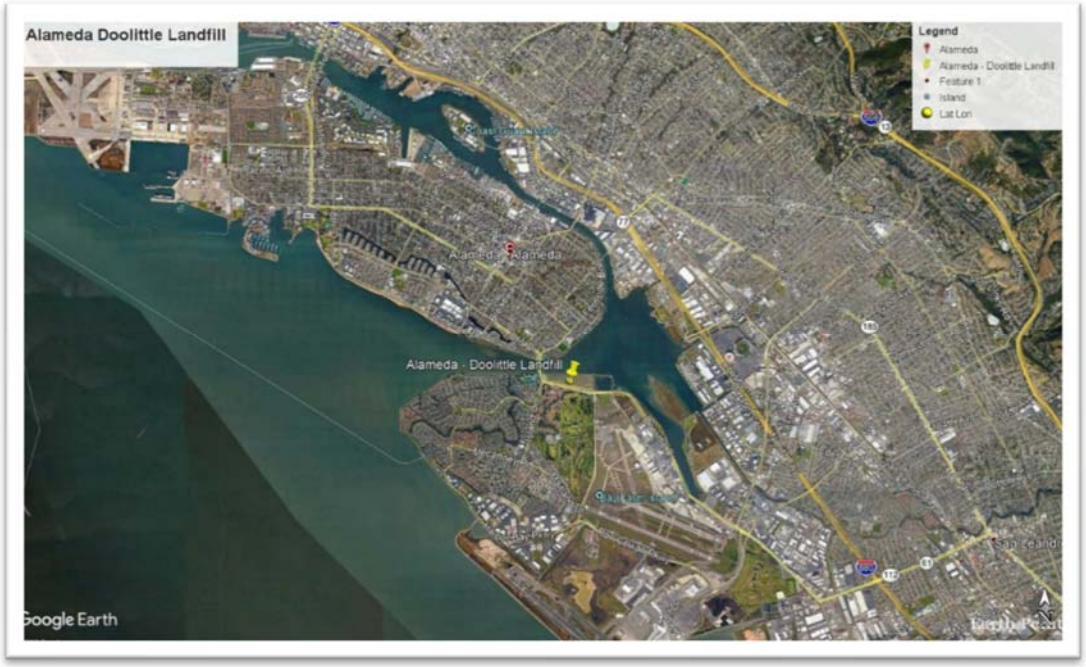

Figure 1.1-1 Alameda Municipal Power Solar Project at the Doolittle Landfill Site

1.2 Project Background

Alameda Municipal Power (AMP) serves more than 34,000 customers throughout the City of Alameda. It has a renewable energy mix of geothermal, hydroelectric, wind, landfill gas and solar. Starting in 2020, AMP will achieve 100 percent clean energy mix. Implementation of the Alameda Municipal Power Solar Project at the Doolittle Landfill Site will assist the City in reaching and maintaining the goal of 100 percent clean energy mix.

1.3 Project Summary

AMP intends to construct and operate a photovoltaic solar facility on the approximately 33.2-acre Doolittle Class III landfill site. The City-owned landfill site is no longer in operation. The site is bounded on the north by San Leandro Bay, on the south and west by Doolittle Drive and on the east by Martin Luther King Jr. Regional Shoreline Park. The proposed photovoltaic technology type for the solar project is fixed-tilt solar array. As shown on Figure 1.3-1, solar panels would be placed on 11.2 acres of the site. The total installed capacity would be approximately 2.0 megawatts as measured by alternating current (MW_{ac}).



Figure 1.3-1 Proposed Solar Array Locations

1.4 California Environmental Quality Act Compliance

The California Environmental Quality Act (California Public Resources Code §21000 et seq., "CEQA"), requires that the environmental impacts of proposed projects be evaluated and that feasible methods to reduce, avoid or eliminate significant adverse impacts of these projects be identified. Therefore, to fulfill the purpose and intent of CEQA, the City of Alameda, as the lead agency, requires this Initial Study/Mitigated Negative Declaration (IS/MND) to be prepared to address the potentially significant adverse environmental impacts associated with implementation of the Project.

1.4.1 Purposes of an Initial Study

The purposes of an Initial Study, as outlined in §15063(c) of the State CEQA Guidelines, are:

1) *Provide the Lead Agency with information to use as the basis for deciding whether to prepare an EIR or a Negative Declaration;*

2) *Enable an applicant or Lead Agency to modify a project, mitigating adverse impacts before an EIR is prepared, thereby enabling the project to qualify for a Negative Declaration;*

3) *Assist the preparation of an EIR, if one is required, by:*

   a. *Focusing the EIR on the effects determined to be significant,*

   b. *Identifying the effects determined not to be significant,*

   c. *Explaining the reasons for determining that potentially significant effects would not be significant, and*

   d. *Identifying whether a program EIR, tiering, or another appropriate process can be used for analysis of the project's environmental effects.*

4) *Facilitate environmental assessment early in the design of a project;*

5) *Provide documentation of the factual basis for the finding in a Negative Declaration that a project will not have a significant effect on the environment;*

6) *Eliminate unnecessary EIRs; and*

7) *Determine whether a previously prepared EIR could be used with the project.*

1.4.2 Contents of an Initial Study

The required contents of an Initial Study are set forth in §15063(d) of the CEQA Guidelines as follows:

1) *A description of the project including the location of the project;*

2) *An identification of the environmental setting;*

3) *An identification of environmental effects by use of a checklist, matrix, or other method, provided that entries on a checklist or other form are briefly explained to indicate that there is some evidence to support the entries. The brief explanation may be either through a narrative or a reference to another information source such as an attached map, photographs, or an earlier EIR or negative declaration. A reference to another document should include, where appropriate, a citation to the page or pages where the information is found;*

4) *A discussion of ways to mitigate the significant effects identified, if any;*

5) *An examination of whether the project would be consistent with existing zoning, plans, and other applicable land use controls;*

6) *The name of the person or persons who prepared or participated in the Initial Study.*

1.4.3 Decision to Prepare a Mitigated Negative Declaration

The decision to prepare a mitigated negative declaration for a project is described in §15070(b) of the CEQA Guidelines as follows:

(b) The initial study identifies potentially significant effects, but:

1) *Revisions in the project plans or proposals made by or agreed to by the applicant before a proposed mitigated negative declaration and initial study are released for public review 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.*

1.4.4 Contents of a Mitigated Negative Declaration

The required contents of a Mitigated Negative Declaration are set forth in §15071 of the CEQA Guidelines as follows:

A [mitigated] *negative declaration circulated for public review shall include:*

a) *A brief description of the project, including a commonly used name for the project, if any;*
b) *The location of the project, preferably shown on a map, and the name of the project proponent;*
c) *A proposed finding that the project will not have a significant effect on the environment;*
d) *An attached copy of the initial study documenting reasons to support the finding; and*
e) *Mitigation measures, if any, included in the project to avoid potentially significant effects.*

1.4.5 Intended Uses of the Initial Study/Mitigated Negative Declaration

In accordance with CEQA, the City of Alameda's Planning Board must consider the IS/MND, along with any public comments, before approving the Project.

1.4.6 Lead Agency Decision-Making Process

Prior to approving the Project, the City will provide a 30-day public review period of the Draft IS/MND. The City Planning Board must also independently review and consider the findings contained within the IS/MND and determine whether the proposed mitigation measures reduce impacts to a level of insignificance. In addition to the public review period, public input will also be requested and evaluated during the City Planning Board meeting for review and approval of the IS/MND.

1.4.7 Approvals for which this Initial Study will be Used

The following agencies would also utilize this document in their decision-making process regarding the Proposed Project:

1. City of Alameda
    - Land Use Permit
    - Power Purchase Agreement
    - Lease of City Land
2. Federal Aviation Administration
    - FAA Form 7460-1 – Notice of Proposed Construction or Alteration
3. California Regional Water Quality Control Board, San Francisco Bay Region
    - General Permit for Storm Water Discharges Associated with Construction Activity
4. Alameda County Airport Land Use Commission
    - Land Use Compatibility Determination
5. Alameda County Department of Environmental Health
    - Disposal Site Postclosure Land Use

2 Project Description

2.1 Introduction

The Project consists of the construction and operation of a 2.0 megawatt photovoltaic solar facility on an 11-acre portion of the 33.2-acre site, located northwest of the intersection of Doolittle Drive and Harbor Bay Parkway, in the northeastern area of Bay Farm Island in Alameda. The proposed technology type for the Project is fixed-tilt solar array and will contain approximately 7,500 solar modules on site. The Project will require approval of a use permit, lease of city land, and a power purchase agreement. The term of approvals is anticipated to be for up to 25 years. At the end of life of the Project all equipment would be removed to allow the City of Alameda to develop the open space park at this site.

2.2 Existing Site Conditions

The Project site is located northwest of the intersection of Doolittle Drive and Harbor Bay Parkway in the northeastern area of Bay Farm Island in Alameda. The 33.2-acre property is the former Alameda Doolittle Class III solid waste disposal site that began operation in 1953 and was closed in 1985. The land is currently owned and maintained by the City of Alameda and contains the closed solid waste facility, a model airplane field, and a multi-use bicycle pedestrian path around the perimeter. The property is located within the M-2, General Industrial Zoning and is designated as Parks and Public Open Space by the General Plan for a future open space park. The contours of the site include a low grade at the crown and higher grades at the perimeter of the parcel. Steep slopes are present at both the north and south edges of the property. The solar arrays will sit on an 11.2-acre level portion of the site elevated approximately 40-feet above Doolittle Drive. The site can be accessed at the intersection of Doolittle Drive and Harbor Bay Parkway. There is a public parking lot adjacent to the Project site that is shared with a public recreation area.



Figure 2.2-1 Alameda Doolittle Landfill Site

The Project site, shown on Figure 2.2-1 above, is bounded on the north by San Leandro Bay, on the south and west by Doolittle Drive, and on the east by Martin Luther King Jr. Regional Shoreline Park on Doolittle Road. Amelia Earhart Elementary School is located approximately 1,000 feet to the southwest of the Project and the nearest residence sits west of the Project, opposite Doolittle Drive, approximately 320 feet away. The Chuck Corica Municipal Golf Complex is located approximately 130 feet across Doolittle Drive to the south, and the property line on the northwest edge of Oakland International Airport is 320 feet to the southeast.

Because the Project site was previously utilized as a landfill, no native plant communities or natural communities of special concern were observed on the Project site. The Project site primarily consists of vacant, undeveloped land that has been subject to a variety of anthropogenic disturbances from existing landfill activities and site maintenance activities (e.g., weed abatement, gas monitoring). These disturbances have eliminated the natural plant communities that once occurred within the boundaries of the Project site. See Figure 2.2-2 for a photo of the Project site.

The Project site consists of land cover types that would be classified as disturbed. The Project site primarily supports non-native and early successional/ruderal plant species that have established on the site after the cap of dirt was installed on the top of the landfill after landfill operations stopped. The Project site is dominated by wild oat (*Avena fatua*). Other plant species observed onsite include fennel (*Foeniculum vulgare*), filaree (*Erodium sp.*), bind weed (*Convolvulus arvensis*), wild radish (*Raphanus raphanistrum*), short-podded mustard (*Hirschfeldia incana*), prickly lettuce (*Lactuca serriola*), curly dock (*Rumex crispus*), cheeseweed (*Malva parviflora*), smilo grass (*Piptatherum miliaceum*), cocklebur (*Xanthium strumarium*), bur clover (*Medicago polymorpha*), and Chilean trefoil (*Acmispon wrangelianus*).



Figure 2.2-2 Photo of Project Site

Plant communities provide foraging habitat, nesting/denning sites, and shelter from adverse weather or predation. The Project site provides limited habitat for wildlife species except those adapted to a high degree of anthropogenic disturbances and development.

Material storage will be limited on-site as potential damage to the landfill cap must be minimized. The existing landfill lines must also be considered during site development. The current landfill cap is approximately four feet thick, which requires the solar panels to be ballasted and rack mounted (cast-in place concrete anchors at grade). Ballasted rack mounted systems require a fixed-panel design and low site grade as steep slopes pose a risk for the panels to slide. Boundaries of the Project are steeply sloped, so the proposed solar panels will only be installed on the flat inner portion of the site. An independent structural analysis will be completed as part of the Project to evaluate the impact of a photovoltaic (PV) system under resting load, dynamic load (during construction and operations and maintenance), wind conditions, and seismic events.

According to the County of Alameda's Oakland International Airport Land Use Compatibility Plan ("ALUCP"), the Project site lies within the Airport Influence Area and is subject to ALUCP airspace protection policies as well as regulations enacted by the Federal Aviation Administration (FAA). Most of the Project is located within Safety Compatibility Zone 6 Traffic Pattern Zone, while the eastern side is within Zone 4 Outer Approach/Departure Zone. The Project location is classified as an Aviation Easement Zone, which may require limitations on noise or other effects that could impact aircraft operations. The Project also falls within the Approach Surface Zone of the Federal Aviation Administration FAR, Part 77 Surfaces Map. The Project will be required to comply with current and applicable Airport Land Use Commission (ALUC) and FAA regulations.

2.3 Solar Equipment

2.3.1 Solar PV Modules

For the proposed Project layout, 340-Watt ("W") Canadian Solar (CS6U-340MS) PV modules are considered, although higher efficiency modules may be considered by the developer. The developer will determine the appropriate module technology to maximize annual energy production and provide the lowest price for energy to the City. The final selection in the type of PV module technology has no additional impact on the environment than as otherwise described in this study.

2.3.2 Solar PV Racking

The proposed array design at this location is a fixed-tilt solar array system. A ballasted racking system installed at grade is recommended to prevent disturbance of the landfill gas system and/or landfill cap that is installed at a four-foot depth. The initially proposed racking system is GameChange Solar's Pour-in-Place ballasted racking solution. The developer will determine the appropriate fixed-tilt, ballasted racking technology for the site. The images on Figure 2.3-1 show an example of a ballasted fixed-tilt PV on a landfill gas site and are provided for conceptual purposes only. The final selection in the type of ballasted racking system has no additional impact on the environment than as otherwise described in this study.



Figure 2.3-1 Example of Solar Array on Landfill

2.3.3 Inverters

String inverters are the preferred technology given the size of the Project and SMA HighPower Peak3 125kW inverters were considered in the proposed single-line diagram. This general arrangement is recommended as a cost-effective approach to converting DC power to AC power, but other arrangements could be considered. The developer will determine the appropriate inverter technology to maximize annual energy production and provide the lowest price for energy to the City. The final selection in the type of inverter technology has no additional impact on the environment than as otherwise described in this study.

2.4 Site Layout

The proposed layout of the Project is shown on Figure 2.4-1. The PV site layout was modeled to avoid steep slopes and gas lines and should be considered preliminary in nature. As discussed above, the developer will determine the appropriate racking technology to maximize annual energy production and provide the lowest price for energy to the City.



Figure 2.4-1 Proposed Layout of Solar Arrays

Proposed design criteria are provided in Table 2.4-1.

Table 2.4-1
Preliminary Design Criteria

Parameter	Content
Project Buildable Area	33.2 acres
Approximate PV Project Area	11.2 acres
Estimated Project Size (DC)	2.6 MW_{dc}
Estimated Project Size (AC)	2.0 MW_{ac}
Target DC:AC Ratio	1.3
POI Voltage	12.47 kV
Wetland Setback	50 feet
Site Access Buffer from Perimeter to Array	30 feet
Security and Fencing	Upgrade existing to 6-foot chain link
Module Size	Minimum 340 W
Racking System	Fixed Tilt between 30 and 33º south facing Avoid slopes <15%
Inverters	String

2.5 Construction Phase

The proposed Project would involve the site preparation, installation and operation of a 2-megawatt (MW_{ac}) non-penetrating, fixed-tilt solar photovoltaic (PV) system at the Project site. The installation would include approximately 7,500 thin-film, non-reflective solar panels, which, in combination with 16 utility-scale inverters, would convert sunlight into electricity. This would be fed directly into the utility grid from an interconnection point adjacent to the site. The panels will cover approximately 11 acres of the more than 33 acre site or about 33% of the total area. There are no proposed improvements to the site.

No construction equipment or materials at the site will disturb the 4ft landfill cap. The results of the independent structural analysis will determine the dynamic load requirements during the construction phase. The results of the structural analysis will determine the allowed weight of construction vehicles on top of the landfill. For the ballasted racks, depending on the results of the structural analysis, concrete trucks would either pour concrete directly into ballasted tubs or concrete would be loaded onto pumping trucks which would then pour concrete into ballasted tubs in their final location. All solar equipment will be placed at or above grade with no ground penetrations. The ballasted, fixed-tilt racking solution sits on top of the ground. All inverters and transformers would be mounted on pre-cast concrete pads at grade. Inverters and transformers would be connected by above-grade EMT conduits/conductor to the point of interconnection with AMP's electric distribution system. The electrical equipment would pose no electrical shock risk and would be safe for human and wildlife contact, and all electrical conduits would be rated for outdoor use.

If subsurface penetrations occur through the low-permeable geomembrane, the layer must be replaced or repaired, in accordance with site design standards and regulatory requirements. As part of the contract and California law, the developer will follow all regulatory requirements of the IS/MND and other relevant agencies for the construction and operation of the photovoltaic system on the landfill. Existing regulatory requirements for the testing, reporting, and maintenance of the landfill will continue to be performed by the City Public Works Department and its contractor.

The Project is proposed to be built in two phases. Phase I includes the site preparation and installation of approximately half of the pour-in-place ballasted racking solutions and is expected to last approximately 45 days. No earthwork is proposed to be needed on the Project site as the ballasted racking solution can handle most uneven surfaces. Outside fill will be utilized as needed to correct any major settling pockets on the landfill. Phase 2 of the Project includes the installation of the solar equipment including all additional electrical equipment installation and is expected to last approximately 120 days. Total construction from start to finish would therefore take 165 days or approximately 6 months.

The construction workforce consists of pre-qualified laborers, electricians, craftsmen, supervisory, support and management staff. Construction would generally occur between 7:00 AM and 7:00 PM on weekdays, though additional work hours and days may be necessary on an emergency basis any day or on an as-needed basis on Saturdays between 8:00 AM and 5:00 PM to make up for unexpected delays or testing.

Site access during construction and operation would be along existing paved roadways using 18-wheel flatbed trucks. All deliveries and materials would primarily enter by the existing Doolittle Drive onto paved access roads to the Model Airplane Field parking lot and then into the Project site. Construction staging and parking would occur primarily in the laydown area near the flare station and in part of the Model Airplane Field parking area as needed. Construction and installation would require minimal vegetation removal.

2.6 Operation Phase

The Project would be operated by the Project developer under the terms of a Power Purchase Agreement with Alameda Municipal Power. Operation and maintenance activities would be minor with a monthly visit to the site by 1 to 2 operation and maintenance personnel with a pickup truck. Additionally, solar developers are expected to control vegetation levels as part of the operations and maintenance of the Project multiple times per year. Site access during operation would be along existing paved roadways.

2.7 End Use of Project Site

As previously discussed, the Project site is designated in the City's General Plan as Park and Public Open Space as the City intends to develop a park at this site at the end of the useful life of the solar facility (i.e., up to 25 years). Upon completion of the Project, the site developer will have 6 months to a year for the removal of all equipment at the site. The PV panels will either be returned to the panel manufacturer for recycling or enter the secondary panel market and continue to operate for their remaining useful lives. The conductor and steel racking systems will be recycled and/or reused as well.

3 Environmental Checklist, Analysis and Mitigation Measures

3.1 Introduction

1. Project Title:	Alameda Municipal Power Solar Project
2. Lead Agency Name and Address:	City of Alameda Planning, Building and Transportation Department 2263 Santa Clara Avenue, Room 190 Alameda, California 94501
3. Contact Person, Phone Number and Email:	Henry Dong, Planner III (510) 747-6871 hdong@alamedaca.gov
4. Project Location:	The Project site is located northwest of the intersection of Doolittle Drive and Harbor Bay Parkway in the northeastern area of Bay Farm Island within the City of Alameda, Alameda County at the City-owned Doolittle Landfill Site Section 14, Township 2 South, Range 3 West, Mount Diablo B&M 37º 44’ 49.24” N, -122º 13’ 53.61” W
5. Project Sponsor’s Name and Address:	Alameda Municipal Power 2000 Grand Street Alameda, California 94501
6. General Plan Designations:	Parks and Public Open Space
7. Zoning:	General Industrial (M-2)
8. Project Description:	AMP intends to install a solar photovoltaic generation system at the Alameda Doolittle Landfill property. The installed capacity would be 2.0 megawatts, alternating current (MW_{ac}). At the end of the life of the Project (up to 25 years) all equipment would be removed to allow the City of Alameda to develop an open space park at this site.

