



Northern California Power Agency
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Initial Study and Mitigated Negative Declaration NCPA Solar Project 1 Healdsburg Water Reclamation Facility Site



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Acronyms and Abbreviations

AADT	annual average daily traffic
AAM	annual arithmetic mean
ADOE	Archaeological Determinations of Eligibility
AGM	annual geometric mean
AQMP	Air Quality Management Plan
ARB	Air Resources Board
BAQMD	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
CH ₄	methane
CNDDDB	California Natural Diversity Data Base
CNEL	community noise equivalent level
CNPS	California Native Plant Society
CO	carbon monoxide
CO ₂	carbon dioxide
CRWQCB, NCR	California Regional Water Quality Control Board, North Coast 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
EMP	Energy Management Plan
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
MW _{dc}	megawatts measured as direct current
MWh	megawatt hours
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission

NDDB	Natural Diversity Data Base
NO	nitrogen oxide
NO ₂	nitrogen dioxide
NO _x	oxides of nitrogen
NPL	National Priorities List
NRCS	Natural Resources Conservation Service
NSCAPCD	Northern Sonoma County Air Pollution Control District
O ₃	ozone
OES	Office of Emergency Services
OHP	Office of Historic Preservation
Pb	lead
Pga	peak ground acceleration
PM	particulate matter
PM ₁₀	particulate matter (less than 10 microns in diameter)
PM _{2.5}	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)
Sa	spectral acceleration
SAAQS	State Ambient Air Quality Standards
SCAB	South Coast Air Basin
SCAQMD	South Coast Air Quality Management District
SIP	State Implementation Plan
SMAQMD	Sacramento Metropolitan Air Quality Management District
SO ₂	sulfur dioxide
SO _x	oxides of sulfur
SRA	Source Receptor Area

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
$\mu\text{g}/\text{m}^3$	micrograms per cubic meter



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Executive Summary

Initial Study and Mitigated Negative Declaration

NCPA Solar Project 1

Healdsburg Water Reclamation Facility Site



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Executive Summary

Overview of the Proposed Project

The objective of the NCPA Solar Project 1 is to develop a fleet of Photovoltaic (PV) Solar Power Plants throughout participating member service territories to be under construction by the end of 2019. The plants will be managed by the Northern California Power Agency (NCPA) as a single project to be owned and operated by a third-party provider through a power purchase agreement (PPA). After the initial 5 – 7 years of operation, NCPA plans to purchase the plants.

The project will be executed in three phases:

- ❖ Phase 1 – Determine member interest and requirements and identify potential sites.
- ❖ Phase 2 – Site selection and screening, plan development and selection of a third-party provider to fulfill design, construction and operation through a PPA.
- ❖ Phase 3 – Construction and operation per the PPA.

NCPA has now completed Phase 1 and the site selection and screening portion of Phase 2. The City of Healdsburg selected a potential site at the Healdsburg Water Reclamation Facility (WRF) for further analysis as shown below:

Site	Location		Developable Area (acres)	Estimated Capacity (MW _{dc})
	Latitude, Longitude	Section, Township, Range		
Healdsburg WRF	38°35'00.03" N, 122°51'45.37" W	Sec 5, T 9 N, R 9 W, MDB&M	8.13	3.62

The Project site is located within a 36-acre water reclamation facility site that is situated between Foreman Lane to the north and Cohn Road to the south (Figure ES-1). The proposed technology type for the solar project is floating arrays, whereby the panels would be mounted to pontoons that are anchored to ballasts located outside the ponds. As shown on Figure ES-2, the site would accommodate three arrays totaling 8.13 acres. The total installed capacity would be approximately 3.62 MW_{dc}.