9. Surrounding Land Uses and Setting:	San Leandro Bay to the north, Martin Luther King, Jr., Regional Park to the east, Doolittle Drive and Municipal Golf Course to the south, and Doolittle Drive to the west.
10. Other Public Agencies whose Approval is Required (e.g., permits, financing approval, or participation agreement):	Federal Aviation Administration California Regional Water Quality Control Board, San Francisco Bay Region Alameda County Airport Land Use Commission Alameda County Department of Environmental Health
11. Have California Native American Tribes traditionally and culturally affiliated with the Project area requested information pursuant to Public Resources Code Section 21080.3.1? If so, has consultation begun?	Yes.

3.2 Environmental Factors Potentially Affected

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

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

3.3 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.
◙	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 in 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 legal 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.

Andrew Thomas, AICP
Planning, Building & Transportation Director

Date

3.4 Chapter Organization

In this analysis, potential reasonably foreseeable impacts are evaluated with respect to aesthetics, agriculture and forestry resources, air quality, biological resources, cultural resources, energy, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation, tribal cultural resources, utilities and service systems, and wildfire. Additionally, mandatory findings of significance regarding short-term, long-term, and cumulative impacts are evaluated. Each topic area begins with a listing of the factors identified by the State CEQA Guidelines for analysis, followed by a discussion of the environmental setting, the analysis for each factor, and an overall conclusion.

3.4.1 Environmental Setting

Throughout this document and according to the State CEQA Guidelines, the environmental setting is intended to mean the environmental conditions as they exist at the time the environmental analysis is commenced. The environmental setting will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant. The description of the environmental setting shall be no longer than is necessary to gain an understanding of the significant effects of the proposed Project and its alternatives.

3.4.2 Discussion and Mitigation Measures

The Initial Study includes an analysis of direct and reasonably foreseeable physical changes in the environment from the proposed Project and feasible mitigation measures that would reduce such impacts to a less than significant level. Thresholds of significance for each potential impact are provided as appropriate.

A “significant effect on the environment” is defined in CEQA Guidelines Section 15382 as a “substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant.”

“Environment” is defined in CEQA Guidelines Section 15360 as “the physical conditions which exist within the area which will be affected by a proposed project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance.”

3.5 Aesthetics

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Have a substantial adverse effect on a scenic vista?	☐	☐	☐	◙
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	◙
c. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☐	◙
d. Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?	☐	☐	◙	☐

3.5.1 Environmental Setting

As shown on Figure 3.5-1, the proposed Project site is located on a closed Class III landfill. The Project site is bounded by San Leandro Bay to the north, Martin Luther King, Jr., Regional Park to the east, Doolittle Drive and a municipal golf course to the south, and Doolittle Drive to the west.



Figure 3.5-1 Proposed Project Site, Alameda Doolittle Landfill

3.5.2 Discussion and Mitigation Measures

Aesthetics a. *Would the project have a substantial adverse effect on a scenic vista?*

Answer: No Impact.

Discussion:

As shown on Figure 3.5-2, the existing landfill rises dramatically from approximately 3 feet in elevation at Doolittle Drive to approximately 50 feet in elevation at the top of the landfill. This fill effectively blocks any scenic vistas to the north from Doolittle Drive in this area. The solar arrays stand approximately 10-feet in height and would be installed in the flat area at the top of the landfill. Therefore, there would be minimal visibility of the panels from Doolittle Drive, and the low height of the arrays will not substantially block any scenic views. In addition, as shown on Figure 3.5-2, trees have been planted along Doolittle Drive to further screen the landfill. Therefore, there would be no adverse effects on a scenic vista caused by implementation of the Project. Consequently, no further analysis or mitigation is required.



Figure 3.5-2 View from Doolittle Drive Looking North to Landfill Site

Aesthetics b. *Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?*

Answer: No Impact.

Discussion:

There are no officially designated State scenic highways within the Project area. Therefore, the project would not substantially damage any scenic resources within a state scenic highway. No further analysis or mitigation is required.

Aesthetics c. *In non-urbanized areas, would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?*

Answer: No Impact.

Discussion:

The proposed Project site is located in an urbanized area zoned (M-2) General Industrial. Installation of solar facilities is a permitted use in this zoning designation. Therefore, there would be no conflicts with applicable zoning and therefore no further analysis or mitigation is required.

Aesthetics d. *Would the project create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?*

Answer: Less than Significant.

Discussion:

The Project consists of a 2.0 megawatt photovoltaic solar facility on an 11-acre portion of the 33.2-acre site located northwest of the intersection of Doolittle Drive and Harbor Bay Parkway in the northeastern area of Bay Farm Island in Alameda. The proposed technology type for the solar Project is fixed-tilt solar array and will contain approximately 7,500 solar modules on site. According to the June 2014 Meister Consultants Group Solar and Glare Fact Sheet prepared for the U.S. Department of Energy, a common misconception about solar photovoltaic (PV) panels is that they intently cause or create "too much" glare, posing a nuisance to neighbors and a safety risk for pilots. While in certain situations the glass surfaces of solar PV systems can produce a glint (a momentarily flash of bright light) and glare (a reflection of bright light for a longer duration), light adsorption, rather than reflection is central to the function of a solar PV panel – to absorb solar radiation and convert it to electricity. Solar PV panels are constructed of dark-colored (usually blue or black) materials and are covered with anti-reflective coatings. Modern PV panels reflect as little as two percent of incoming sunlight, about the same as water and less than soil or even wood shingles.

Section 3.1.2: Reflectivity in the FAA Technical Guidance for Evaluating Selected Solar Technologies on Airports, November 2010 discusses PV solar panels and states, "Solar PV are constructed of dark, light-absorbing materials and covered with an anti-reflective coating designed to maximize absorption and minimize reflection. However, the glass surfaces of solar PV systems also reflect sunlight to varying degrees throughout the day and year. The amount of reflected sunlight is based on the incidence angle of the sun relative to the light-sensitive receptor (e.g., a pilot or air traffic tower controller). The amount of reflection increases with lower incidence angles. In some situations, 100% of the sun's energy can be reflected from solar PV panels. Because solar energy systems introduce new visual surfaces to an airport setting where reflectivity could result in glare that can cause flash blindness to those that require clear, unobstructed vision, project proponents should evaluate reflectivity during project siting and design."

On October 18, 2019, Forge Solar: PV Planning & Glare Analysis conducted a Glare Analysis for the 2.0 MWac Alameda Landfill ("Project") site located in Alameda, CA. The analysis was prepared pursuant to criteria set forth in the 2013 FAA Interim Policy 78 FR 63276 on solar energy system projects near airports. The analysis noted the following conclusions (entire report is included in Appendix C of this document):

- The Air Traffic Control Tower ("ATCT") at Oakland International Airport did not experience glare from the Project.
- Runways 12, 15, 28L, 28R, 30, and 33 did not experience glare from the Project.
- Runway 10L experienced 793 minutes of low potential for afterimage ("Green glare") over the period of a year from the Project. The glare occurred for the months of April thru August between the hours of 6:30 AM and 7:30 AM. The daily duration of the glare lasts less than 10 minutes a day and is visible from approximately 1.3 to 2 miles out on the landing approach.

- Runway 10R experienced 553 minutes of low potential for afterimage ("Green glare") over the period of a year from the Project. The glare occurred for the months of April thru August between the hours of 6:30 AM and 7:30 AM. The daily duration of the glare lasts less than 10 minutes a day and is visible from approximately 1.3 to 2 miles out on the landing approach.
- This study indicates that glare will be visible from the Project at the runway approach paths for Runway 10L and 10R. However, the solar facility is in compliance with the 2013 U.S. FAA Interim Policy 78 FR 63276 as the potential for afterimage from the glare meets FAA guidelines.

New lighting is not proposed for the site and a standard condition of approval will require any future sources of light to be downward facing and compliant with the City of Alameda Dark Skies Ordinance. Therefore, the Project will not be a substantial source of light.

Based on the above discussion, the impacts from the Project as a new source of substantial light and glare from the solar PV panels is considered to be less than significant and therefore no further analysis or mitigation is required.

3.5.3 Conclusion

No significant impacts were identified; therefore, no further analysis or mitigation is required.

3.6 Agriculture and Forestry Resources

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project, and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. *Would the Project:*				
a. Convert Prime Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	◙
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	◙
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	◙
d. Result in the loss of forest land or conversion of forest land to non-forest uses.	☐	☐	☐	◙

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
e. Involve other changes in the existing environment that, 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?	☐	☐	☐	◙

3.6.1 Environmental Setting

As stated previously, the Project site is located on the closed Class III Doolittle Landfill. There are no Farmlands or forest lands on the Project site.

3.6.2 Discussion and Mitigation Measures

Agriculture and Forestry Resources. a. *Would the project 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?*

Answer: No Impact.

Discussion:

There are no Prime Farmlands or Farmlands of Statewide Importance as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program (FMMP) of the California Resources Agency at the Project site *(resources.ca.gov, 7/05/2019).* The Project site is shown as "Other Lands" on the Alameda County Important Farmland 2016 map (Figure 3-6.1). Therefore, there would be no impacts and no further analysis or mitigation is required.

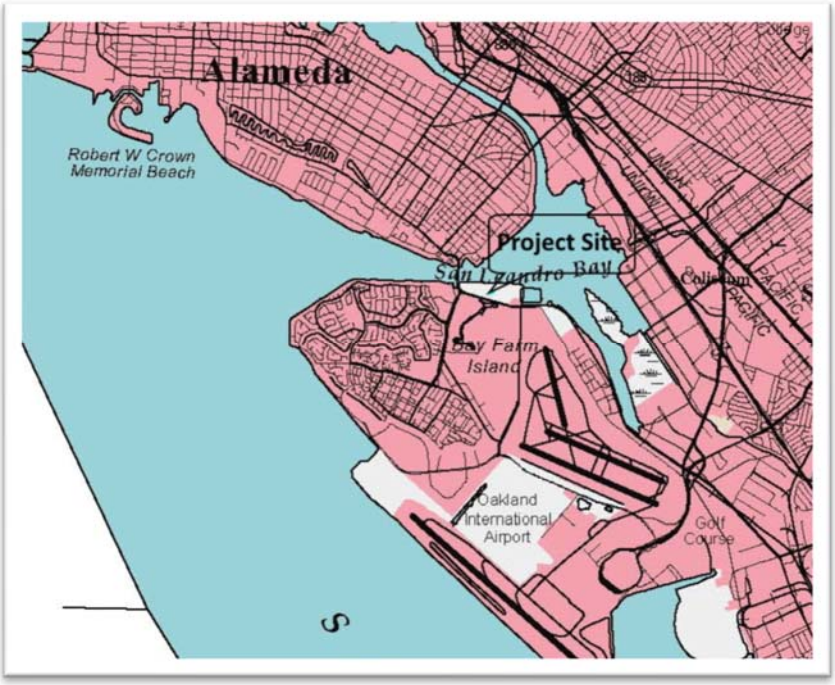

Figure 3.6-1 Project Site shown as Other Lands on 2016 FMMP Map

Agriculture and Forestry Resources. b. *Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?*

Answer: No Impact.

Discussion:

The site is zoned as industrial (M-2). It is not under a Williamson Act contract. Therefore, there would be no impacts and no further analysis or mitigation is required.

Agriculture and Forestry Resources. c. *Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?*

Answer: No Impact.

Discussion:

The site is not zoned for forest land or timber land use. Therefore, there would be no impacts and no further analysis or mitigation is required.

Agriculture and Forestry Resources. d. *Would the project result in the loss of forest land or conversion of forest land to non-forest use?*

Answer: No Impact.

Discussion:

There is no forest land within the Project site. Therefore, there would be no impacts and no further analysis or mitigation is required.

Agriculture and Forestry Resources. e. *Would the project 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?*

Answer: No Impact.

Discussion:

There are no Farmlands or forest lands at the Project site. Therefore, there would be no impacts and no further analysis or mitigation is required.

3.6.3 Conclusion

No impacts were identified; therefore, no further analysis or mitigation is required.

3.7 Air Quality

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. *Would the Project:*				
a. Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	◙	☐
b. Result in 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?	☐	☐	◙	☐
c. Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	◙	☐
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	◙	☐

3.7.1 Environmental Setting

Ambient air quality is affected by both the rate and location of pollutant emissions and by meteorological conditions that influence the local and regional dispersal of pollutants. Atmospheric conditions such as wind speed and direction and air temperature gradients combined with local topography provide the link between air pollutant emissions and air quality.

The proposed Project is within the San Francisco Bay Area Air Basin. Planning for the attainment and maintenance of both federal and State air quality standards in the Project area is the responsibility of the Bay Area Air Quality Management District (BAAQMD). Alameda County is in non-attainment for the State ozone, PM_{10} and $PM_{2.5}$ standards as well as the federal ozone standards.

The BAAQMD adopted its *2017 Clean Air Plan: Spare the Air, Cool the Climate* on April 19, 2017. That plan provides a regional strategy to protect public health and protect the climate. To protect public health, the plan describes how the BAAQMD will continue its progress toward attaining all state and federal air quality standards and eliminating health risk disparities from exposure to air pollution among Bay Area communities. To protect the climate, the plan defines a strategy that will put the Bay Area on a pathway to achieve GHG reduction targets. The 2017 Plan includes a wide range of control measures designed to decrease emissions of the air pollutants that are most

harmful to Bay Area residents, such as particulate matter, ozone, and toxic air contaminants; to reduce emissions of methane and other "super-GHGs" that are potent climate pollutants in the near-term; and to decrease emissions of carbon dioxide by reducing fossil fuel combustion.

California Air Resources Board (ARB) provides ambient air quality data for most air basins in the State. A summary of the data available for the nearest monitoring station to the Project area (i.e., Oakland – 9925 International Boulevard) is provided in Tables 3.7-1 through 3.7-3.

Table 3.7-1
Ozone Trends Summary: Oakland – 9925 International Boulevard
National Standards

	Days > Standard			1-hr Observations				8-hr Observations				
	8-hr			EENED[1]				0.070 Std.		0.075 Std.		
Year	0.07	0.075	0.08	Max.	1-Yr	3-Yr	D.V.[2]	Max.	D.V.[2]	Max.	D.V.[2]	Coverage
2017	2	2	2	*0.136*	*1.0*	*0.3*	*0.091*	0.100	0.054	0.100	0.054	97
2016	0	0	0	*0.082*	*0.0*	*0.0*	*0.083*	0.057	0.055	0.057	0.055	99
2015	2	0	0	*0.094*	*0.0*	*0.0*	*0.082*	0.074	0.052	0.074	0.052	97
2014	0	0	0	*0.083*	*0.0*	*0.0*	*0.077*	0.068	0.048	0.068	0.048	98
2013	0	0	0	*0.076*	*0.0*	*0.0*	*0.073*	0.054	0.045	0.064	0.045	99
2012	0	0	0	*0.072*	*0.0*	*0.0*	*0.078*	0.045	0.044	0.045	0.044	97
2011	0	0	0	*0.091*	*0.0*	*0.0*	*0.084*	0.051	0.049	0.051	0.049	99
2010	0	0	0	*0.097*	*0.0*	*0.0*	*0.084*	0.058	0.053	0.058	0.053	98
2009	0	0	0	*0.092*	*0.0*	*0.0*	*0.084*	0.062	*	0.062	*	99
2008	0	0	0	*0.086*	*0.0*	*0.0*	*0.083*	0.064	*	0.064	*	100

Notes: All concentrations expressed in parts per million.
The national 1-hour ozone standard was revoked in June 2005. Statistics related to the revoked standard are shown in *italics* or ***italics***.
National exceedances shown in **orange**.
An exceedance is not necessarily a violation.
Daily maximum 8-hour averages associated with the National 0.070 ppm standard exclude those 8-hour averages that have first hours between midnight and 6:00 am, Pacific Standard Time.
Daily maximum 8-hour averages associated with the National 0.070 ppm standard include only those 8-hour averages from days that have sufficient data for the day to be considered valid.
Daily maximum 8-hour averages associated with the National 0.075 ppm standard may come from days that don't have sufficient data for the day to be considered valid, provided the daily maximum 8-hour average itself includes sufficient data to be considered valid.
[1] EENED = Estimated Expected Number of Exceedance Days
[2] D.V. = National Design Value
* There was insufficient (or no) data available to determine the value.

Source: arb.ca.gov, 07/08//2019

Table 3.7-2
Ozone Trends Summary: Oakland – 9925 International Boulevard
State Standards

Days > Standard			1-Hour Observations			8-Hour Averages			Year
Year	1-Hour	8-Hour	Max.	EPDC[1]	D.V.[2]	Max.	EPDC[1]	D.V.[2]	Coverage
2017	**2**	**2**	**0.136**	0.0792	0.08	**0.101**	0.0606	0.060	96
2016	0	0	0.082	0.0759	0.08	0.058	0.0607	0.059	97
2015	0	2	0.094	0.0714	0.07	**0.074**	0.0592	0.059	97
2014	0	0	0.083	0.0671	0.07	0.069	0.0559	0.054	98
2013	0	0	0.076	0.0641	0.06	0.064	0.0508	0.049	99
2012	0	0	0.072	0.0701	0.07	0.045	0.0493	0.049	96
2011	0	0	0.091	0.0747	0.07	0.052	0.0557	0.054	98
2010	**1**	**0**	**0.097**	0.0766	0.08	0.058	0.0601	0.060	98
2009	0	0	0.092	*	0.09	0.063	*	0.064	99
2008	0	0	0.086	*	0.09	0.064	*	0.064	100

Notes: All concentrations expressed in parts per million.
California ambient air quality standard exceedances shown in **red**.
An exceedance is not necessarily a violation.
[1] EPDC = Expected Peak Day Concentration
[2] D.V. = State Designation Value
*There was insufficient (or no) data available to determine the value.

Source: arb.ca.gov, 07/08/2019

Table 3.7-3
$PM_{2.5}$ Trends Summary: Oakland – 9925 International Boulevard

	Est. Days	Annual		Nat'l	State	Nat'l '06	Nat'l '06	High 24-Hour		
	> Nat'l	Average		Ann. Std.	Ann. Std	Std. 98th	24-Hr Std.	Average		Year
Year	'06 Std.	Nat'l	State	D.V.[1]	D.V.[2]	Percentile	D.V.[1]	Nat'l	State	Coverage
2017	**7.0**	9.4	9.4	7.9	9	32.4	24	**70.2**	70.2	98
2016	0.0	6.1	6.1	7.6	9	14.2	21	15.5	15.5	99
2015	**1.0**	8.3	*	9.1	10	24.8	25	**44.7**	44.7	98
2014	**1.0**	8.5	8.5	9.4	10	23.6	24	**37.6**	37.6	98
2013	**2.0**	10.3	10.3	10.0	10	27.6	26	**37.9**	37.9	99
2012	0.0	9.5	9.5	9.1	10	21.5	24	33.6	33.6	99
2011	**3.0**	10.1	10.1	9.0	10	28.0	25	**49.3**	49.3	10
2010	0.0	7.8	7.8	8.8	8	21.7	24	25.2	25.2	98
2009	**3.0**	9.2	*	*	9	26.7	*	**36.3**	36.3	99
2008	0.0	9.5	9.5	*	9	23.8	*	30.1	30.1	10

Notes: All concentrations expressed in micrograms per cubic meter.
State exceedances shown in **red**. National exceedances shown in **orange**. An exceedance is not necessarily a violation.
State and national statistics may differ for the following reasons:
State statistics are based on California approved samplers, whereas national statistics are based on samplers using federal reference or equivalent methods. State and national statistics may therefore be based on different samplers.
State criteria for ensuring that data are sufficiently complete for calculating valid annual averages are more stringent than the national criteria.
[1] D.V. = National Design Value
[2] D.V. = State Designation Value
* There was insufficient (or no) data available to determine the value.

Source: arb.ca.gov, 07/08/2019

Both the ARB and the EPA issue area designations for individual pollutants for California's air basins. The latest designations for Alameda County are shown in Table 3.7-4.

Table 3.7-4

Ambient Air Quality Area Designations for Alameda County

Pollutant	State Area Designation	National Area Designation
Ozone	Non-Attainment	Marginal Non-Attainment
Particulate Matter Less than 2.5 microns in diameter ($PM_{2.5}$)	Non-Attainment	Unclassified
Particulate Matter Less than 10 microns in diameter (PM_{10})	Non-Attainment	Unclassified
Carbon Monoxide (CO)	Attainment	Unclassified/Attainment
Nitrogen Dioxide (NO_2)	Attainment	Unclassified/Attainment
Sulfur Dioxide (SO_2)	Attainment	Unclassified/Attainment
Sulfates	Attainment	--
Lead (Pb)	Attainment	Unclassified/Attainment
Hydrogen Sulfide (H_2S)	Unclassified	--
Visibility Reducing Particles	Unclassified	--

Source: arb.ca.gov, 7/08/2019: epa.gov, 7/17/2019

Thresholds of Significance

As shown in its May 2017 *California Environmental Quality Act Guidelines,* the Bay Area Air Quality Management District has adopted thresholds of significance for criteria air pollutants and precursors. Those thresholds are reactive organic gases, 54 pounds per day; oxides of nitrogen, 54 pounds per day; respirable particulate matter, PM_{10}, 82 pounds per day; and fine particulate matter, $PM_{2.5}$, 54 pounds per day.

The BAAQMD has not established numerical significance thresholds for carbon monoxide (CO) or oxides of sulfur (SO_x). Other AQMDs have established such thresholds, among them the South Coast AQMD. For construction projects, those thresholds are 550 pounds per day and 150 pounds per day, respectively. Those thresholds are used in this Initial Study to determine significance.

The BAAQMD has not adopted significance thresholds for the evaluation of toxic air contaminants (TACs) and associated human health risks. Cancer risks from TACs is typically expressed in numbers of excess cancer cases per million persons exposed over a defined period of exposure, for example, over an assumed 70-year lifetime. Non-cancer health hazards for chronic and acute diseases are expressed in terms of a hazard index (HI), which is ratio of TAC concentration to a reference exposure level (REL), below which no adverse health effects are expected to occur. This analysis relies on commonly applied thresholds typically recommended by other air pollution control districts in California, as identified in the California Air Pollution Control Officers Association's (CAPCOA) *Health Risk Assessments for Proposed Land Use Projects (2009).* Exposure to TACs would be considered significant if the probability of contracting cancer for the

maximum exposed individual would exceed 10 in one million or would result in a hazard index greater than one. *(Sacramento Metropolitan Air Quality Management District, May 2015)*

The BAAQMD has not adopted significance criteria for the evaluation of greenhouse gas (GHG) emissions. Thresholds for GHG emissions are usually expressed in terms of carbon dioxide equivalents (CO_2 eq). EPA has suggested a reportable significance threshold of 25,000 tons of CO_2 eq per year. However, the Sacramento Metropolitan AQMD has adopted a significance criteria threshold of 1,100 metric tons (MT) per year for construction projects. For the purposes of evaluating the proposed project's GHG impacts, emissions resulting from construction of the Project will be quantified and compared to the SMAQMD threshold of 1,100 metric tons of CO_2 eq per year (1,210 tons per year).

A summary of the threshold criteria to determine significance utilized in this Initial Study is provided in Table 3.7-5.

Table 3.7-5
Threshold Criteria Utilized to Determine Significance

Pollutant	Threshold Limit	
	tons per year	pounds per day
Reactive Organic Gases (ROG)	10	54
Carbon Monoxide (CO)	--	550
Oxides of Nitrogen (NO_x)	10	54
Oxides of Sulfur (SO_x)	--	150
Respirable Particulate Matter (PM_{10})	15	82
Fine Particulate Matter ($PM_{2.5}$)	10	54
Toxic Air Contaminants (TACs), Odor and GHG Thresholds		
TACs (including carcinogens and non-carcinogens)	Maximum Incremental Cancer Risk ≥ 10 in 1 million Cancer Burden > 0.5 excess cancer cases (in areas ≥ 1 in 1 million) Chronic and Acute Hazard Index ≥ 1.0 (project increment)	
GHG	1,100 MT/yr CO_2eq (1,210 tons per year).	

3.7.2 Discussion and Mitigation Measures

Air Quality. a. *Would the project conflict with or obstruct implementation of the applicable air quality plan?*

Answer: Less than significant

Discussion:

As discussed above, the applicable air quality plan for the Project area is the *2017 Clean Air Plan: Spare the Air, Cool the Climate* which was adopted by the BAAQMD on April 19, 2017. The proposed control strategy in the plan is based on four key priorities:

- Reduce emissions of criteria air pollutants and toxic air contaminants from all key sources.

- Reduce emissions of "super-GHGs" such as methane, black carbon and fluorinated gases.
- Decrease demand for fossil fuels (gasoline, diesel and natural gas).
  - ✓ Increase efficiency of our industrial processes, energy and transportation systems.
  - ✓ Reduce demand for vehicle travel, and high-carbon goods and services.
- Decarbonize our energy system.
  - ✓ Make the electricity supply carbon-free.
  - ✓ Electrify the transportation and building sectors.

The Project includes the installation of a 2.0 MW_{ac} solar facility at the closed Doolittle Landfill site. This facility will generate approximately 4,400 MWhrs of renewable energy per year. The Western Electric Coordinating Council has published conversion factors to determine the amount of CO_2 that would be emitted from the average generation of electricity in California. That conversion factor is 805 pounds of CO_2 per MWhr generated. Based on this emission factor, the generation of 4,400 MWhrs would produce approximately 1,610 metric tons of CO_2 per year. Therefore, the Project could reduce the CO_2 emissions from fossil-fuel generated electricity by 1,610 metric tons per year. The Project would, therefore, assist in meeting the goals of the applicable air quality plan by decreasing the demand for fossil fuels and decarbonizing the electricity supply.

Furthermore, as shown in *Air Quality (b)*, the total estimated emissions from installation of the solar equipment at the Doolittle Landfill site would not exceed construction-related threshold limits for significance. The Project will also be required to follow the standard conditions of approval listed in *Air Quality (b)* to further limit construction-related emissions and air pollutants below the construction-related thresholds for significance described in Table 3.7-5, and is thus considered to have a less than significant impact.

Therefore, implementation of the Project would not result in a conflict with the applicable air quality plan and no further analysis or mitigation is required.

Air Quality. b. *Would the project result in 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?*

Answer: Less than Significant.

Discussion:

Criteria Pollutants

It is anticipated that AMP or the Project developer would install solar equipment at the Doolittle Landfill site. A typical construction equipment list for this activity follows:

Equipment	Number	Horsepower	Load Factor[1]	Hours per Day
Compressor	1	106	0.48	4
Crane	2	399	0.43	4
Sweeper	1	250	0.68	2
Tractor/Backhoe/Loader	2	108	0.55	4
Utility Trucks	1	479	0.57	2
Water Truck	1	189	0.50	2

Notes:
[1] Percentage of the engines' maximum horsepower rating that the equipment actually operates.

These additional assumptions are also utilized in the air quality analyses for installation of the solar equipment:

- The disturbed area is estimated at 11.2 acres on the peak day of activities.
- There would be four heavy-duty trucks delivering supplies to the site. Mileage for each truck is assumed at 100 miles per day.
- There would be approximately 2 pickup trucks traveling to and from the site by inspectors. Mileage for each pickup would be approximately 100 miles per day.
- Approximately 10 construction workers would be involved at the site on the peak day of activities. Mileage for worker commuters would be approximately 50 per day.
- Construction activities would occur for about 90 days.

K.S. Dunbar & Associates, Inc., developed an Excel Spreadsheet model, based on the California Air Resources Board's 2011 OFFROAD emission factors, that calculates estimated emissions from construction activities. That model was used to estimate construction related emissions from off-road heavy construction equipment. Based on construction occurring in 2019, the model generated estimated construction emissions as shown in Table 3.7-6 (detailed model results are contained in Appendix D)[1].

[1] Should the construction period be delayed, the emissions from heavy construction equipment would be less due to technology improvements and phasing out of older equipment. Therefore, the emissions shown are considered the worst-case scenario.

Table 3.7-6
Estimated Emissions from Off-Road Heavy Construction Equipment
Solar Equipment Installation

	Pollutant (pounds per day)[a]					
	ROG	CO	NO_x	SO_x	PM_{10}	$PM_{2.5}$
Solar Equipment Installation	4.25	32.14	39.80	0.07	0.31	0.29
Threshold Limits[b]	54	550	54	150	82	54

[a] Use of particulate traps reduces PM_{10} and $PM_{2.5}$ by 85% and oxidation catalysts reduces NO_x by 15%.
[b] Construction-related threshold limits developed to determine significance.

As can be seen by the data in Table 3.7-6, emissions from heavy construction equipment during solar equipment installation would not exceed the construction-related threshold limits contained in Table 3.7-5. Construction activity is also anticipated to only occur over a short period of time (approximately 90 days).

There would also be 4 heavy-duty trucks transporting equipment to the site as well as two pickup trucks utilized by inspectors at the job site. Based on the assumption that each heavy-duty truck and each pickup travel 100 miles per day, exhaust emissions would be as shown in Table 3.7-7.

Table 3.7-7
Estimated Emissions from On-Road Vehicles
Solar Equipment Installation

Equipment	Pollutant (pounds per day)					
	ROG	CO	NO_x	SO_x	PM_{10}	$PM_{.2.5}$
On-Road Trucks	0.48	2.26	5.56	0.02	0.28	0.22
Pickups	0.11	1.01	0.10	0.00	0.02	0.01
Totals	0.59	3.27	5.66	0.02	0.30	0.23

Vehicles owned by construction workers would be an additional source of air pollutants. An estimate of emissions based on 10 worker vehicles per day of which 100 percent are pickup trucks (gross vehicle weight of 8,500 pounds or less) with an average round trip of 50 miles is presented in Table 3.7-8.

Table 3.7-8
Construction Worker Commute Vehicle Emissions
Solar Equipment Installation

Pollutant (pounds per day)					
ROG	CO	NO_x	SO_x	PM_{10}	$PM_{2.5}$
0.29	2.51	0.24	0.01	0.05	0.03

Earth disturbing activities will be limited as non-penetrating construction techniques will be used to maintain the landfill cap. Travel over un-paced surfaces and the placement of equipment would still create some fugitive dust emissions. It is estimated that fugitive dust emissions from construction activities on disturbed soil approximate 5 pounds per acre per day (PM_{10}) with no mitigation. However, the application of water as required would reduce the emissions by 61 percent (*SCAQMD, October 2016)*. As stated above, it is anticipated that approximately 11.2 acres would be disturbed at the peak day of activity. Therefore, the resulting PM_{10} emissions would be estimated at 21.84 pounds per day. SCAQMD also estimates that the $PM_{2.5}$ emissions in fugitive dust are equal to 21 percent of the PM_{10} emissions in fugitive dust *(SCAQMD, October 2006).* Therefore, the $PM_{2.5}$ emissions would equal 4.59 pounds per day.

The total estimated emissions from the installation of the solar equipment at the Doolittle Landfill site are shown in Table 3.7-9.

Table 3.7-9

Total Estimated Construction Emissions[a]

Solar Equipment Installation

Source	Pollutant (pounds per day)					
	ROG	CO	NO_x	SO_x	PM_{10}	$PM_{2.5}$
Construction Equipment	4.25	32.14	39.80	0.07	0.31	0.29
On-Road Vehicles	0.59	3.27	5.66	0.02	0.30	0.23
Worker Commutes	0.29	2.51	0.24	0.01	0.05	0.03
Fugitive Dust	0.00	0.00	0.00	0.00	21.84	4.59
Totals	5.13	37.92	45.70	0.10	22.50	5.14
Threshold Limits[b]	54	550	54	150	82	54

[a] Use of particulate traps reduces PM_{10} and $PM_{2.5}$ by 85% and oxidation catalysts reduces NO_x by 15%.
[b] Construction-related threshold limits developed to determine significance.

As shown in Table 3.7-9, the total estimated emissions from installation of the solar equipment at the Doolittle Landfill site would not exceed the construction-related threshold limits for significance presented in Table 3.7-5 and are thus considered less than significant. However, EPA has designated Alameda County as marginal non-attainment for the federal ozone standard and the ARB has designated Alameda County as non-attainment for the State ozone, PM_{10} and $PM_{2.5}$ standards. Therefore, every effort should be made to minimize emissions within Alameda County. Consequently, to reduce the emissions as much as possible, the Project would be required to comply with the following standard conditions of approval for the construction phase of the Project:

Standard Conditions of Approval:

1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.

2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.

3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.

4. All vehicle speeds on unpaved roads shall be limited to 15 mph.

5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.

6. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.

7. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.

8. Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

Operation and maintenance personnel might make one or two trips per month to the Project site. Consequently, there would be a negligible increase in emissions associated with vehicle travel to and from the site during operation and maintenance of the new facilities. Operation of the actual facilities would result in a negligible increase in emissions. Therefore, the emissions from operation would be considered less than significant and no further analyses or mitigation is required.

Toxic Air Contaminants (TACs)

The combustion of diesel fuel produces diesel particulate matter as a byproduct. Diesel particulate matter has been identified by the California Air Resources Board (ARB) as a toxic air contaminant (TAC). While TACs can have long-term and/or short-term effects, diesel TAC has been shown by the ARB to have little or no short-term impact.

The ARB determined that the chronic impact of diesel particulate matter was of more concern than the acute impact in the Risk Management Guidance for the Permitting of New Stationary Diesel-Fueled Engines *(ARB 2000)*. In that document, ARB noted that "Our analysis shows that the potential cancer risk from inhalation is the critical path when comparing cancer and non-cancer risk. In other words, a cancer risk of 10 cases per million from the inhalation of diesel particulate matter (PM) will result from diesel PM concentrations that are much less than the diesel

PM or TAC concentrations that would result in chronic or acute non-cancer hazard index values of 1 or greater." Consequently, any analysis of diesel TAC should focus on the long-term, chronic cancer risk posed by diesel emissions. Chronic cancer risk is normally measured by assessing what the risk to an exposed individual from a source of TACs would be if the exposure occurred over 70 years. Diesel emissions related to construction of the proposed Project would only occur for less than a one-year period. Therefore, the impact would be considered less than significant and no further analysis is required.

Air Quality. c. *Would the project expose sensitive receptors to substantial pollutant concentrations?*

Answer: Less than Significant.

Discussion:

As shown above, all emissions from construction of the Project would be less than significant based on the threshold limits shown in Table 3.7-5. Therefore, implementation of the Project would not expose sensitive receptors to substantial pollutant concentrations. Consequently, no further analysis or mitigation is required.

Air Quality. d. *Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?*

Answer: Less than Significant.

Discussion:

As shown above in Table 3.7-9, the fugitive dust emissions would be less than significant based on threshold criteria shown in Table 3.7-5. In addition, implementation of the Project would not result in the generation of odors. Consequently, there would be no impacts and no further analysis or mitigation is required.

3.7.3 Conclusions

The Project would have a less-than-significant impact on air quality with the standard conditions of approval incorporated.

3.8 Biological Resources

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	◙	☐	☐
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 U.S. Fish and Wildlife Service?	☐	☐	☐	◙
c. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	◙
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?	☐	☐	☐	◙
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	◙

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	☐	◙

3.8.1 Environmental Setting

A habitat and jurisdictional assessment was conducted by ELMT Consultant's Biologist Travis J. McGill on July 9, 2019 to document baseline conditions and assess the potential for special-status[2] plant and wildlife species to occur within the Project site that could pose a constraint to implementation of the proposed Project. Special attention was given to the suitability of the Project site to support special-status plant and wildlife species identified by the California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (CNDDB), and other electronic databases as potentially occurring in the general vicinity of the Project site. The complete report is included as Appendix E of this document.

Existing Site Conditions

The Project site is located on the existing Alameda Doolittle Landfill that began operation in 1953 and was closed in 1985. The Project site is bordered by San Leandro Bay to the north, Martin Luther King Regional Shoreline Park and Doolittle Pond to the east, the Chuck Corica Municipal Golf Complex to the south, and residential developments and the San Francisco Bay to the west. The Bill Osborne Model Airplane Field is located on the southeast corner of the Project site but is not part of the proposed Project footprint. There is an extensive network of heavy-duty plastic pipes and wells, which collect gas and deliver it to a flare structure, where it is incinerated. The flare structure, near the southeast corner of the site, is operated a minimum of eight hours a day, seven days a week.

The Project site has a low grade at the crown and higher grades at the perimeter of the parcel. Steep slopes are present at both the north and south edges of the property. The middle portion (crown) of the Project site is located at an approximate elevation of 55 feet above mean sea level and the perimeter of the Project site is located at an approximate elevation of 10 feet above mean sea level. Based on the NRCS USDA Web Soil Survey, the Project site is underlain by the

[2] As used in this report, "special-status" refers to plant and wildlife species that are federally and State listed, proposed, or candidates; plant species that have been designated with a California Native Plant Society Rare Plant Rank; wildlife species that are designated by the CDFW as fully protected, species of special concern, or watch list species; and specially protected natural vegetation communities as designated by the CDFW.

following soil units: water and xeropsamments, fill. Refer to Exhibit 4, *Soils*, in Attachment A in ELMT's report in Appendix E.

Vegetation

Because the Project was previously utilized as a landfill, no native plant communities or natural communities of special concern were observed on the Project site. The Project site primarily consists of vacant, undeveloped land that has been subject to a variety of anthropogenic disturbances from existing landfill activities and site maintenance activities (e.g., weed abatement, gas monitoring). These disturbances have eliminated the natural plant communities that once occurred within the boundaries of the Project site. Refer to Attachment B, *Site Photographs* in Appendix E, for representative site photographs. No native plant communities will be impacted from implementation of the proposed Project.

The Project site consists of land cover types that would be classified as disturbed. Refer to Exhibit 5, *Vegetation* in Attachment A in Appendix E. The Project site primarily supports non-native and early successional/ruderal plant species that have established on the site after the cap of dirt was installed on the top of the landfill after landfill operations stopped. The Project site is dominated by wild oat (*Avena fatua*). Other plant species observed onsite include fennel (*Foeniculum vulgare*), filaree (*Erodium sp.*), bind weed (*Convolvulus arvensis*), wild radish (*Raphanus raphanistrum*), short-podded mustard (*Hirschfeldia incana*), prickly lettuce (*Lactuca serriola*), curly dock (*Rumex crispus*), cheeseweed (*Malva parviflora*), smilo grass (*Piptatherum miliaceum*), cocklebur (*Xanthium strumarium*), bur clover (*Medicago polymorpha*), and Chilean trefoil (*Acmispon wrangelianus*).

Wildlife

Plant communities provide foraging habitat, nesting/denning sites, and shelter from adverse weather or predation. This section provides a discussion of those wildlife species that were observed or are expected to occur within the Project site. The discussion is to be used as a general reference and is limited by the season, time of day, and weather conditions in which the field investigation was conducted. Wildlife detections were based on calls, songs, scat, tracks, burrows, and direct observation. The Project site provides limited habitat for wildlife species except those adapted to a high degree of anthropogenic disturbances and development.

Fish

No hydrogeomorphic features (e.g., perennial creeks, ponds, lakes, or reservoirs) that would provide suitable habitat for fish were observed on the Project site. No fish are expected to occur onsite and are presumed absent from the Project site.

It should be noted that San Leandro Bay north of the Project site provides suitable habitat for fish species. However, no direct or indirect impacts to San Leandro Bay will occur from Project implementation.

Amphibians

No amphibians or hydrogeomorphic features (e.g., perennial creeks, ponds, lakes, or reservoirs) that would provide suitable habitat for amphibian species were observed on the Project site. No amphibians are expected to occur and are presumed absent from the Project site.

Reptiles

During the field investigation no reptilian species were observed on the Project site. Common reptilian species adapted to a high degree of anthropogenic disturbances that have the potential to occur on the Project site include western side-blotched lizard (*Uta stansburiana elegans*), alligator lizard (*Elgaria coerulea coerulea*), Pacific gophersnake (*Pituophis catenifer catenifer*), and northern Pacific rattlesnake (*Crotalus oreganus oreganus*). Due to the high level of anthropogenic disturbances onsite no special-status reptilian species are expected to occur within Project site.

Birds

The Project site provides foraging and cover habitat for bird species adapted to a high degree of human disturbance. Bird species detected during the field investigation included northern mockingbird (*Mimus polyglottos*), mourning dove (*Zenaida macroura*), purple finch (*Haemorhouse purpureuss*), Canada goose (*Branta canadensis*), northern rough-winged swallow (*Stelgidopteryx serripennis*), barn swallow (*Hirundo rustica*), American robin (*Turdus migratorius*), osprey (*Pandion haliaetus*), Forster's tern (*Sterna foresteri*), and western gull (*Larus occidentalis*). Both due to the routine disturbance associated with the operations and maintenance of existing landfill and its flare station as well as the proliferation of tall, nonnative plants, the Project site does not provide suitable habitat for special-status bird species known to occur in the area.

Mammals

During the field investigation, California ground squirrel (*Otospermophilus beecheyi*) were the only mammalian species observed on the Project site. Common mammalian species adapted to a high degree of anthropogenic disturbances that have the potential to occur within the Project site include Botta's pocket gopher (*Thomomys bottae*), opossum (*Didelphis virginiana*), and raccoon (*Procyon lotor*).