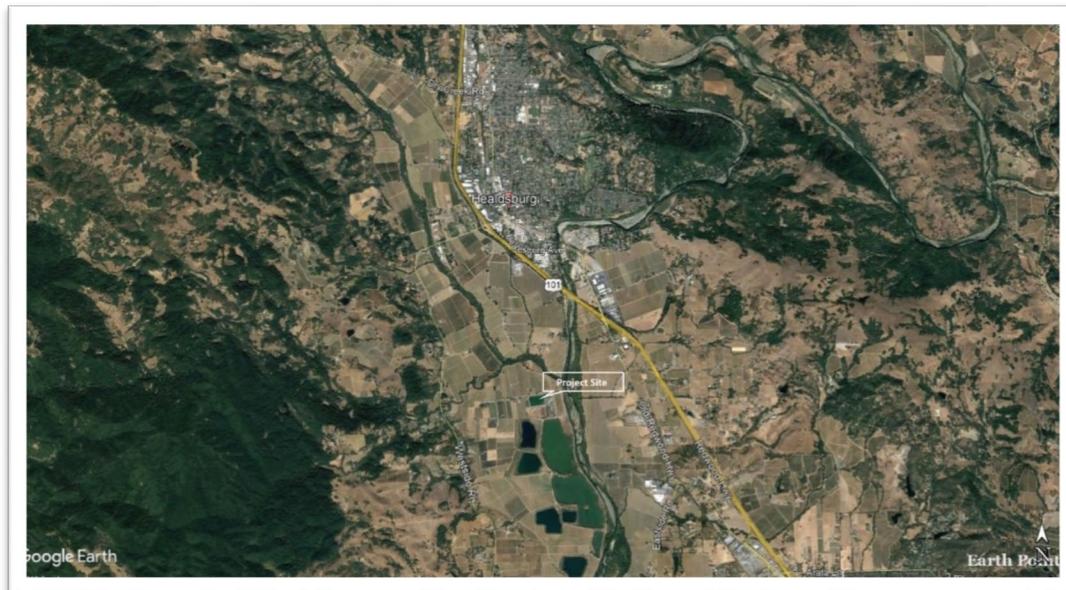


Figure ES-1 Healdsburg Water Reclamation Facility Site Location

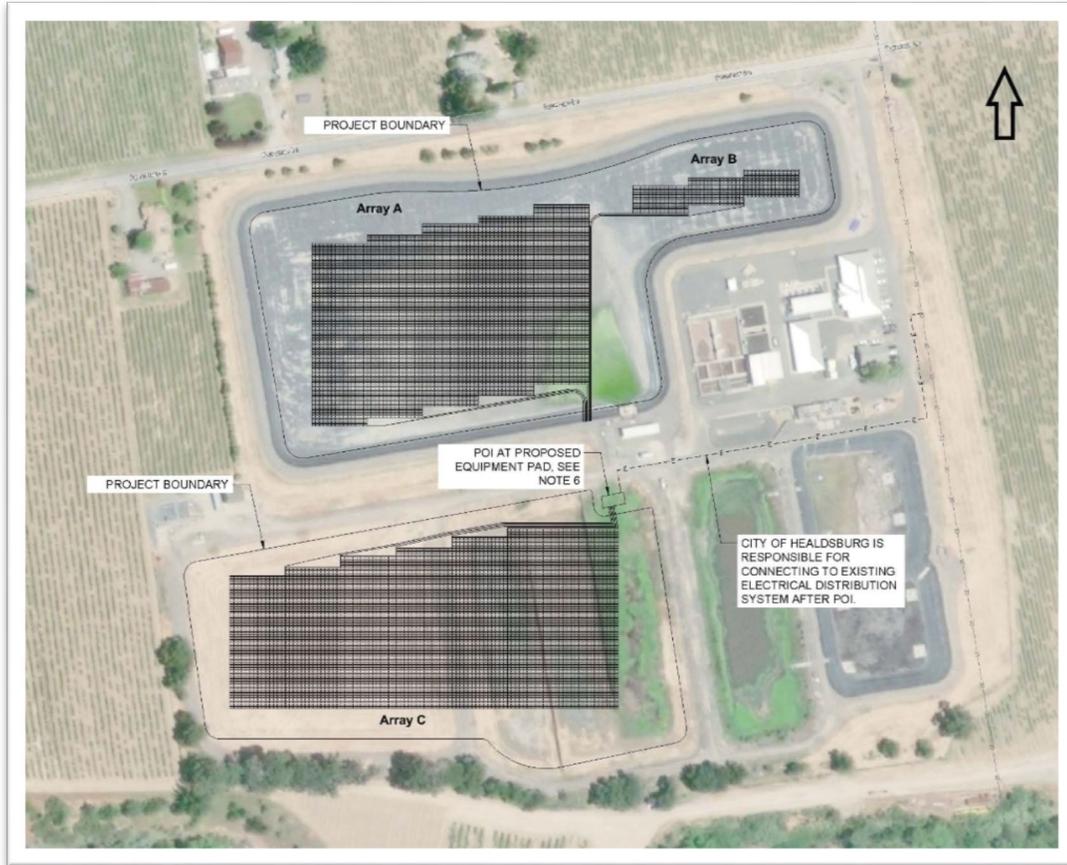


Figure ES-1 Proposed Solar Array Locations

Impacts and Mitigation Measures

Table ES-1 identifies each potential significant effect, Standard Construction Practices/Design Features, and proposed mitigation measures that would reduce or avoid that effect. Proposed mitigation measures are NCPA Staff's and its consultant's recommendations to reduce potential impacts associated with implementation of the proposed Project. Should NCPA's Commission adopt the Mitigation Monitoring and Reporting Program (Appendix F in the IS&MND) 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.
Standard Construction Practices/Design Features	NCPA will include the following mitigation measures in its contract documents for this project.
Mitigation Measures:	<ul style="list-style-type: none"> ❖ 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