Nesting Birds

No active nests or birds displaying nesting behavior were observed during the field investigation. The Project site and surrounding area provides foraging and nesting habitat for year-round and seasonal avian residents, as well as migrating songbirds that could occur in the area. The Project site has the potential to provide suitable nesting opportunities for birds that nest on the open ground and those acclimated to routine disturbances. Additionally, the trees that border the Project site provide suitable nesting opportunies. A pre-construction nesting bird clearance survey should be conducted within three (3) days prior to ground disturbance to ensure no nesting birds will be impacted from site development.

Migratory Corridors and Linkages

Habitat linkages provide connections between larger habitat areas that are separated by development. Wildlife corridors are similar to linkages but provide specific opportunities for animals to disperse or migrate between areas. A corridor can be defined as a linear landscape feature of sufficient width to allow animal movement between two comparatively undisturbed habitat fragments. Adequate cover is essential for a corridor to function as a wildlife movement area. It is possible for a habitat corridor to be adequate for one species yet inadequate for others. Wildlife corridors are features that allow for the dispersal, seasonal migration, breeding, and foraging of a variety of wildlife species. Additionally, open space can provide a buffer against both human disturbance and natural fluctuations in resources.

San Leandro Bay north of the Project site and San Francisco Bay west of the Project site support natural open water habitats that allow wildlife to move through the region in search of food, shelter, or nesting habitat. The Project site will be confined to a heavily disturbed area that is bordered by development to the west and south and will not extend north or east into open waters. Implementation of the proposed Project is not expected to result in temporary and/or permanent impacts to potential wildlife movement opportunities within San Leandro Bay or San Francisco Bay during construction and operation activities.

Jurisdictional Areas

There are three key agencies that regulate activities within inland streams, wetlands, and riparian areas in California. The U.S. Army Corps of Engineers Regulatory Branch (Corps) regulates discharge of dredge or fill materials into “waters of the United States” pursuant to Section 404 of the Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act. Of the State agencies, the California Department of Fish and Wildlife (CDFW) regulates alterations to streambed and bank under Fish and Game Code Sections 1600 et seq., and the California San Francisco Bay Regional Water Quality Control Board (Regional Board) regulates discharges into surface waters pursuant to Section 401 of the CWA and the California Porter-Cologne Water Quality Control Act.

San Leandro Bay borders the northern boundary of the Project site and Doolittle Pond borders the eastern boundary of the Project site. These water features are located outside of the proposed Project footprint and no direct or indirect impacts will occur to them.

The Project site does not support any discernible drainage courses, inundated areas, wetland features, or hydric soils that would be considered jurisdictional by the Corps, Regional Board, or CDFW. Therefore, Project activities will not result in impacts to Corps, Regional Board, or CDFW jurisdictional areas and regulatory approvals will not be required.

According to National Wetlands Inventory (NWI) data, riverine resources have been mapped on the Project site. However, the mapped riverine resources directly align with the gas collection piping that currently exists above grade. During the field investigation, no evidence of riverine resources was observed onsite. Additionally, estuarine and marine wetland habitat, and estuarine and marine deepwater habitat have been mapped north of the Project site in association with San Leandro Bay, and freshwater pond resources have been mapped east (Doolittle Pond) and south

(golf course ponds) of the Project site. None of these resources will be directly or indirectly impacted from Project implementation. Additionally, the Federal Emergency Management Agency (FEMA) data indicates that the Project site is located in an area above the 500-year flood level.

Special-Status Biological Resources

The CNDDB Rarefind 5 and the CNPS Electronic Inventory of Rare and Endangered Vascular Plants of California were queried for reported locations of special-status plant and wildlife species as well as special-status natural plant communities in the San Leandro, Hunters Point, Oakland East, and Oakland West USGS 7.5-minute quadrangles. The habitat assessment evaluated the conditions of the habitat(s) within the boundaries of the Project site to determine if the existing plant communities, at the time of the survey, have the potential to provide suitable habitat(s) for special-status plant and wildlife species.

The literature search identified forty-five (45) special-status plant species, seventy-one (71) special-status wildlife species, and three (3) special-status plant communities as having potential to occur within the San Leandro, Hunters Point, Oakland East, and Oakland West USGS 7.5-minute quadrangles. Special-status plant and wildlife species were evaluated for their potential to occur within the Project site based on habitat requirements, availability and quality of suitable habitat, and known distributions. Species determined to have the potential to occur within the general vicinity of the Project site are presented in Attachment C*: Potentially Occurring Special-Status Biological Resources* in Appendix E.

Special-Status Plants

According to the CNDDB and CNPS, forty-five (45) special-status plant species have been recorded in the San Leandro, Hunters Point, Oakland East, and Oakland West (refer to Attachment C in Appendix E). No special-status plant species were observed onsite during the habitat assessment. The Project site was previously utilized as a landfill, and as a result, the Project site has been subject to various anthropogenic disturbances. These disturbances have eliminated the natural plant communities that once occurred on-site which has removed suitable habitat for special-status plant species known to occur in the general vicinity of the Project site. Based on habitat requirements for specific special-status plant species and the availability and quality of habitats needed by each species, it was determined that the Project site does not provide suitable habitat for any of the special-status plant species known to occur in the area and such special-status plant species are presumed to be absent from the Project site. No focused surveys are recommended.

Special-Status Wildlife

According to the CNDDB, seventy-one (71) special-status wildlife species have been reported in the San Leandro, Hunters Point, East, and Oakland West quadrangles (refer to Attachment C in Appendix E). No special-status wildlife species were observed onsite during the habitat assessment. The Project site was previously utilized as a landfill, and as a result, the Project site has been subject to various anthropogenic disturbances. These disturbances have eliminated the natural plant communities that once occurred onsite which have greatly reduced the ability of the

Project site to provide suitable habitat for special-status wildlife species. Based on habitat requirements for specific species and the availability and quality of on-site habitats, it was determined that the proposed Project site has a high potential to support great egret (*Ardea alba*), great blue heron (*Ardea herodias*), snowy egret (*Egretta thula*), and California gull (*Larus californicus*); a moderate potential to support Cooper's hawk (*Accipiter cooperii*), and sharp-shinned hawk (*Accipiter straitus*); and a low potential to support northern harrier (*Circus hudsonius*), merlin (*Falco columbarius*), long-billed curlew (*Numenius americanus*), California brown pelican (*Pelecanus occidentalis californicus*), rufous hummingbird (*Selasphorus rufus*), California least tern (*Sternula antillarum browni*), and elegant tern (*Thalasseus elegans*). All remaining special-status wildlife species are presumed to be absent because the Project site has been heavily disturbed from onsite disturbances and does not support suitable habitat. No focused surveys are recommended. Least tern is the only federally and State listed species with the potential to occur onsite. Least tern may fly over the site when it is foraging in the bay north of the Project site, but the Project site does not provide suitable nesting opportunities for least tern.

In order to ensure impacts to the aforementioned species do not occur from implementation of the proposed Project, a pre-construction nesting bird clearance survey should be conducted prior to ground disturbance. With implementation of mitigation through the pre-construction clearance survey, no impacts to the aforementioned species are expected, and impacts would be considered less than significant.

Because burrowing owls have been observed near the site at the Martin Luther King Jr. Shoreline Park by the Golden Gate Audubon, the potential occurrence of burrowing owls is described in further detail below.

Burrowing Owls

The burrowing owl is a grassland specialist distributed throughout western North America where it occupies open areas with short vegetation and bare ground within shrub, desert, and grassland environments. Burrowing owls use a wide variety of arid and semi-arid environments with well-drained, level to gently sloping areas characterized by sparse vegetation and bare ground (Haug and Didiuk 1993; Dechant et al. 1999). Burrowing owls are dependent upon the presence of fossorial mammals, such as ground squirrels (*Otospermophilus beecheyi*), whose burrows are used for roosting and nesting (Haug and Didiuk 1993). The presence or absence of colonial mammal burrows is often a major factor that limits the presence or absence of burrowing owls. Where mammal burrows are scarce, burrowing owls have been found occupying man-made cavities, such as buried and non-functioning drainpipes, stand-pipes, and dry culverts. Burrowing mammals may burrow beneath rocks and debris or large, heavy objects such as abandoned cars, concrete blocks, or concrete pads. Large, hard objects at burrow entrances stabilize the entrance from collapse and may inhibit excavation by predators.

Burrowing owls have crepuscular (dawn and dusk) hunting habits but are often observed perched in or near the burrow entrance during the day. They prey upon invertebrates and small vertebrates (Thomsen 1971) through the low vegetation which allows for foraging visibility. The nesting

season occurs between February 1 and August 31. Burrowing owls in California may migrate southerly, but often remain in the breeding area during the non-breeding period.

The burrowing owl was once abundant and widely distributed within coastal southern California, but it has declined precipitously in counties such as Los Angeles, Orange, San Diego, Riverside, and San Bernardino. A petition was filed to list the California population of the western burrowing owl as an Endangered or Threatened species (Center for Biological Diversity 2003); however, CDFW declined to list the burrowing owl as either endangered or threatened. The CDFW currently lists the burrowing owl as a California Species of Special Concern.

Burrowing owls have been observed near the Project site at the Martin Luther King Jr. Shoreline Park. The areas on the Project site that are routinely maintained (i.e., location of the plastic gas pipes) provide line-of-site opportunities favored by burrowing owls; however, onsite disturbances and surrounding land uses have likely discouraged the use of the Project site by burrowing owls. The majority of the Project site lacks suitable burrows (>4 inches in diameter) capable of providing roosting and nesting opportunities. However, several ground squirrel burrows were observed along the perimeter of the Project site, but no sign of recent or historic use by burrowing owls was observed. Additionally, weedy plant species on the Project site ranged in height from 24 to 48 inches in areas that are not routinely maintained, which discourages burrowing owls, as they prefer line-of-site.

In addition, ornamental trees that border the southern boundary of the Project site further decrease the likelihood that burrowing owls would occur on-site as these features provide perching opportunities for larger raptor species (i.e., red-tailed hawk) that prey on burrowing owls. Despite a systematic search of the Project site, no burrowing owls or signs (pellets, feathers, castings, or whitewash) were observed on or within 500 feet, where applicable, of the Project site during the field investigation. Focused burrowing owl surveys are not recommended.

Special-Status Plant Communities

According to the CNDDB, three (3) special-status plant communities have been reported in the San Leandro, Hunters Point, Oakland East, and Oakland West USGS 7.5-minute quadrangles: Northern Coastal Salt Marsh, Northern Maritime Chaparral, and Serpentine Bunchgrass. Based on the results of the field investigation, no special-status plant communities were observed onsite.

Critical Habitat

Under the federal Endangered Species Act, “Critical Habitat” is designated at the time of listing of a species or within one year of listing. Critical Habitat refers to specific areas within the geographical range of a species at the time it is listed that include the physical or biological features that are essential to the survival and eventual recovery of that species. Maintenance of these physical and biological features requires special management considerations or protection, regardless of whether individuals or the species are present or not. All federal agencies are required to consult with the United States Fish and Wildlife Service (USFWS) regarding activities they authorize, fund, or permit which may affect a federally listed species or its designated Critical Habitat. The purpose of the consultation is to ensure that projects will not jeopardize the continued

existence of the listed species or adversely modify or destroy its designated Critical Habitat. The designation of Critical Habitat does not affect private landowners, unless a project they are proposing is on federal lands, uses federal funds, or requires federal authorization or permits (e.g., funding from the Federal Highways Administration or a CWA Permit from the Corps). If a there is a federal nexus, then the federal agency that is responsible for providing the funding or permit would consult with the USFWS.

The Project site is not located within federally designated Critical Habitat. Refer to Exhibit 6, *Critical Habitat & Essential Fish Habitat* in Attachment A in Appendix E. The nearest designated Critical Habitat is located west of the Project site within San Francisco Bay for steelhead (*Oncorhynchus mykiss*), and approximately 6 miles northeast for Alameda whipsnake (*Masticophis lateralis euryxanthus*). Therefore, the loss or adverse modification of Critical Habitat from Project implementation will not occur and consultation with the USFWS for impacts to Critical Habitat will not be required for implementation of the proposed Project.

Essential Fish Habitat

Essential Fish Habitat (EFH) is defined as those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity. The Magnuson-Stevens Act requires the National Marine Fisheries Service (NMFS) to work with other Federal agencies to conserve and enhance EFH. As a result, whenever Federal agencies authorize, fund, or carry out actions that may adversely impact EFH, they must consult with NMFS regarding the impact of their activities on EFH. NMFS must provide the consulting Federal agency with EFH conservation recommendations for any action that would adversely affect EFH. Within 30 days of receiving these recommendations, the consulting action agencies must provide a detailed response in writing to NMFS that includes measures proposed to avoid, minimize, or offset the impact of proposed activities on EFH.

The Project site is not located within EFH (refer to Exhibit 6, *Critical Habitat & Essential Fish Habitat* in Attachment A in Appendix E). EFH is designated immediately north of the Project site, outside of the proposed limits of disturbance, within San Leandro Bay. Therefore, no impacts to EFH will occur from Project implementation, and coordination with the NMFS will not be required.

3.8.2 Discussion and Mitigation Measures

Biological Resources. a. *Would the project 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 Wildlife or U.S. Fish and Wildlife Service?*

Answer: Less than significant with mitigation incorporated.

Discussion:

No special-status plant or wildlife species were observed on the Project site during the site visit. However, the Project site and surrounding area provides foraging and nesting habitat for year-round and seasonal avian residents, as well as migrating songbirds that could occur in the area.

The Project site has the potential to provide suitable nesting opportunities for birds that nest on the open ground and those aclimated to routine disturbances. Additionally, the trees that border the Project site on the south provide suitable nesting opportunies.

Nesting birds are protected pursuant to the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (Sections 3503, 3503.5, 3511, and 3513 prohibit the take, possession, or destruction of birds, their nests or eggs). In order to protect migratory bird species, a nesting bird clearance survey shall be conducted prior to any ground disturbance or vegetation removal activities that may disrupt the birds during the nesting season. Therefore, in accordance with ELMT's recommendation, the Project shall add the following mitigation measure to its contract documents for this Project as part of the standard conditions of approval:

Mitigation Measure - MM-BIO-1

- If construction occurs between February 1st and August 31st, a pre-construction clearance survey for nesting birds shall be conducted within three (3) days of the start of any vegetation removal or ground disturbing activities to ensure that no nesting birds will be disturbed during construction. The biologist conducting the clearance survey should document a negative survey with a brief letter report indicating that no impacts to active avian nests will occur. If an active avian nest is discovered during the pre-construction clearance survey, construction activities should stay outside of a no-disturbance buffer. The size of the no-disturbance buffer will be determined by the wildlife biologist and will depend on the level of noise and/or surrounding anthropogenic disturbances, line of sight between the nest and the construction activity, type and duration of construction activity, ambient noise, species habituation, and topographical barriers. These factors will be evaluated on a case-by-case basis when developing buffer distances. Limits of construction to avoid an active nest will be established in the field with flagging, fencing, or other appropriate barriers; and construction personnel will be instructed on the sensitivity of nest areas. A biological monitor should be present to delineate the boundaries of the buffer area and to monitor the active nest to ensure that nesting behavior is not adversely affected by the construction activity. Once the young have fledged and left the nest, or the nest otherwise becomes inactive under natural conditions, construction activities within the buffer area can occur.

The project would have a less-than-significant impact on nesting birds with the MM-BIO-1 incorporated.

Biological Resources. b. *Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?*

Answer: No Impact.

Discussion:

As discussed in the *Jurisdictional Areas* and *the Special-Statues Plant Communities* section of the Biological Resources Technical Report in Appendix E, there are no riparian habitats or other

sensitive natural communities on the Project site. Therefore, no further analysis or mitigation is required.

Biological Resources. c. *Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?*

Answer: No Impact.

Discussion:

The Project site does not support any discernible drainage courses, inundated areas, wetland features, or hydric soils that would be considered jurisdictional by the Corps, Regional Board, or CDFW. Therefore, Project activities will not result in impacts to Corps, Regional Board, or CDFW jurisdictional areas and regulatory approvals will not be required.

As stated in the Biological Resources Technical Report in Appendix E, according to National Wetlands Inventory (NWI) data, riverine resources have been mapped on the Project site. However, the mapped riverine resources directly align with the gas collection piping that currently exists above grade. During the field investigation, no evidence of riverine resources was observed onsite. Additionally, estuarine and marine wetland habitat, and estuarine and marine deepwater habitat have been mapped north of the Project site in association with San Leandro Bay, and freshwater pond resources have been mapped east (Doolittle Pond) and south (golf course ponds) of the Project site. None of these resources will be directly or indirectly impacted from Project implementation. Additionally, FEMA data indicates that the Project site is located in an area above the 500-year flood level. Therefore, no further analysis or mitigation is required.

Biological Resources. d. *Would the project 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?*

Answer: No Impact.

Discussion:

The potential impacts to migratory birds were discussed in a above. As discussed above, San Leandro Bay north of the Project site and San Francisco Bay west of the Project site support natural open water habitats that allow wildlife to move through the region in search of food, shelter, or nesting habitat. The Project site will be confined to a heavily disturbed area that is bordered by development to the west and south and will not extend north or east into open waters. Implementation of the proposed Project is not expected to result in temporary and/or permanent impacts to potential wildlife movement opportunities within San Leandro Bay or San Francisco Bay during construction and operation activities. Therefore, no further analysis or mitigation is required.

Biological Resources. e. *Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?*

Answer: No Impact.

Discussion:

There are no local policies or ordinances protecting biological resources that would apply to the Project. Therefore, no further analysis or mitigation is required.

Biological Resources. f. *Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan?*

Answer: No Impact.

Discussion:

There are no adopted habitat conservation plans that apply to the Project site. Therefore, no further analysis or mitigation is required.

3.8.3 Conclusion

The Project would have a less-than-significant impact on biological resources with mitigation measure, **MM-BIO-1**, incorporated.

3.9 Cultural Resources

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☐	☐	◙
b. Cause a substantial adverse change in the significance of an archeological resource pursuant to §15064.5?	☐	☐	◙	☐
c. Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☐	◙	☐

3.9.1 Environmental Setting

Anza Resource Consultants (Anza) was retained by K.S. Dunbar & Associates, Inc. to conduct a Phase I cultural resources study for the Project. The Phase 1 study included a cultural resources records search, Sacred Lands File search and Native American scoping, a pedestrian survey of the Project site, and preparation of a technical report in compliance with the cultural resources requirements of CEQA. A complete copy of Anza's report is included in Appendix F of this report.

The cultural resource records search, Native American scoping, and pedestrian survey identified no cultural resources within or adjacent to the Project site.

The area of potential effects (APE) of an undertaking is defined in 36 CFR 800.16(d) as the "geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties if any such property exists." The APE is three-dimensional (depth, length, width) and include all areas directly and indirectly affected by the proposed construction. The current undertaking is located at a closed Class 3 solid waste landfill. To the north is San Leandro Bay; to the west is Doolittle Drive and the San Leandro Bay Bridge, to the south is Doolittle Drive, and to the east is Martin Luther King Jr. Regional Shoreline Park, including a model airplane field. Effects would include construction phase direct effects including ground disturbance to an estimated depth of two feet throughout the APE. The vertical depth of the APE is limited because the Project cannot disturb the landfill and its gas recovery system. The landfill has a four-foot-thick soil cap, which requires the solar panels to be ballasted and rack mounted (cast-in place concrete anchors at grade) to achieve this limited depth of disturbance. The indirect APE includes adjacent or nearby properties that may be indirectly affected (e.g., visual change to historic district, vibrational impacts to unreinforced adobe structures) by the proposed undertaking.

Anza Cultural Resources Specialist Sydni Kitchel conducted a pedestrian survey of the Project APE on July 10, 2019. Ms. Kitchel surveyed the Project site using transects spaced 10 to 20 meters apart and oriented east-west. The entire approximately 33.2-acre Project site was surveyed. She also inspected the indirect APE (i.e., properties adjacent to the direct APE or in immediate line of sight). Ms. Kitchel examined all exposed ground surface for artifacts (e.g., flaked stone tools and tool manufacture debris, ground stone tools, ceramic sherds, fire-affected rock), ecofacts (marine shell, bone), soil discoloration that could indicate the presence of a cultural midden, soil depressions, and features indicative of the former presence of structures or buildings (e.g., standing exterior walls, postholes, foundations) or historic debris (e.g., metal, glass, ceramic sherds, cut bone). Ground disturbances such as burrows and drainages were visually inspected. Photographs documenting the Project site and survey are maintained by Anza in cloud storage online.

3.9.2 Discussion and Mitigation Measures

Cultural Resources. a. *Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?*

Answer: No Impact.

Discussion:

Anza conducted a search of cultural resource records housed at the California Historical Resources Information System (CHRIS), Northwest Information Center (NWIC) located at California State University, Sonoma. The search was conducted on July 9, 2019, to identify all previous cultural resources work and previously recorded cultural resources within a 0.5-mile radius of the Project site (Appendix A in Anza's report). The CHRIS search included a review of the National Register of Historic Places (NRHP), California Register of Historic Resources (CRHR), the California Points of Historical Interest list, the California Historical Landmarks list, the Archaeological Determinations of Eligibility list, and the California State Historic Resources Inventory list. The records search also included a review of all available historic USGS 7.5-, 15-, and 30-minute quadrangle maps.

The record search revealed that four prehistoric shell mounds, five historic period residences and one historic period bridge were recorded within 0.5-mile of the Project Area of Potential Effect (APE) (Table 2 in Anza's report). Except for the San Leandro Bay Bridge, which connects Bay Farm Island with Alameda Island, all of the resources are located across the San Leandro Bay on Alameda Island. None of the resources are within or adjacent to the Project APE. The bridge is located approximately 100 feet west of the APE at its closest point; however, it was determined not eligible for listing on the NRHP.

These historic resources would not be impacted by the Project as they are located well off the Project site. Therefore, there would be no impacts to historic resources and no analysis or mitigation is required.

Cultural Resources. b. *Would the project cause a substantial adverse change in the significance of an archeological resource pursuant to §15064.5?*

Answer: Less than Significant.

Discussion:

The records search in the July 2019 Cultural Resource Survey conducted by Anza Resource Consultants revealed the presence of four prehistoric archaeological sites within 0.5 miles of the Project site. These prehistoric shell mounds would not be impacted by Project implementation as they are well outside the Project site. No archaeological resources were discovered on or adjacent to the Project site. In addition, the property is a former landfill and the proposed solar facility site is elevated 43-feet above Doolittle Drive. There is minimal grading proposed for the installation of the solar arrays. In the unlikely event that potentially significant archaeological materials are encountered during construction activities, the Project shall implement the following standard condition of approval:

Standard Condition of Approval:

- In the event that prehistoric, cultural, or historic resources are encountered during excavation and/or grading of the site, all activity within a 50-foot radius of the find will be stopped, the Director of Planning will be notified, and a qualified archaeologist will examine the find. The archaeologist will 1) evaluate the find(s) to determine if they meet the definition of a historical or archaeological resource; and (2) make appropriate recommendations regarding he disposition of such finds prior to issuance of building permits. If the finds do not meet the definition of a historical or archaeological resources, no further study or protection is necessary prior to Project implementation. If the find(s) does meet the definition of a historical or archaeological resource, then it should be avoided by Project activities. If avoidance is not feasible, adverse effects to such resources should be mitigated in accordance with the recommendations of the archaeologist. Recommendations could include collection, recordation, and analysis of any significant cultural materials. A report of findings documenting any data recovery would be submitted to the Director of Planning and the Northwest Information Center.

Therefore, the potential for the Project to cause a substantial adverse change in the significance of an archeological resource is considered less than significant.

Cultural Resources. c. *Would the project disturb any human remains, including those interred outside of formal cemeteries?*

Answer: Less than Significant.

Discussion:

The July 2019 Cultural Resource Survey conducted by Anza Resource Consultants determined there were no human remains likely to be discovered on or adjacent to the Project site. The property is a former landfill and the solar facility site is elevated 43-feet above Doolittle Drive. There is minimal grading proposed for the installation of the solar arrays. Therefore, the Project is unlikely to disturb any human remains. While it is not anticipated, if future Project activities result in discovery of human remains, the Project would have to comply with the following standard condition of approval:

Standard Condition of Approval:

In the event of the discovery of human remains during construction, work shall stop in that area and within 100 feet of the find. The Alameda County Coroner shall be notified and shall make a determination as to whether the remains are Native American. If the Coroner determines that the remains are not subject to their authority, they shall notify the Native American Heritage Commission who shall identify descendants of the deceased Native American. If no satisfactory agreement can be reached as to the disposition of the remains pursuant to this State law, then the Project applicant shall re-inter the human remains and items associated with Native American burials on the property in a location not subject to further ground disturbance.

3.9.3 Conclusion

The Project would have a less-than-significant impact on cultural resources with standard conditions of approval incorporated.

3.10 Energy

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☐	◙
b. Conflict or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	◙

3.10.1 Environmental Setting

The City of Alameda has owned and operated its own electric utility, Alameda Municipal Power, for more than 132 years and serves more than 34,000 customers. Alameda Municipal Power has a renewable energy mix of geothermal, hydroelectric, wind, landfill gas and solar. Starting in 2020, Alameda Municipal Power will have a 100 percent clean energy mix.

3.10.2 Discussion and Mitigation Measures

Energy. a. *Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?*

Answer: No Impact.

Discussion:

During construction, it would be necessary to use diesel-powered equipment. This would not be considered a wasteful, inefficient or unnecessary consumption of energy resources. The construction period is anticipated to occur over a 90-day period, which is a relatively short period of time considering the Project's 25-year life span.

The Project proposes installation of solar photovoltaic electric generation systems at the Doolittle Landfill site. The installed capacity would be 2.0 MW_{ac}. It is anticipated that these facilities would generate a total of approximately 4,400 MWhr per year during their first year of operation. This generation of electrical energy would far outweigh the minor amount of resources used to construct the facilities.

Therefore, there would be no impacts to energy caused by implementation of the Project. Consequently, there would be no further analysis or mitigation required.

Energy. b. *Would the project conflict or obstruct a state or local plan for renewable energy or energy efficiency?*

Answer: No Impact.

Discussion:

The addition of approximately 2.0 MW_{ac} of renewable energy generation would assist the State of California in meeting the requirements of The 100 Percent Clean Energy Act (SB 100) which establishes the goal of 60% renewable energy resources by 2030, and 100% by 2045. The Project also supports the NCPA in meeting its goals of a 60 percent Renewable Portfolio Standard (RPS) by 2030 and would assist the City of Alameda in continuing to meet its goals of a 100 percent renewable energy mix by 2020. Therefore, implementation of the Project would not conflict or obstruct implementation of a state or local plan for renewable energy or energy efficiency. Consequently, no further analysis or mitigation is required.

3.10.3 Conclusion

No adverse impacts were identified; therefore, no further analysis or mitigation is required.

3.11 Geology and Soils

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Directly or indirectly cause 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.	☐	☐	☐	◙
ii. Strong seismic ground shaking?	☐	☐	◙	☐
iii. Seismic-related ground failure, including liquefaction?	☐	☐	◙	☐
iv. Landslides?	☐	☐	☐	◙
b. Result in substantial soil erosion or the loss of topsoil?	☐	☐	☐	◙
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☐	◙
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?	☐	☐	☐	◙
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	◙
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	◙	☐

3.11.1 Environmental Setting

Geologic Setting

The Project site is on the northern edge of Bay Farm Island. The majority of Bay Farm Island including the Project site is underlain by artificial fill (af).

Seismicity[3]

Earthquakes are the single-most significant short-term geologic hazard facing the residents and businesses in Alameda. Earthquakes are also the hazard that are most likely to cause extensive damage. In addition to the initial shaking, secondary seismic hazards associated with earthquakes include liquefaction, lateral spreading, and cracking of the ground surface, sand boils, slope failure, and seiches. Figure 3.11-1 illustrates the proximity of Alameda to the Hayward and San Andreas Faults. The likelihood of occurrence of these secondary effects due to ground shaking in Alameda is high due to underlying soil conditions in Alameda, such as artificial fill, bay mud, and expansive soils. Alameda is susceptible to severe liquefaction in the event of ground shaking. Alameda's relatively old housing stock and unique historic commercial buildings were generally constructed without the benefit of modern Building Code requirements to strengthen buildings against earthquake shaking.

[3] The discussion on seismicity is taken from the Safety and Noise Element of the City of Alameda's General Plan.

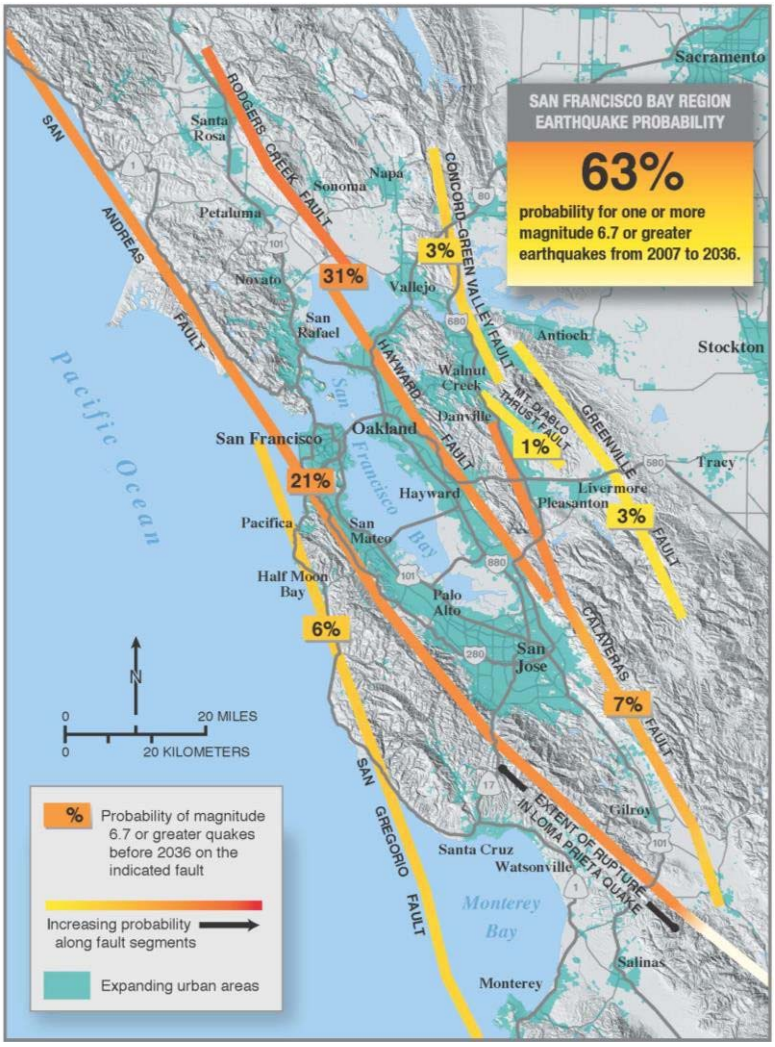

Figure 3.11-1 Earthquake Probabilities

Soils

According to the U.S. Department of Agriculture's National Conservation Service's Web Soils Survey for Alameda County, soils at the site are composed of xeropsamments, fill. Refer to Exhibit 4, *Soils*, in Attachment A in ELMT's report in Appendix E.

3.11.2 Discussion and Mitigation Measures

Geology and Soils. a. i. *Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving 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.*

Answer: No impact.

Discussion:

The Alquist-Priolo Earthquake Fault Zoning Act identifies special study zones for areas where existing known faults are located. The main purpose of the Act is to prevent the construction of buildings used for human occupancy on the surface trace of active faults. The Act also required the State Geologist to establish regulatory zones (known as Earthquake Fault Zones) around the surface traces of active faults and to issue appropriate maps. As shown Figure 3.11-1, the nearest Alquist-Priolo Earthquake Fault Zone (Hayward fault) is approximately 5 miles east of the proposed Project site. Therefore, there is no potential of a rupture of a known earthquake fault on site, no further analysis or mitigation is required.

Geology and Soils. a. ii. *Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?*

Answer: Less than Significant.

Discussion:

The potential for strong seismic ground shaking in the Project area is similar to that in surrounding areas. Because the proposed Project consists of facilities that are not intended for human habitation, it will not expose people or critical structures to adverse effects resulting from seismic-related ground failure, including liquefaction. In addition, the proposed solar arrays are built low to the ground at approximately 10-feet in height and are specifically designed to withstand seismic conditions anticipated to occur at the Project site. Seismic conditions expected to occur in the Project area can be mitigated by special design using reasonable construction and/or maintenance practices common to the Alameda County area. Any potential substantial adverse effects, including risk of loss, injury, or death involving a strong seismic ground shaking would be considered less than significant and no further analysis or mitigation is required.

Geology and Soils. a. iii. *Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?*

Answer: Less than Significant.

Discussion:

The risk of ground shaking and liquefaction (transformation of water-saturated granular soils to a liquid state during ground shaking) in the Project area is considered very high. However, because the proposed Project consists of facilities that are not intended for human habitation, it will not expose people or critical structures to adverse effects resulting from seismic-related ground failure, including liquefaction. In addition, the solar arrays are built low to the ground at approximately 10-feet in height and are specifically designed to withstand seismic conditions anticipated to occur at the Project site. Any potential impacts from ground shaking and liquefaction would be considered less than significant and no further analysis or mitigation is required.

Geology and Soils. a. 4. *Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?*

Answer: No Impact.

Discussion:

Seismically triggered landslides or other types of ground failure, including expansive soils (those that swell when wet and shrink when dry) and subsidence (gradual settling or sinking of an area with little or no horizontal movement) are not considered a significant hazard in the Project area due to the fairly level terrain in the area proposed for development. The Project site is a former landfill facility that is currently regulated under permits with the Regional Water Quality Control Board and the Alameda County Environmental Health Department and will continue to meet the erosion control requirements of those agencies. There is minimal grading proposed for the addition of solar arrays to the level surface of the site. Therefore, the Project would not result in substantial adverse effects involving landslides, and no further analysis or mitigation is required.

Geology and Soils. b. *Would the project result in substantial soil erosion or the loss of topsoil?*

Answer: No Impact.

Discussion:

The Project site is a former landfill facility that is currently regulated under permits with the Regional Water Quality Control Board and the Alameda County Environmental Health Department and will continue to meet the erosion control requirements of those agencies. There is minimal grading proposed for the addition of solar arrays to the level surface of the site. Therefore, the Project will not result in substantial soil erosion or loss of topsoil.

Geology and Soils. c. *Would the project 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?*

Answer: No Impact.

Discussion:

As stated above, the Project area is not located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project. The Project site is a former landfill facility that is currently regulated under permits with the Regional Water Quality Control Board and the Alameda County Environmental Health Department and will need to meet the erosion control requirements of those agencies. There is minimal grading proposed for the addition of solar arrays to the level surface of the site. Therefore, no further analysis or mitigation is required.

Geology and Soils. d. *Would the project 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?*

Answer: No Impact.

Discussion:

Expansive soils are largely composed of clay which expand in volume when water is absorbed and shrink when dried. The soils at the Project sites are loams which are not susceptible to expansion and shrinking. Therefore, there would be no impacts and no further analysis or mitigation is required.

Geology and Soils. e. *Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?*

Answer: No Impact.

Discussion:

The Project does not include the use of septic tanks or alternative wastewater disposal systems. Therefore, there are no impacts associated with the use of septic tanks or alternative wastewater disposal systems and no mitigation is required.

Geology and Soils. f. Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Answer: Less than Significant.

Discussion:

The site is a former landfill site that is vacant with no unique geological features. The solar arrays will be constructed on a level portion of the site elevated approximately 43-feet above grade of the surrounding area. There will be minimal grading as part of the construction of the solar arrays. Although the site has been previously disturbed and there will be no ground-penetrating construction activities, there is always the possibility of an inadvertent discovery of paleontological resources during construction. In the unlikely event that potentially significant paleontological materials (e.g., fossils) are encountered during construction of the Project, the Project shall halt all work to in the vicinity of the paleontological discovery until a qualified paleontologist can visit the site of discovery, assess the significance of the paleontological resource, and provide proper management recommendations. The treatment and disposition of paleontological material that might be discovered during excavation shall be in accordance with applicable laws and regulations. The Project shall comply with the standard condition of approval as described in Section 3.9.2 of this document.

3.11.3 Conclusion

The Project would have a less-than-significant impact on geology and soils with standard conditions of approval incorporated.

3.12 Greenhouse Gas Emissions

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the Project:				
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	◙	☐
b. Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emission of greenhouse gases?	☐	☐	☐	◙

3.12.1 Environmental Setting

Under Assembly Bill 32 (AB 32), greenhouse gases (GHGs) are defined as carbon dioxide (CO_2), methane (CH_4), nitrous oxide (NO_2), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulfur hexafluoride (SF_6),

Global Warming Potential (GWP) is a measure of how much a given mass of greenhouse gas is estimated to contribute to global warming. It is a relative scale that compares the gas in question to the same mass of carbon dioxide (whose GWP by definition is 1). A GWP is calculated over a specific time interval and the value of this must be stated whenever a GWP is quoted or else the value is meaningless. A substance's GWP depends on the time span over which the potential is calculated. A gas which is quickly removed from the atmosphere may initially have a large effect but for longer time periods as it has been removed becomes less important. For the purposes of a CEQA analysis, especially an analysis of operating emissions, the maximum GWP is typically used, regardless of the actual atmospheric lifetime. This approach simplifies the analysis and provides a very conservative analysis, especially for the fluorinated gases. The GWP of the Kyoto GHGs is shown in Table 3.12-1 [U.S. EPA (www.epa.gov)].

Table 3.12-1

Global Warming Potential of Kyoto GHGs

Gas	Atmospheric Lifetime	GWP
Carbon Dioxide (CO_2)	50 – 200	1
Methane (CH_4)	12 ± 3	21
Nitrous Oxide (NO_2)	120	310
Hydrofluorocarbons		
HFC-23	264	11,700
HFC-32	5.6	650
HFC-125	32.6	2,800
HFC-134a	14.6	1,300
HFC-143a	48.3	3,800
HFC-152a	1.5	140
HFC-227ea	36.5	2,900
HFC-236fa	209	6,300
HFC-4310mee	17.1	1,300
Perfluorocarbons		
CF_4	50,000	6,500
C_2F_6	10,000	9,200
C_4F_{10}	2,600	7,000
C_6F_{14}	3,200	7,400
Sulfur Hexafluoride (SF_6)	3,200	23,900

Source: U.S. EPA (www.epa.gov)

According to the California Air Resources Board's 2018 *California Greenhouse Gas Emission for 2000 to 2016 Trends of Emissions and Other Indicators,* California uses the annual statewide GHG emission inventory to track progress toward meeting statewide GHG targets. The inventory for 2016 shows that California's GHG emissions continue to decrease, a trend observed since 2007. In 2016, emissions from routine GHG emitting activities statewide were 429 million metric tons of CO_2 equivalent ($MMTCO_2e$), 12 $MMTCO_2e$ lower than 2015 levels. This puts total emissions just below the 2020 target of 431 million metric tons. Emissions vary from year-to-year depending on the weather and other factors, but California will continue to implement its greenhouse gas reductions program to ensure the state remains on track to meet its climate targets in 2020 and beyond. These reductions come while California's economy grows and continues to generate jobs. Compared to 2015, California's Gross Domestic Product (GDP) grew 3% while the carbon intensity of its economy declined by 6%.

- The largest reductions came from the electricity sector which continues to see decreases as a result of the State's climate policies, which led to growth in wind generation and solar power, including growth in both rooftop and large solar array generation.
- The abundant precipitation in 2016 provided higher hydropower to the State.

- The industrial sector shows a slight decrease in emissions in the past two years.
- The transportation sector remains the largest source of GHG emissions in the State and saw a 2% increase in emissions in 2016.
- Emissions from the remaining sectors are relatively constant in recent years, although emissions from high GWP gases also continued to increase as they replace Ozone Depleting Substances (ODS) banned under the 1987 Montreal Protocol.

3.12.2 Discussion and Mitigation Measures

Greenhouse Gas Emissions. a. *Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment, based on any applicable threshold of significance?*

Answer: Less than Significant.

Discussion:

As shown in the Air Quality section, construction of the Project would generate exhaust emissions, including GHGs, from the construction equipment and on-road vehicles. The carbon dioxide equivalent of those emissions (CO_2 and CH_4) are estimated at 260 metric tons during 2019. The BAAQMD has not established threshold limits for GHGs. However, the Sacramento Metropolitan Air Quality Management District (SMAQMD) has suggested a threshold limit of 1,100 metric tons per year. Based on this threshold limit, emissions of GHGs during construction of the Project would be less than significant. Therefore, no further analysis or mitigation is required.

Operation of the Project has the potential to lower GHG emissions as the production of solar power does not produce GHGs as opposed to fossil fuel or gas-fired generation facilities.

Greenhouse Gas Emissions. b. *Would the project conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emission of greenhouse gases?*

Answer: No Impact.

Discussion:

As previously stated in the Energy section, the addition of approximately 2.0 MW_{ac} of renewable energy generation would assist NCPA in meeting its goals of a 60 percent Renewable Portfolio Standard (RPS) by 2030 and would assist the City of Alameda in continuing to meet its goals of a 100 percent renewable energy mix by 2020. Therefore, implementation of the Project would not conflict or obstruct implementation of that plan. Consequently, no further analysis or mitigation is required.

3.12.3 Conclusion

Less than significant impacts were identified; therefore, no further analysis or mitigation is required

3.13 Hazards and Hazardous Materials

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials?	☐	☐	◙	☐
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?	☐	☐	◙	☐
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	◙	☐
d. Be located on a site that 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?	☐	☐	◙	☐
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 or excessive noise for people residing or working in the project area?	☐	☐	◙	☐
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	◙
g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☐	◙

3.13.1 Environmental Setting

Hazards

Seismic and Geologic Hazards

Seismic and geologic hazards are discussed in Section 3.11.

Fire

According to Cal Fire maps, the Project site is within a Local Responsibility Area High Fire Hazard Severity Zone.

Flooding

The Project site is shown on FEMA's Flood Insurance Rate Map 06001C0251H as an area above the 500-year flood zone.

Hazardous Materials

Several standard environmental record services are available to determine the potential for recognized environmental conditions in an area. Those databases are briefly described in the following paragraphs.

Superfund Enterprise Management System (SEMS)

In 2014, the Superfund Program implemented a new information system, the Superfund Enterprise Management System (SEMS). SEMS integrates multiple legacy systems (e.g., CERCLIS, ICTS, SDMS) into a comprehensive tracking and reporting tool, providing data on the inventory of active and archived hazardous waste sites evaluated by the Superfund program. It contains sites that are either proposed to be, or are on, the National Priority List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL. SEMS also includes information from the California Department of Toxic Substances Control's (DTSC) Envirostor database. The SEMS search did not reveal any sites in the City of Alameda.

Envirostor

Envirostor is a database maintained and primarily used by DTSC to determine the location of all hazardous waste sites. The Envirostor search did not reveal any active sites near the Project site.

Geotracker

Geotracker is the State Water Resources Control Board's (State Water Board) data management system for managing sites that impact groundwater, especially those that require groundwater cleanup (Underground Storage Tanks, Department of Defense Site Cleanup Program) as well as permitted facilities such as operating USTs and land disposal sites. The Doolittle Landfill site is included in the Geotracker database.

Leaking Underground Storage Tank Information System (LUSTIS)

The State Water Board administers the Leaking Underground Storage Tank Information System (LUSTIS). The LUSTIS database includes all reported leaks from underground storage tanks. The LUSTIS database is now reported in the Geotracker results which did not show the presence of any LUSTIS sites.

Site Mitigation Program Property Database (formerly CalSites)

DTSC administers the CalSites program. Information in the CalSites database is preliminary in nature; therefore, most sites listed in the database need additional work to determine if contamination exists. There are no sites in the CalSites database within the Project area.

Hazardous Waste and Substances Sites List (Cortese)

California Government Code §65962.5 requires DTSC to develop, at least annually, an updated list of Hazardous Waste and Substances Sites. This list, known as the Cortese List, is a planning document used by the State, local agencies and developers to comply with the California Environmental Quality Act requirements in providing information about the location of hazardous materials release sites. DTSC is responsible for a portion of the information contained in the Cortese List. Other State and local agencies are required to provide additional hazardous materials release information for the Cortese List. The Cortese List is to be submitted to the Secretary of the California Environmental Protection Agency. There are no sites on the Cortese List within the Project area.

Solid Waste Information System (SWIS)

The Solid Waste Information System (SWIS) is a database provided by the California Department of Resources Recycling and Recovery (CalRecycle) which consists of both open as well as closed and inactive solid waste disposal facilities and transfer stations. The Doolittle Landfill is the only site in the SWIS database within the Project area.

3.13.2 Discussion and Mitigation Measures

Hazards and Hazardous Materials. a. *Would the project create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials?*

Answer: Less than Significant.

Discussion:

Construction activities would require the use of certain hazardous materials such as fuels, oils, solvents, and glues. Inadvertent release of large quantities of these materials into the environment could adversely impact workers, the public, soil, surface waters, or groundwater quality. The implementation of Conditions of Approval required in *Hydrology and Water Quality (a)* and the construction best management practices implemented as part of a Storm Water Pollution Prevention Plan (discussed further in Section 3.14.2, *Hydrology and Water Quality*) as required

by the National Pollution Discharge Elimination System General Construction Permit would minimize the potential adverse effects to workers, the public, groundwater and soils.

In general, aside from refueling needs for heavy equipment, the hazardous materials typically used on a construction site are brought onto the site packaged in consumer quantities and used in accordance with manufacturer recommendations. The overall quantities of these materials on the site at any one time would not result in large bulk amounts that, if spilled, could cause a significant soil or groundwater contamination issue. Spills of hazardous materials on construction sites are typically localized and would be cleaned up in a timely manner. As described above, refueling activities of heavy equipment would be conducted in a controlled dedicated area complete with secondary containment and protective barriers to minimize any potential hazards that might occur with an inadvertent release. Given the required protective measures (i.e., best management practices) and the quantities of hazardous materials typically needed for construction projects such as the proposed Project, the threat of exposure to the public or contamination to soil and/or groundwater from construction-related hazardous materials is considered a less than significant impact.

Hazards and Hazardous Materials. b. *Would the project 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?*

Answer: Less than Significant.

Discussion:

Equipment used to construct the Project facilities would have the potential to release oils, grease, solvents and other finishing products through accidental spills. However, adherence to SWPPP discussed in section a. above would result in less-than-significant impacts. Therefore, no further analysis or mitigation is required.

Hazards and Hazardous Materials. c. *Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?*

Answer: Less than Significant.

Discussion:

Amelia Earhart Elementary School is located approximately 1,000 feet southwest of the Project site. However, strict adherence to SWPPP discussed in *Hazards and Hazardous Materials (a)* above would ensure that any potential impact would be less than significant. In addition, construction and operations on site will be subject to a Health and Safety Plan to ensure the equipment is installed and maintained safely. Therefore, no further analysis or mitigation is required.

Hazards and Hazardous Materials. d. *Would the project be located on a site that 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?*

Answer: Less than Significant.

Discussion:

Several standard environmental record services are available to determine the potential for recognized environmental conditions in an area. Those databases include:

- Superfund Enterprise Management System (SEMS)
- Envirostor
- Geotracker
- Site Mitigation Program Property Database (formerly CalSites)
- Hazardous Waste and Substances Sites List (Cortese)
- Solid Waste Information System (SWIS)

These databases were searched for the presence of hazardous materials sites within the Project area. According to those databases, there are no active sites in the Project area. However, the record searches do reveal the presence of the closed Doolittle Landfill. The closed landfill includes a four-foot thick cap which will be protected by the contractor. It will also be the responsibility of the contractor to ensure the gas pipes on the landfill are protected. No construction equipment or materials at the site will disturb the 4ft landfill cap. The results of the independent structural analysis will determine the dynamic load requirements during the construction phase. The results of the structural analysis will determine the allowed weight of construction vehicles on top of the landfill. For the ballasted racks, depending on the results of the structural analysis concrete trucks would either pour concrete directly into ballasted tubs or concrete would be loaded onto pumping trucks which would then pour concrete into ballasted tubs in their final location. All solar equipment will be placed at or above grade with no ground penetrations. The ballasted, fixed-tilt racking solution sits on top of the ground. All inverters and transformers would be mounted on pre-cast concrete pads at grade. Inverters and transformers would be connected by above-grade EMT conduits/conductor to the point of interconnect. The electrical equipment would pose no electrical shock risk and would be safe for human and wildlife contact, and all electrical conduits would be rated for outdoor use. Construction and operations on site will be subject to a Health and Safety Plan to ensure the equipment is installed and maintained safely. In addition, the existing monitoring of the landfill conditions will continue to be conducted by the Public Works Department, Environmental Health Department, and the Regional Water Quality Control Board to insure the conditions meet their standards. Therefore, the impacts are considered less than significant.

Hazards and Hazardous Materials. e. *Would the project be 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 or excessive noise for people residing or working in the project area?*

Answer: Less than Significant.

Discussion:

According to the Oakland International Airport Land Use Compatibility Plan (ALUCP), the Project site is within the Airport Influence Area and is subject to ALUCP airspace protection policies as well as regulations enacted by the FAA and State of California. Most of the Project is located within Safety Compatibility Zone 6 Traffic Pattern Zone while the eastern portion is within Zone 4 Outer Approach/Departure Zone. The Project area falls within the imaginary surfaces defined for the Oakland International Airport in accordance with FAA Regulations (FAR, Part 77). These regulations require an FAA Form 7460 review of the Project prior to construction. A glint-glare analysis has been performed as part of the FAA review. As described in the Aesthetics section, the glint-glare analysis was within FAA compliance levels for the proposed facilities. Therefore, there would be less than significant impacts and no further analysis or mitigation is required.

Hazards and Hazardous Materials. f. *Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?*

Answer: No Impact.

Discussion:

Implementation of the Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan as it would not be constructed within public rights-of-way. Therefore, there would be no impacts and no further analysis or mitigation is required.

Hazards and Hazardous Materials. g. *Would the project expose people or structures, either directly or indirectly to a significant risk of loss, injury or death involving wildland fires?*

Answer: No Impact.

Discussion:

The Project area is within a high fire severity zone in a local fire responsibility area. Implementation of the Project would not increase the fire risk at this site. Therefore, there would be no impacts and no further analysis or mitigation is required.

3.13.3 Conclusion

Implementation of SWPPP and completion of the FAA Form 7460 Review process will ensure that the impacts associated with hazards and hazardous materials are less than significant and no further environmental review or mitigation is required.

3.14 Hydrology and Water Quality

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	◙	☐
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable ground management of the basin?	☐	☐	☐	◙
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i. Result in substantial erosion or siltation on- or off-site;	☐	☐	☐	◙
ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	☐	☐	☐	◙
iii. 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; or	☐	☐	☐	◙
iv. Impede or redirect flood flows?	☐	☐	☐	◙
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	◙
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	◙

3.14.1 Environmental Setting

The Project site is within the San Francisco Bay Basin which covers approximately 4,600 square miles and is characterized by its dominant feature, 1,100 square miles of the 1,600 square mile San Francisco Bay Estuary, the largest estuary on the west coast of the United States, where fresh waters from California's Central Valley mix with saline waters from the Pacific Ocean.

The San Francisco Bay Basin falls under the jurisdiction of the California Regional Water Quality Control Board, San Francisco Bay Region. The Regional Board has established beneficial uses and water quality objectives for San Francisco Bay in its Water Quality Control Plan for the San Francisco Bay Region.

3.14.2 Discussion and Mitigation Measures

Hydrology and Water Quality. a. *Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?*

Answer: Less than Significant.

Discussion:

The Project site is essentially level and will require only a minimum amount of grading. The panels will be installed on cast in-place piers that would have a negligible effect on runoff from the site. Generally, during site grading and excavation activities, bare soil would be exposed to wind and water erosion. If precautions are not taken to contain sediments, construction activities could produce sediment laden storm runoff. The property is subject to Order No. 95-189 of the California Regional Water Quality Control Board for the closed landfill and must comply with the waste discharge requirements of the Board. In addition, site grading and excavation activities associated with the construction of the Project facilities would be subject to the provisions of the National Pollutant Discharge Elimination System (NPDES) Construction Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities [NPDES No. CAS000002 (State Water Resources Control Board Order No. 2009-0009-DWQ)]. Compliance with the provisions of that Order would require AMP to obtain coverage before the onset of construction activities. Construction activities would comply with the conditions of these permits that include preparation of a storm water pollution prevention plan (SWPPP), implementation of BMP's, and monitoring to ensure impacts to water quality are minimized. Therefore, the following Standard Conditions of Approval will be implemented for the Project:

Standard Conditions of Approval:

1. Final Storm Water Management Plan: The improvement plans shall incorporate a Final Storm water Management Plan for the solar facility, including all appropriate pollution prevention source control measures, permanent low impact development (LID) measures, storm water treatment controls and/or design techniques to manage the quantity and quality of storm water runoff from the Project site to prevent and minimize impacts to water quality and must be consistent with the Provision C3 requirements of the City's municipal storm water permit. Roof

drains shall discharge and drain to an unpaved area wherever practicable. Design techniques may include green roofs, rainwater harvesting, vegetated swales, vegetated buffer zones, bio retention units, retention/detention basins and ponds, tree well systems, and the incorporation of pervious surface areas and LID measures. The Improvement Plans shall provide details sufficient to ensure that the storm water design and treatment measures shall be constructed consistent with the latest version of the Alameda County Clean Water Program's Provision C3 Technical Guidance Manual, the Alameda Landing SWMP, and the preliminary storm water management plan. Applicants may also refer to the Bay Area Storm Water Management Agencies Association (BASMAA) *Start at the Source Manual* for technical guidance. All storm water design and treatment measures for private development pads shall be consistent with the C3 requirements and be located on the development pad or an adjacent private development pad and shall not be located on property planned for public parks or public rights of way. The finalized Storm Water quality management plans shall also include:

a. The identification of the drainage management areas (DMAs) for all newly created and/or recreated impervious surface areas on the Project site and the establishment and identification of Provision C3-compliant storm water quality design and treatment measures for each DMA.
b. A site plan map and inventory identifying the location and area values (in square feet) of each DMA and the corresponding, one-to-one-matching, C3-compliant measure. The DMA inventory shall be summarized in tabular form and provide an accurate total area summation value.
c. A finalized supplemental submittal of the Storm water Requirements Checklist. The area value summation of all of the DMAs shall be consistent with the area values accurately presented in the summary "Table of Impervious and Pervious Surfaces" (Section I.B) in the completed Storm water Requirements Checklist.
d. A finalized, stamped, signed City of Alameda C3 certification form prepared by an independent civil engineer with storm water treatment facility design experience, licensed in the State of California, and meeting City qualification standards, that indicates the LID and treatment measure designs of the finalized improvement plans and storm water quality management plan meet the established sizing design criteria for storm water treatment measures.

2. Best Management Practices: The Applicant shall be responsible for ensuring that all contractors and sub-contractors install, implement and effectively maintain appropriate sediment control, erosion control and other water quality protection measures to prevent any pollutants from entering the municipal storm water drainage system or the Oakland Estuary, either directly or indirectly, during all construction activities. All implemented measures shall be consistent with the City's urban runoff Best Management Practices (BMPs) standards. The Applicant shall pay for any required cleanup, testing, and/or City administrative costs resulting from consequence of construction materials entering the storm water drainage system. The Civil Improvement Plans shall list the City's erosion and sediment control standards and provide detail drawings and installation specifications for all water quality control measures.

3. Storm Water Pollution Prevention Plan Prior to issuance of the initial demolition, grading or combination grading/building permit, provide the Public Works Department Clean Water Program, a copy of the current, up-to- date Storm Water Pollution Prevention Plan (SWPPP) and the WDID# issued to the Project site by the State Water Resources Control Board (SWRCB), consistent with the requirements in SWRCB Order No. 2009-0009-DWQ.

4. Operations and Maintenance Plan: The Applicant/Developer shall submit a storm water treatment measures Operations and Maintenance (O&M) plan for review and approval to the Public Works Department prior to the approval of and consistent with the improvement plans for each phase. The O&M plan shall include, but not be limited to: treatment and design measure(s) descriptions and summary inventory; a legible, recordable, reduced-scale (8.5"x11") copy(-ies) of the Site Plan indicating the treatment and design measure(s) location(s) and site drainage patterns; treatment measure(s) maintenance requirements and maintenance schedule; the approved plant list and planning plan; detailed description of the integrated pest management principals and techniques and/or Bay Friendly Landscaping Program techniques to be utilized during landscape maintenance to ensure pesticide/herbicide use-minimization in landscaped areas; name and contact information of current maintenance personnel; and template of the annual O&M report submittal to the City. The O&M plan(s) for all storm water treatment and design measures to be maintained by any HOA or CA shall be incorporated with the CC&Rs of the relevant HOA/CA. Upon approval, provide Public Works a pdf copy of the finalized O&M Plan.

The City of Alameda Public Works Department's *Urban Runoff Best Management Practices Standards* require the Project proponent and the designated contractor to provide a Water Pollution Control Plan (WPCP) for a Storm Water Pollution Prevention Plan (SWPPP) for projects one acre or more for review and approval by the City Engineer with adequate time to ensure that necessary WCCP/SWPPP revisions can be made prior to the preconstruction meeting. The plan includes appropriate erosion and sediment control measures to effectively prevent the entry of soil, dirt, debris and other pollutants to stormwater runoff, the storm drain system, the lagoons or the bay/estuary during construction. The following Urban Runoff Best Management Standards will be required as part of the required Stormwater Pollution Prevention Plan:

1. The Project proponent and the designated contractor shall provide a Water Pollution Control Plan (WPCP) (or a Stormwater Pollution Prevention Plan (SWPPP) for projects one acre or more) for review and approval by the City Engineer with adequate time to ensure that necessary WPCP/SWPPP revisions can be made prior to the pre-construction meeting. This Plan shall include appropriate erosion and sediment control measures to effectively prevent the entry of soil, dirt, debris and other pollutants to stormwater runoff, the storm drain system, the lagoons or the bay/estuary during construction.

2. Erosion and sediment control plans/sheets shall indicate the specifications and maintenance schedules for the installation and upkeep of the erosion and sediment control mechanisms. Specifications shall be provided for the erosion control practices, perimeter protection(s), any silt fencing and fiber rolls used, the storm drain inlet protections, the stabilized construction entrance(s) and exits, site and excavation dewatering activities, vehicle tire wash area(s), the vehicle and equipment servicing area(s) and the materials handling and storage area(s). These specifications should meet the same level of erosion and sediment control effectiveness established by practices identified in the San Francisco Bay Regional Water Quality Control Board's Erosion and Sediment Control Field Manual (510-622-2465), the Association of Bay Area Government's Manual of Standards for Erosion and Sediment Control (510-464-7900) and/or the California Stormwater Quality Association's Stormwater Best

Management Practice Handbook – Construction (www.cabmphandbooks.com). Contact City PWD Clean Water Program Specialist Jim Barse, telephone 510-747-7930, for additional assistance in obtaining copies of these reference documents.

3. Prior to the commencement of any clearing, grading or excavation resulting in a land disturbance of 1 (one) acre or more, the developer must comply with the conditions of the General Construction Stormwater Permit issued by the State Water Resources Control Board (SWRCB). The developer must submit to the City's Public Works Department a copy of the WDID# issued to the Project by the State and the required SWPPP document.

4. Construction phase erosion and sediment control measures shall include: Construction access routes shall be limited to those approved by the City Engineer and shall be shown on the approved grading plan.

5. The applicant is responsible for ensuring that all contractors and subcontractors are aware of and implement all stormwater quality control measures. The Contractor(s) shall avoid creating excess dust when breaking asphalt/concrete and during excavation and grading. If water is used for dust control, use as little as possible. All wash water shall be kept out of streets, gutters and storm drains. Controls shall be implemented prior to start of construction, maintained during construction to provide adequate protection and removed at the end of construction. Failure to comply with the approved construction BMPs shall result in the issuance of correction notices, citations and/or a project stop order.

BMP Standards A through Q:

A. Gather all construction debris on a regular basis and place it in a dumpster or other container which is emptied or removed on a weekly basis. When appropriate, use tarps on the ground to collect fallen debris or splatters that could contribute to stormwater pollution. After breaking old pavement, remove all pieces to avoid contact with rainfall or runoff.

B. On-site piles shall be removed regularly from site, with only temporary storage allowed. All temporary soil or other stockpiles on site shall be securely covered with a tarp, plastic sheeting or similar material.

C. Remove all dirt/mud, gravel, rubbish, refuse and green waste from the sidewalk, street pavement, and storm drain system adjoining the Project site daily and prior to rain. Clean up leaks, drips and spills immediately. During wet weather, avoid driving vehicles off paved areas and other outdoor work areas.

D. Stabilized construction entrances shall be installed and maintained to minimize the tracking of dirt, mud, dust and debris onto the public right-of-way.

E. Broom-sweep the sidewalk and public street pavement adjoining the Project site daily and prior to rain. Caked-on mud or dirt shall be scraped from these areas before sweeping. At the completion of work the street shall be washed and the wash water collected and disposed offsite.

F. Filter materials (such as block and gravel bags, sandbags, filter fabric) shall be installed at the storm drain inlets surrounding the Project site. Inlet protections shall be installed prior to: the start of the rainy season, site de-watering activities, saw-cutting activities or any other activity that may result in the discharge of material to the storm drain. Filter materials shall be maintained and/or replaced as necessary to minimize short-cutting and to remove sediment deposits and buildup. Accumulated sediment/debris shall be disposed of properly.

G. Vacuum saw-cutting slurry immediately and remove from site. Do not allow saw-cut slurry to accumulate on surrounding pavement or enter the storm water conveyance system.

H. Create a contained and covered area on the site for the storage of cement bags, paints, flammables, oils, fertilizers, pesticides, or any other materials used on the Project site that have the potential for being discharged to the storm drain system by wind, exposure to rainfall or in the event of a material spill.

I. Never clean machinery, tools, brushes, etc. or rinse containers into a street, gutter, storm drain or stream. See the *Building Maintenance and Remodeling* BMP flyer and ACCWP BMP brochures for more information. Contact Public Works Environmental Services Division at 747- 7930 for assistance with obtaining these documents.

J. Ensure that concrete/gunite supply trucks or concrete/plaster finishing operations do not discharge wash water into street gutters or drains. Concrete trucks shall have a self-contained wash-out system or discharge to a dedicated, secure site wash-out in order to avoid the possibility of debris on city streets or discharge of wash water to the storm water conveyance system.

K. Minimize removal of natural vegetation or ground cover from the site in order to minimize the potential for erosion and sedimentation problems. Re-plant the area, and stabilize all cut and fill slopes as soon as possible after grading is completed. At a minimum, 4,000 pounds/acre of straw with tackifier should be placed on all exposed soils including those within active work areas and flat lots. No site grading shall occur between October 1 and May 31 unless approved erosion and sedimentation control measures are in place.

L. Provide erosion “prevention” and perimeter protection measures (soil stabilization) such as fiber rolls, silt fence, and/or sediment traps or basins. Ensure control measures are adequately maintained and in operable condition. Sediment controls, including inlet protection, are necessary but should be a secondary defense behind good erosion control and site perimeter measures.

M. Site de-watering operations shall be designed to prevent the discharge of any sediment, debris or other pollutants to the municipal storm water conveyance system.

N. All erosion prevention and sediment control measures shall be maintained and repaired throughout the season. Replacement supplies should be kept on site. Site inspections shall be conducted before and after each storm event, and every 24 hours for extended storm events, to identify areas that contribute to erosion and

sediment problems or any other pollutant discharges. If additional measures are needed, revise the SWPPP and implement the measures immediately. Document all inspection findings and actions taken.

O. Visual observations before, during, and after storm events shall be conducted. Any breach, malfunction, leakage, or spill observed that could result in the discharge of pollutants to surface waters which would not be visually detectable in stormwater shall trigger the collection of a sample of discharge. The following procedures shall be followed during sampling:

Sampling Procedures:

- For all construction activity, identify a sampling and analysis strategy and sampling schedule for potential discharges discovered through visual monitoring.
- Any breach, malfunction, leakage, or spill observed during visual monitoring which could result in the discharge of pollutants to surface waters that would not be visually detectable in stormwater shall trigger the collection of a sample of discharge.
- Samples shall be collected at all discharge locations which drain the areas identified by the visual observations and which can be safely accessed.
- Personnel trained in water quality sampling procedures shall collect stormwater samples.
- An uncontaminated sample shall be collected for comparison with the discharge sample.
- Sampling shall be conducted during the first two hours of discharge from rain events that occur during daylight hours and which generate runoff.
- The uncontaminated sample shall be compared to the samples of discharge using field analysis or through laboratory analysis. Analyses may include, but are not limited to indicator parameters such as: pH, specific conductance, dissolved oxygen, conductivity, salinity, and TDS
- All field and/or analytical data shall be kept in the SWPPP document, which is to remain at the construction site at all times

P. The City of Alameda shall be contacted in the event of any slope failure, sediment pond overflow, or any other malfunction resulting in pollutant-laden runoff. The City shall, in turn, report such incidents to the Regional Water Quality Control Board.

Q. On-site storm drain inlets shall be clearly marked with the words “No Dumping! Drains to Bay,” or equivalent, using methods approved by the City of Alameda. All on-site storm drains must be inspected and, if necessary, cleaned at least once a year immediately prior to the rainy season. Additional cleaning may be required by the City of Alameda.

The SWPPP also identifies the method of final stabilization of the site to ensure no post-construction erosion and impacts to water quality will occur. The Notice of Termination (NOT) and release of the Project from the provisions of the Construction General Permit coverage is granted by the California Regional Water Quality Control Board, San Francisco Bay Region once it is satisfied that no impacts to water quality will occur. In addition to increased erosion potential,

hazardous materials associated with construction equipment could adversely affect water quality if spilled or stored improperly. (See Section 3.13.2 for a full discussion associated with hazardous materials.)

Adherence to these Conditions of Approval will ensure that the impacts to water quality are less than significant.

Hydrology and Water Quality. b. *Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable ground management of the basin?*

Answer: No Impact.

Discussion:

The proposed Project includes the installation of solar photovoltaic facilities and does not include any facilities to extract groundwater. It will not result in the use of groundwater and thus will not substantially deplete groundwater supplies or interfere with groundwater recharge. Therefore, no further analysis or mitigation is required.

Hydrology and Water Quality. c.i. *Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation on- or off-site?*

Answer: No Impact.

Discussion:

The Project site is essentially level and will require only a minimum amount of grading. The panels will be installed on cast in-place piers that would have a negligible effect on runoff from the site. Therefore, the Project would not substantially alter the existing drainage pattern of the site or area. Consequently, no further analysis or mitigation is required.

Hydrology and Water Quality. c.ii. *Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces in a manner which would substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?*

Answer: No Impact.

Discussion:

As discussed above, to the Project would not substantially alter the existing drainage pattern of the site or area. Consequently, no further analysis or mitigation is required.

Hydrology and Water Quality. c.iii. *Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?*

Answer: No Impact.

Discussion:

As discussed above, no impacts to the existing drainage pattern of the site would occur. As a result, the Project would not create or contribute runoff water which would exceed the capacity of the site's existing storm water drainage facilities. In addition, the Project will be required to provide a Storm Water Pollution Protection Plan to the Public Works Department prior to issuance of building permits. Consequently, no further analysis or mitigation is required.

Hydrology and Water Quality. c.iv. *Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would impede or redirect flood flows?*

Answer: No Impact.

Discussion:

As discussed above, no impacts to the existing drainage pattern of the site would occur. As a result, the Project would not impede or redirect flood flows. Consequently, no further analysis or mitigation is required.

Hydrology and Water Quality. d. *Would the project in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?*

Answer: No Impact.

Discussion:

According to FEMA's Flood Insurance Rate Map 060001C0251H, the Project site is above the elevation of the 500-year flood event. Therefore, there is no risk of pollutants due to Project inundation and no further analysis or mitigation is required.

Hydrology and Water Quality. e. *Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?*

Answer: No Impact.

Discussion:

As shown above, the Project is subject to Order No. 95-189 of the California Regional Water Quality Control Board for the closed landfill and must comply with the waste discharge requirements of the Board. The Project site is essentially level and will require only a minimum

amount of grading. In addition, the Project will be required to provide a Storm Water Pollution Protection Plan to the Public Works Department prior to issuance of building permits. Therefore the Project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Consequently, no further analysis or mitigation is required.

3.14.3 Conclusion

Implementation of the above Conditions of Approval and BMPs would ensure that all impacts to water quality were less than significant; therefore, no further analysis or mitigation is required.

3.15 Land Use and Planning

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Physically divide an established community?	☐	☐	☐	◙
b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	◙

3.15.1 Environmental Setting

The City of Alameda's October 2016 Land Use Map designates the Project site as Parks & Public Open Space. The City intends to construct a recreational park at this site when the landfill operation is decommissioned and the land is deemed safe for public use. The remediation plan involves adding a foot or more of new fill over the top of the landfill as well as the decommission or burying of the methane gas extraction system. At the end of the life of the Use Permit, the developer will remove all solar equipment from the landfill. Because there will be no ground penetration at the site there will be no impacts to the remediation plan. During the preparation of its July 10, 2018 letter report to Jim Dorrance and Ron Yuen (See Appendix G for report), Burns & McDonnell estimated how long landfill gas would be generated at the Doolittle Landfill. The results of that estimate are shown on Table 3.15-1.

Table 3.15-1 Projected Landfill Emissions

Alameda Doolittle Landfill
Landfill Gas (LFG) Generation and Emissions

Year	Total LFG Generation[1]	Methane Generation[1]		Methane Emissions without LFG Collection[2]		Methane Emissions with LFG Collection[3]	
	(SCFM)	(Mg/year)	(SCFM)	(Mg/year)	(SCFM)	(Mg/year)	(SCFM)
1955	17.7	88.0	8.9	57.2	5.8	37.6	3.8
1960	59.1	293.3	29.5	190.6	19.2	125.4	12.6
1965	96.5	479.0	48.2	311.4	31.4	204.8	20.6
1970	130.3	647.0	65.2	420.6	42.4	276.7	27.9
1975	161.0	799.1	80.5	519.4	52.3	341.7	34.4
1980	188.7	936.7	94.3	608.9	61.3	400.5	40.3
1985	187.4	930.5	93.7	604.8	60.9	397.8	40.1
1990	169.6	841.9	84.8	547.2	55.1	360.0	36.3
1995	153.4	761.8	76.7	495.2	49.9	325.7	32.8
2000	138.8	689.3	69.4	448.0	45.1	294.7	29.7
2005	125.6	623.7	62.8	405.4	40.8	266.7	26.9
2010	113.7	564.3	56.8	366.8	36.9	241.3	24.3
2015	102.9	510.6	51.4	331.9	33.4	218.3	22.0
2020	93.1	462.0	46.5	300.3	30.2	197.6	19.9
2025	84.2	418.1	42.1	271.8	27.4	178.8	18.0
2030	76.2	378.3	38.1	245.9	24.8	161.7	16.3
2035	68.9	342.3	34.5	222.5	22.4	146.4	14.7
2040	62.4	309.7	31.2	201.3	20.3	132.4	13.3
2045	56.4	280.2	28.2	182.2	18.3	119.8	12.1
2050	51.1	253.6	25.5	164.8	16.6	108.4	10.9
2055	46.2	229.4	23.1	149.1	15.0	98.1	9.9
2060	41.8	207.6	20.9	134.9	13.6	88.8	8.9
2065	37.8	187.9	18.9	122.1	12.3	80.3	8.1
2070	34.2	170.0	17.1	110.5	11.1	72.7	7.3
2075	31.0	153.8	15.5	100.0	10.1	65.8	6.6
2080	28.0	139.2	14.0	90.5	9.1	59.5	6.0
2085	25.4	125.9	12.7	81.8	8.2	53.8	5.4
2090	23.0	113.9	11.5	74.1	7.5	48.7	4.9

1. EPA LandGEM V.3.02 Model Ouput using EPA arid inventory default values from EPA AP-42, Section 2.4
2. Assumes a methane oxidation factor of 0.35 and assumes no LFG collection, per 40 CFR 98, Subpart HH
3. Assumes a collection efficiency of 34.22% based on 2016 Flare Operational information

As pointed out in Burns & McDonnell's report, after a given landfill is closed, landfill gas (and associated methane) generation begins to decline. For closed arid landfills (<25 inches of annual precipitation) similar to the Doolittle Landfill, the waste decay process is extended for a long period of time due to the lack of moisture in the landfill waste mass. As shown on Figure 3.15-1, landfill gas will continue to be generated at the Doolittle Landfill well into the future and beyond the useful life of the solar generation facilities. Therefore, the proposed Project is consistent with the City's land use designation.

3.15.2 Discussion and Mitigation Measures

Land Use and Planning. a. *Would the project physically divide an established community?*

Answer: No Impact.

Discussion:

As stated above, the proposed City-owned Project site is on top of a closed Class III landfill which is not accessible to the public. The Project site is separated from the community by Doolittle Drive. Access to surrounding public access paths along the water will not be impacted by the Project. After the Use Permit has expired the solar installation will be removed to clear the way for remediation of the landfill and the development of an open space park. Therefore, implementation of the Project would not physically divide an established community. Consequently, no further analysis or mitigation is required.

Land Use and Planning. b. *Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?*

Answer: No Impact.

Discussion:

The Project site is presently zoned industrial (M-2) to accommodate the off-gassing from the landfill. Solar installations are permitted uses in the designated land use. Because the solar installation will not penetrate the ground there will be impact to the landfill cap or off-gassing. The useful life of the solar Project is approximately 25 years. At that time, AMP will remove all equipment which will allow the City to construct a park on the site as envisioned on the Land Use Map. Therefore, no further analysis or mitigation is required.

3.15.3 Conclusions

No significant effects were identified; therefore, no further analysis or mitigation is required.

3.16 Mineral Resources

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Result in the loss of availability of a known resource that would be of value to the region and the residents of the state?	☐	☐	☐	◙
b. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	◙

3.16.1 Environmental Setting

The Project site is currently zoned industrial (M-2) to accommodate the off-gassing from the landfill. It is also shown on the City's Land Use Map as Parks & Public Open Space to accommodate the construction of a recreational park once the landfill is decommissioned and the land is deemed safe for public use.

3.16.2 Discussion and Mitigation Measures

Mineral Resources. a. *Would the project result in the loss of availability of a known resource that would be of value to the region and the residents of the state?*

Answer: No Impact.

Discussion:

There are no known mineral resources in the Project area that would be of value to the region and the residents of the State. Therefore, there would be no impacts anticipated and no mitigation is required.

Mineral Resources. b. *Would the project 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?*

Answer: No Impact.

Discussion:

There are no locally important mineral resource recovery sites delineated on the applicable local general plans, specific plan or other land use plan in the Project area. Therefore, there would be no impacts anticipated and no mitigation is required.

3.16.3 Conclusion

No impacts are anticipated; therefore, no further analysis or mitigation is required.

3.17 Noise

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project result in:				
a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☐	◙
b. Generation of excessive groundbourne vibration or groundbourne noise levels?	☐	☐	☐	◙
c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	◙

3.17.1 Environmental Setting

The ambient noise level of a region is the total noise generated within the specific environment and is usually composed of sounds emanating from natural and manmade sources. Noise levels monitored in a region tend to have wide spatial and temporal variation due to the great diversity of contributing sources. This is especially true for the greater project area with its blend of residential, commercial and industrial uses as well as the location of the Oakland International Airport.

Characterization of the Project area noise levels is difficult due to the lack of actual field measurements. Very little noise measurement data are available for the Project area in general. However, typical noise levels for areas like the Project area are in the range of 50 to 55 dB(A).

Generally, the noise levels in the Project area are affected by natural and manmade sources. However, the sound levels are more strongly influenced by human rather than natural sound sources. Within the Project area, the major sources of noise include aircraft and vehicular traffic.

3.17.2 Discussion and Mitigation Measures

Noise. a. *Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?*

Answer: No Impact.

Discussion:

Section 4-10.5 of the Alameda Municipal Code includes the following restrictions related to construction noise:

b. Specific Prohibitions. The following acts, and the causing or permitting thereof, are a violation of this section:

10. Construction. Construction other than during the following hours: 7:00 a.m. to 7:00 p.m. Monday through Fridays and 8:00 a.m. to 5:00 p.m. on Saturdays. This restriction does not apply to:

(a) Construction that does not require a City permit; or

(b) Construction where the City Manager of his/her designee grants an exception upon a showing of significant financial hardship; or

(c) Emergency work to protect or restore safe conditions where immediate construction is required; or

(d) Construction by any person on his/her principal place of residence or rental property.

Construction would not occur during the restricted hours shown above. Consequently, no further analysis or mitigation is required.

Noise. b. *Would the project result in generation of excessive groundbourne vibration or groundbourne noise levels?*

Answer: No Impact.

Discussion:

Section 4-10.5 of the Alameda Municipal Code contains the following restrictions related to vibration:

8. Vibration. Operating or permitting the operation of any device that creates a vibration which is above the vibration perception threshold of an individual at or beyond the

property boundary of the source if on private property or at one hundred fifty (150) feet (forty-six [46] meters) from the source if on a public space or public right-of-way.

Construction activities associated with the Project could result in some minor amount of ground vibration. The California Department of Transportation (Caltrans) has developed a vibration manual. According to that manual, the use of small bulldozers (backhoes) and loaded trucks during construction activities could produce vibration. Depending on the level of vibration, the vibration could cause annoyance or damage structures within the Project vicinity. Caltrans has developed a screening tool to determine if vibration from construction equipment is substantial enough to impact surrounding uses. Those thresholds are presented in Tables 3.17-1 and 3.17-2.

Table 3.17-1

Vibration Damage Potential Threshold Criteria

Structural Integrety	Maximum PPV (in/sec)	
	Transient	Continuous
Historic and some older buildings	0.50	0.25
Older residential structures	0.50	0.30
New residential structures	1.00	0.50
Modern industrial and commercial structures	2.00	0.50

Table 3.17-2

Vibration Annoyance Potential Threshold Criteria

Human Response	Maximum PPV (in/sec)	
	Transient	Continuous
Barely perceptible	0.035	0.012
Distinctly perceptible	0.24	0.035
Strongly perceptible	0.90	0.10
Severely perceptible	2.00	0.40

Construction equipment, such as small bulldozers (backhoes), are repetitive sources of vibration; therefore, the continuous threshold should be used in the vibration analysis for this Project. As shown in Table 3.17-3, the ground vibration from small bulldozers and loaded trucks would not be perceptible within 150 feet of the construction activity and therefore would be in compliance with the City's Municipal Code.

Table 3.17-3

Construction Vibration Impacts

Equipment	PPVref	Distance (feet)	PPV (in/sec)
Small Bulldozer (Backhoe)	0.003	150	0.0004
Loaded Truck	0.076	150	0.0106

Therefore, there would be no impacts and no further analysis or mitigation is required.

Noise. c. *For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public use airport, would the project expose people residing or working in the project area to excessive noise levels?*

Answer: No Impact.

Discussion:

As shown on Figure 3.17-1[4], the Doolittle Landfill site is within the Airport Influence Area (AIA) of the Oakland International Airport. However, as also shown on Figure 3.17-1, the Doolittle Landfill site is not within the 60 CNEL Contour due to airport operations. Therefore, implementation of the Project would not expose people working in the Project area to excessive noise levels. Therefore, there would be no impacts and no further analysis or mitigation is required.

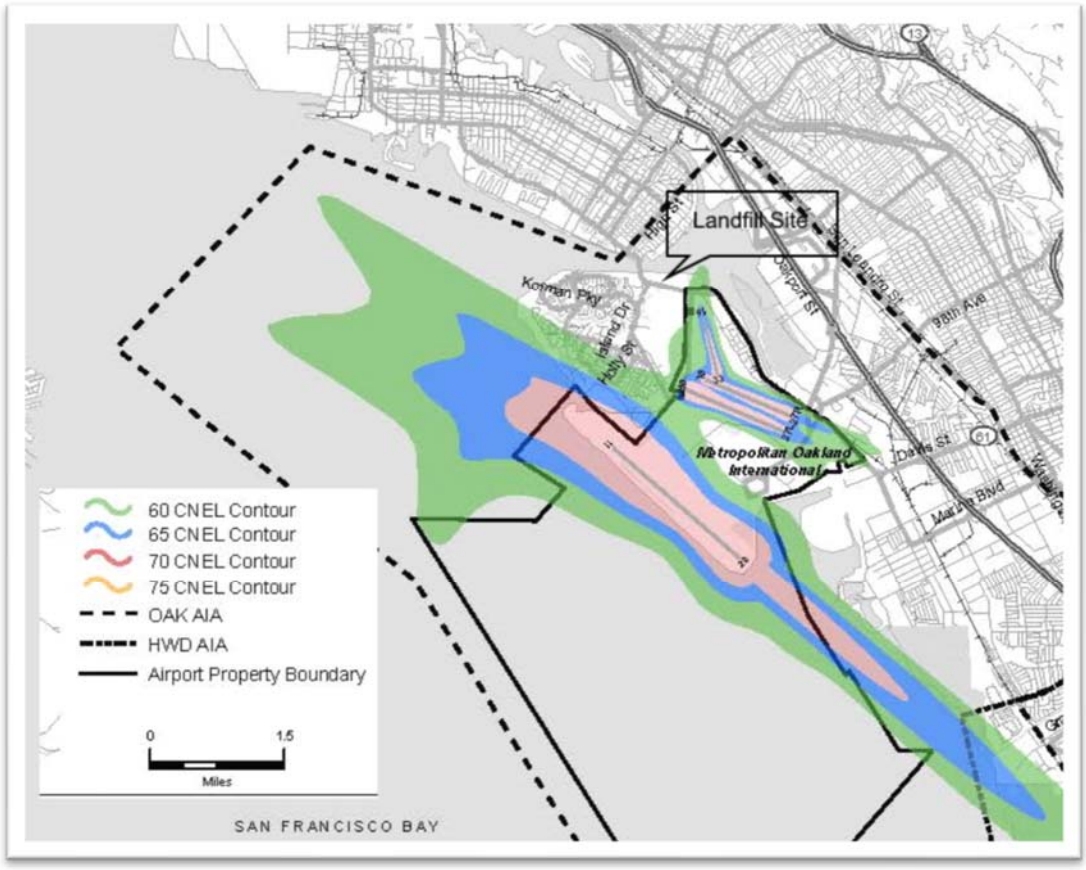

Figure 3.17-1 Noise Compatibility Zones

3.17.3 Conclusion

No impacts were identified; therefore, no further analysis or mitigation is required.

[4] Source: Figure 3.3 in the Oakland International Airport Land Use plan.

3.18 Population and Housing

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Induce substantial unplanned 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)?	☐	☐	☐	◙
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	◙

3.18.1 Environmental Setting

According to the California Department of Finance, the 2019 estimated population in Alameda was 79,316 placing it 116th in the State. According to the 2010 Census, Alameda had a housing stock of 32,166 *(www.usa.com, 07/16/2019).*

3.18.2 Discussion and Mitigation Measures

Population and Housing. a. *Would the project induce substantial unplanned 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)?*

Answer**: **No Impact.

Discussion:

The Project includes the installation of solar photovoltaic systems at the Doolittle Landfill site. It does not include construction of homes, businesses or other infrastructure that would induce unplanned population growth. Therefore, no further analysis or mitigation is required.

Population and Housing. b. *Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?*

Answer: No Impact.

Discussion:

The Project facilities would be constructed on City-owned land that does not include housing and therefore would not displace people or housing. Consequently, no further analysis or mitigation is required.

3.18.3 Conclusion

No impacts were identified; therefore, no further analysis or mitigation is required.

3.19 Public Services

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. 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:				
1. Fire Protection?	☐	☐	☐	◙
2. Police Protection?	☐	☐	☐	◙
3. Schools?	☐	☐	☐	◙
4. Parks?	☐	☐	☐	◙
5. Other Public Facilities?	☐	☐	☐	◙

3.19.1 Environmental Setting

Several entities provide public services to residents in the Project area. They include:

- Police Protection: City of Alameda Police Department
- Fire Protection: City of Alameda Fire Department
- Schools: Alameda City Unified School District
- Parks: East Bay Regional Parks District
  Alameda Recreation and Parks Department

3.19.2 Discussion and Mitigation Measures

Public Services. a.1. *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* ***fire protection services****?*

Answer: No Impact.

Discussion:

Implementation of the Project would not result in the need for additional fire protection services because the Project involves a negligible expansion of operations for which fire protection

services would be required. Therefore, there would be no impacts anticipated and no mitigation is required.

Public Services. a.2. *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* ***police protection services****?*

Answer: No Impact.

Discussion:

Implementation of the Project would not result in the need for additional police protection services because the Project involves a negligible expansion of operations for which police services would be required. Additional police protection services (e.g., equipment, sworn officers) would not be required. Therefore, there would be no impacts anticipated and no mitigation is required.

Public Services. a.3. *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 schools****?*

Answer: No Impact.

Discussion:

Implementation of the Project would not result in a need for additional schools because the Project does not include the development of residential uses for which school services would be required. Therefore, there would be no impacts anticipated and no mitigation is required.

Public Services. a.4. *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 parks****?*

Answer: No Impact.

Discussion:

Implementation of the Project would not result in a need for additional park facilities because the Project does not include the development of uses for which public parks would be required. Therefore, there would be no impacts anticipated and no mitigation is required.

Public Services. a.5. *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* ***other public facilities****?*

Answer: No Impact.

Discussion:

Implementation of the Project would not result in a need for expansions to other public facilities. Therefore, there would be no impacts anticipated and no mitigation is required.

3.19.3 Conclusion

There were no significant impacts identified; therefore, no further analysis or mitigation is required.

3.20 Recreation

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	◙
b. Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☐	◙

3.20.1 Environmental Setting

There are several parks, golf courses and water-oriented recreational facilities in the greater Project area.

3.20.2 Discussion and Mitigation Measures

Recreation. 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?*

Answer: No Impact.

Discussion:

The proposed Project would not increase the use or demand for park or recreational facilities because the Project does not include the development of uses that would place demands on these facilities, such as residential dwellings or office employment. Therefore, there would be no impacts anticipated and no further analysis or mitigation is required.

Recreation. b. *Would the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?*

Answer: No Impact.

Discussion:

The Project does not include recreational facilities. Therefore, there would be no impacts anticipated and no further analysis or mitigation is required.

3.20.3 Conclusion

No significant impacts were identified; therefore, no further analysis or mitigation is required.

3.21 Transportation

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☐	◙
b. For a land use project, would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)(1)?	☐	☐	☐	◙
c. For a transportation project, would the project conflict with CEQA Guidelines section 15064.3, subdivision (b)(3)?	☐	☐	☐	◙
d. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	◙
e. Result in inadequate emergency access?	☐	☐	☐	◙

3.21.1 Environmental Setting

Regional access to the Project site is via Highway 61.

Caltrans' latest traffic counts (2017) for this highway near the Project area are shown in Table 3.21-1.

Table 3.21-1
Selected Traffic Counts by Caltrans
(2017)

Location	Southbound or Westbound			Northbound or Eastbound		
	Peak Hour	Peak Month	AADT[1]	Peak Hour	Peak Month	AADT[1]
Highway 61						
Island Drive	2,200	21,200	20,700	4,500	44,500	43,600
San Leandro Bridge	4,500	44,500	43,600	4,500	44,500	43,600

[1] AADT = Average Annual Daily Traffic
Source: Caltrans 2019, www.dot.ca.gov (7/16/2019)

3.21.2 Discussion and Mitigation Measures

Transportation/Traffic. a. *Would the project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?*

Answer: No Impact.

Discussion:

The Project consists of solar photovoltaic installation at city-owned property at the Doolittle Landfill site. Therefore, the Project would not conflict with a plan, ordinance or policy addressing the circulation system. Consequently, no further analysis or mitigation is required.

Transportation/Traffic. b. *For a land use project, would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)(1)?*

Answer: No Impact.

Discussion:

The Project is not a land use project; therefore, this potential impact category would not apply to the Project. Consequently, there would be no impacts anticipated and no further analysis or mitigation is required.

Transportation/Traffic. c. *For a transportation project, would the project conflict with CEQA Guidelines section 15064.3, subdivision (b)(3)?*

Answer: No Impact.

Discussion:

The Project is not a transportation project; therefore, this potential impact category would not apply to the Project. Consequently, there would be no impacts anticipated and no further analysis or mitigation is required.

Transportation/Traffic. d. *Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?*

Answer: No Impact.

Discussion:

Implementation of the Project would not substantially increase hazards due to a geometric design feature or incompatible uses. Therefore, there would be no impacts anticipated and no further analysis or mitigation is required.

Transportation/Traffic. e. *Would the project result in inadequate emergency access?*

Answer: No Impact.

Discussion:

Implementation of the Project would not result in inadequate emergency access. Therefore, there would be no impacts anticipated and no further analysis or mitigation is required.

3.23.3 Conclusion

No impacts were identified; therefore, no further analysis or mitigation is required.

3.22 Tribal Cultural Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code §21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is:				
1) Listed or eligible for listing on the California Register of Historical Resources, or on a local register of historical resources as defined in Public Resources Code §5020.1(k), or	☐	☐	☐	◙
2) A resource determined by a lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code §5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code § 5024.1, the lead agency shall consider the significance of the resources to a California Native American tribe.	☐	☐	☐	◙

3.22.1 Environmental Setting

NAHC Sacred Lands File Search

On June 28, 2019, K.S. Dunbar & Associates, Inc., sent a request to the Native American Heritage Commission for a search of its Sacred Lands file. Subsequently, on July 1, 2019, Gayle Totton, B.S., M.A., Ph.D., Associate Governmental Program Analyst sent an email response to Keith S. Dunbar in which she stated:

> A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced Project. The results were negative. The absence of specific site information in the SLF does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.
>
> Attached is a list of Native American tribes who may also have knowledge of cultural resources in the Project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed Project area. I suggest you contact all of those

indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the Project information has been received.

AB 52 Consultation

On June 28, 2019, K.S. Dunbar & Associates, Inc., sent AB 52 Notifications to the following based on a list of tribes that had requested notification by the City of Alameda:

Valentin Lopez, Chairperson
Amah Mutsun Tribal Band
P.O. Box 5272
Galt, California 95632

Irenne Zwierlein, Chairperson
Amah Mutsun Tribal Band of Mission San Juan Bautista
789 Canada Road
Woodside, California 94062

Ann Marie Sayers, Chairperson
Indian Canyon Mutsun Band of Costanoan
P.O. Box 28
Hollister, California 95024

Charlene Nijmeh, Chairperson
Muwekma Ohlone Indian Tribe of the San Francisco Bay Area
20885 Redwood Road, Suite 232
Castro Valley, California 94546

Katherine Erolinda Perez, Chairperson
North Valley Yokuts Tribe
P.O. Box 717
Linden, California 95236

Andrew Galvan
The Ohlone Indian Tribe
P.O. Box 3388
Fremont, California 94539

To date, none of these tribes have responded to the Notification or asked for formal consultation.

3.22.2 Discussion and Mitigation Measures

Tribal Cultural Resources. 1). *Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code §21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is listed or eligible for listing on the California Register of Historical Resources, or on a local register of historical resources as defined in Public Resources Code §5020.1(k).*

Answer: No Impact.

Discussion:

As discussed in Sections 4 and 5 of the Anza report in Appendix F, based on record searches at the Native American Heritage Commission and the California Historic Resources Information System, field surveys and Native American consultation, there are no tribal cultural resources within the Project area. The Project shall comply with the standard condition of approval as described in Section 3.9.2 of this document. Therefore, no further analysis or mitigation is required.

Tribal Cultural Resources. 2). *Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code §21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in Public Resources Code §5024.1(c), and considering the significance of the resource to a California Native American tribe.*

Answer: No Impact.

Discussion:

As discussed in Sections 4 and 5 of the Anza report in Appendix F, based on record searches at the Native American Heritage Commission and the California Historic Resources Information System, field surveys and Native American consultation, there are no tribal cultural resources within the Project area. The Project shall comply with the standard condition of approval as described in Section 3.9.2 of this document. Therefore, no further analysis or mitigation is required.

3.22.3 Conclusion

No impacts were identified; therefore, no further analysis or mitigation is required.

3.23 Utilities and Service Systems

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas or telecommunication facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☐	◙
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☐	◙
c. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	◙
d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☐	◙
e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☐	◙

3.23.1 Environmental Setting

Several entities provide utilities and service systems within the Project area including:

- Water — East Bay Municipal Utility District
- Wastewater — City of Alameda/East Bay Municipal Utility District
- Electricity — Alameda Municipal Power
- Natural Gas — Pacific Gas & Electric

3.23.2 Discussion and Mitigation Measures

Utilities and Service Systems. a. *Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas or telecommunication facilities, the construction or relocation of which could cause significant environmental effects?*

Answer: No Impact.

Discussion:

The Project includes the construction and operation of a solar photovoltaic system at a city-owned site at the Doolittle Landfill. It will not result in the relocation or construction of new or expanded services. The connections to the local electrical grid are immediately adjacent to the Project site. The local grid has the capacity to accept the additional electricity generated by the Project. Therefore, there would be no impacts and no further analysis or mitigation is required.

Utilities and Service Systems. b. *Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?*

Answer: No Impact.

Discussion:

The Project will require a minimal amount of water to periodically clean the solar panels. However, the City's existing water supplies are adequate to provide this service. Therefore, there would be no impacts and no further analysis or mitigation is required.

Utilities and Service Systems. c. *Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?*

Answer: No Impact.

Discussion:

The Project will not require wastewater service. Therefore, there would be no impacts and no further analysis or mitigation is required.

Utilities and Service Systems. d. *Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?*

Answer: No Impact.

Discussion:

The Project will not generate solid waste. Therefore, there would be no impacts and no further analysis or mitigation is required.

Utilities and Service Systems. e. *Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?*

Answer: No Impact.

Discussion:

The Project would comply with all federal, state and local regulations related to solid waste. Therefore, there would be no impacts and no further analysis or mitigation is required.

3.23.3 Conclusion

No impacts were identified; therefore, no further analysis or mitigation is required.

3.24 Wildfire

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a. Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	◙
b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☐	◙
c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risks or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	◙
d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	◙

3.24.1 Environmental Setting

Data provided by Calfire indicate that the Project area is within a Local Area Responsibility High Fire Severity Zone.

3.24.2 Discussion and Mitigation Measures

Wildfire. a. *Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?*

Answer: No Impact.

Discussion:

As discussed in Section 3.21, Transportation, the Project would not impair an adopted emergency response plan. Therefore, no further analysis or mitigation is required.

Wildfire. b. *Would the project due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?*

Answer: No Impact.

Discussion:

The Project site is relatively flat with no risk of wildland fires. Implementation of the Project would not exacerbate wildfire risks due to slope, prevailing winds and other factors. Therefore, there would be no impacts and no further analysis or mitigation is required.

Wildfire. c. *Would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risks or that may result in temporary or ongoing impacts to the environment?*

Answer: No Impact.

Discussion:

The Project would be connected to the local electrical grid. However, the connections would be made immediately adjacent to the Project site and be underground. Therefore, there would be no impacts and no further analysis or mitigation is required.

Wildfire. d. *Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?*

Answer: No Impact.

Discussion:

The Project area is not subject to wildland fires. Therefore, there would be no impacts and no further analysis or mitigation is required.

3.24.3 Conclusion

No impacts were identified; therefore, no further analysis or mitigation is required.

3.25 Mandatory Findings of Significance

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Have the potential to substantially 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, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	◙	☐	☐
b. Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	☐	◙	☐	☐
c. Have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	◙	☐

3.25.1 Discussion and Mitigation Measures

Mandatory Findings of Significance. a. *Would the project have the potential to substantially 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, substantially 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?*

Answer: Less than Significant with Mitigation Incorporated.

Discussion:

Compliance with the mitigation measure, **MM-BIO-1**, and best practices will ensure that implementation of the proposed Project does not have the potential to significantly 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.

Mandatory Findings of Significance. b. *Would 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.)*

Answer: Less than Significant with Mitigation Incorporated.

Discussion:

As discussed above in Sections 3.6 through 3.24 implementation of the proposed Project would not result in any impact that could not be reduced to a level of less than significant by implementation of appropriate mitigation measures. In addition, the City of Alameda is not aware of any projects that would contribute cumulatively to those associated with the Project.

Mandatory Findings of Significance. c. *Would the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?*

Answer: Less than Significant.

Discussion:

Compliance with construction best practices and standard conditions of approval will ensure that implementation of the proposed Project does not have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly.

3.25.2 Conclusion

All potential significant impacts associated with the proposed Project can be mitigated to a less than significant level. Therefore, no further environmental review or mitigation is required.

The City of Alameda, having reviewed the Initial Study of this proposed project, having reviewed the written comments received prior to the public meeting of the Planning Commission, having reviewed the recommendations of its staff and consultants, does hereby find and declare that the proposed project will not have a significant effect on the environment. A brief statement of the reasons supporting the City of Alameda's findings are as follows:

The Initial Study concluded that all potentially significant impacts can be reduced to a level of less than significant by implementation of the Mitigation Measure No. **MM-BIO-1** in the Mitigation Monitoring and Reporting Program developed for this Project.

MM-BIO-1:

If construction occurs between February 1st and August 31st, a pre-construction clearance survey for nesting birds shall be conducted within three (3) days of the start of any vegetation removal or ground disturbing activities to ensure that no nesting birds will be disturbed during construction. The biologist conducting the clearance survey should document a negative survey with a brief letter report indicating that no impacts to active avian nests will occur. If an active avian nest is discovered during the pre-construction clearance survey, construction activities should stay outside of a no-disturbance buffer. The size of the no-disturbance buffer will be determined by the wildlife biologist and will depend on the level of noise and/or surrounding anthropogenic disturbances, line of sight between the nest and the construction activity, type and duration of construction activity, ambient noise, species habituation, and topographical barriers. These factors will be evaluated on a case-by-case basis when developing buffer distances. Limits of construction to avoid an active nest will be established in the field with flagging, fencing, or other appropriate barriers; and construction personnel will be instructed on the sensitivity of nest areas. A biological monitor should be present to delineate the boundaries of the buffer area and to monitor the active nest to ensure that nesting behavior is not adversely affected by the construction activity. Once the young have fledged and left the nest, or the nest otherwise becomes inactive under natural conditions, construction activities within the buffer area can occur.

4 Persons and Organizations Consulted

On February 6, 2020, the City of Alameda mailed copies of the Notice of Intent to Adopt a Mitigated Negative Declaration with a link to the City's website where the Initial Study and Mitigated Negative Declaration could be electronically downloaded to the following:

4.1 Federal Agencies

Mike Fritz
Assistant Regional Director of Ecological Services
U.S. Fish & Wildlife Service
2800 Cottage Way, Room W-2606
Sacramento, California 95825-1888

Regulatory Division
U.S. Army Corps of Engineers – San Francisco District
450 Golden Gate Avenue, 4th Floor
San Francisco, California 94102-3404

Amy Dutschke, Regional Director
Pacific Region Regional Office
Bureau of Indian Affairs
U.S. Department of the Interior
2800 Cottage Way, Room W-2820
Sacramento, California 94825-1885

Camille Garibaldi
Environmental Protection Specialist
San Francisco Airports District Office
Western Pacific Region
Federal Aviation Administration
1000 Marina Blvd., Suite 220
Brisbane, CA 94005-1835

4.2 State Agencies

Scott Morgan, Director
State Clearinghouse
Governor's Office of Planning and Research
Post Office Box 3044
Sacramento, California 95812-3044

Gregg Erikson, Regional Manager
Bay-Delta Region (Region 3)
California Department of Fish and Wildlife
2825 Cordelia Road, Suite 100
Fairfield, California 94534

Michael Montgomery, Executive Officer II
California Regional Water Quality Control Board, San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, California 94612

Julianne Polanco
State Historic Preservation Officer
Office of Historic Preservation
California Department of Parks and Recreation
1725 23rd Street, Suite 100
Sacramento, California 95816-7100

Wade Crowfoot, Secretary
California Natural Resources Agency
1416 Ninth Street, Suite 1311
Sacramento, California 95814

Christina Snider, Executive Secretary
California Native American Heritage Commission
1550 Harbor Boulevard, Suite 100
West Sacramento, California 95691-3830

Wes Minderman, Branch Chief
Engineering Support Branch
Department of Resources Recycling and Recovery (CalRecycle)
Post Office Box 4025
Sacramento, California 95812-4025

4.3 Regional Agencies

Jack Broadbent
Executive Officer/Air Pollution Control Officer
Bay Area Air Quality Management District
375 Beale Street, Suite 600
San Francisco, California 94105

Larry Goldzband, Executive Director
San Francisco Bay Conservation and Development Commission
50 California Street
San Francisco, California 94111

4.4 County Agencies

Albert Lopez, Planning Director
Alameda County Planning Department
Alameda County Airport Land Use Commission
224 W. Winton Avenue, Room 111
Hayward, California 94544

Ronal Browder, Director
Department of Environmental Health
County of Alameda
1131 Harbor Bay Parkway, Suite 200
Alameda, California 94502-6567

4.5 Interested Entities

Bryant L. Francis, C.M.
Director of Aviation
Port of Oakland
530 Water Street
Oakland, California 94607

Valentin Lopez, Chairperson
Amah Mutsun Tribal Band
P.O. Box 5272
Galt, California 95632

Irenne Zwierlein, Chairperson
Amah Mutsun Tribal Band of Mission San Juan Bautista
789 Canada Road
Woodside, California 94062

Ann Marie Sayers, Chairperson
Indian Canyon Mutsun Band of Costanoan
P.O. Box 28
Hollister, California 95024

Charlene Nijmeh, Chairperson
Muwekma Ohlone Indian Tribe of the San Francisco Bay Area
20885 Redwood Road, Suite 232
Castro Valley, California 94546

Katherine Erolinda Perez, Chairperson
North Valley Yokuts Tribe
P.O. Box 717
Linden, California 95236

Andrew Galvan
The Ohlone Indian Tribe
P.O. Box 3388
Fremont, California 94539

Costanoan Rumsen
Carmel Tribe
Attn: Tony Cerda, Chairperson
244 East 1st Street,
Pomona, CA 91766

5 Report Authors/Contributors

5.1 Report Authors

This Initial Study and Mitigated Negative Declaration was prepared under contract to the Northern California Power Agency by:

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ELMT Consulting

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5.2 Report Contributors

Northern California Power Agency

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Alameda Municipal Power

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Vidhi Chawla, Assistant General Manager, Energy Resources Planning
Alan Harbottle, Energy Resources Planning

City of Alameda Planning, Building, and Transportation Department

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6 References

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