	<p>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.</p> <p>It should be noted that the City of Healdsburg will be performing work within the proposed Project footprint prior to the implementation of the solar project. If disturbances within the Project footprint continue to occur after the City completes its work and before the solar project starts, a pre-construction nesting bird clearance survey will not be required due to the decreased potential for nesting to occur. However, if there is a gap between projects, especially during the breeding season, a pre-construction survey will be required prior to the initiation of the proposed solar project.</p>
Impact After Mitigation:	Less than significant impact
Environmental Factor:	Cultural Resources
Potential Impact:	Possible inadvertent discoveries of cultural resources or human remains during excavation activities.
Standard Construction Practices/Design Features	NCPA will include the following mitigation measures in its contract documents for this project.
Mitigation Measures:	<ul style="list-style-type: none"> ❖ In the unlikely event that potentially significant archaeological materials are encountered during construction activities, all work shall be halted in the vicinity of the archaeological discovery until a qualified archaeologist can visit the site of discovery, assess the significance of the archaeological resource, and provide proper management recommendations. If the discovery proves to be significant, additional work, such as data recovery excavation, may be warranted. The treatment and disposition of cultural material that might be discovered during excavation shall be in accordance with applicable laws and regulations. ❖ All sacred items, should they be encountered within the Project sites, shall be avoided and preserved as the preferred mitigation, if feasible. All cultural materials that are collected during excavation and other earth disturbing activities on the Project sites, with the exception of sacred items, burial goods and human remains which will be addressed in any required Treatment Agreement, shall be tribally curated according to the current repository standards. The collections and associated records shall be transferred, including title, to the closest tribe to the Project site. ❖ In the event of an accidental discovery or recognition of any human remains, the County Coroner shall be notified and construction activities at the affected work site shall be halted. If the coroner determines the remains to be Native American: (1) the coroner shall contact the Native American Heritage Commission (NAHC) within 24-hours, and (2) the NAHC shall identify the person or persons it believes to be the most likely descended from the deceased Native American. The treatment and disposition of human remains that might be discovered during excavation shall be in accordance with applicable laws and regulations.
Impact After Mitigation:	Less than significant impact
Environmental Factor	Geology and Soils
Potential Impact	Possible inadvertent discoveries of paleontological resources during excavation activities.
Standard Construction Practices/Design Features	NCPA will include the following mitigation measures in its contract documents for this project.
Mitigation Measures	<ul style="list-style-type: none"> ❖ In the unlikely event that potentially significant paleontological materials (e.g., fossils) are encountered during construction of the project, all work shall be halted 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. If the discovery proves to be significant, additional work, such as data recovery excavation, may be warranted. The treatment and disposition of paleontological material that might be discovered during excavation shall be in accordance with applicable laws and regulations.
Environmental Factor	Hazards and Hazardous Materials
Potential Impact	During construction, the contractor would utilize equipment that uses petroleum-based fuels and lubricants, which are subject to both leakage from engine blocks and containers, or spillage during refueling and lubrication operations
Standard Construction Practices/Design Features	<p>NCPA's contract documents for this project will include the following:</p> <p>During project construction, the construction contractor shall implement the following measures to address the potential environmental constraints associated with the presence of hazardous materials at the project site to the satisfaction of NCPA:</p>

	<ul style="list-style-type: none"> ❖ The contractor shall prepare a Health and Safety Plan in compliance with the requirements of Chapter 6.95, Division 20 of the Health and Safety Code (§25500 – 25532). The plan shall include measures to be taken in the event of an accidental spill. ❖ The contractor shall enforce strict on-site handling rules to keep construction and maintenance materials out of receiving waters and storm drains. In addition, the contractor shall store all reserve fuel supplies only within the confines of designated construction staging areas; refuel equipment only with the designated construction staging areas; and regularly inspect all construction equipment for leaks. ❖ The construction staging area shall be designed to contain contaminants such as oil, grease, and fuel products to ensure that they do not drain towards receiving waters or storm drain inlets.
Mitigation Measures	No additional mitigation is required.
Impact After Mitigation	Less than significant impact.

Areas of Controversy

There are no areas of controversy associated with the NCPA Solar Project 1 – Healdsburg Water Reclamation Facility site.

Issues to be Resolved

There are no issues to be resolved associated with the NCPA Solar Project 1 – Healdsburg Water Reclamation Facility site.

Document Availability and Contact Personnel

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

Northern California Power Agency
651 Commerce Drive
Roseville, California 95678

City of Healdsburg Electric, Water and Wastewater Department
401 Grove Street
Healdsburg, California 95448

and can be downloaded at:

<http://www.ncpa.com/wp-content/uploads/2019/08/Healdsburg-ISMND.pdf>.

All comments regarding the Project or environmental documents should be mailed or emailed to:

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June 2019



1 Introduction

1.1 Introduction

The following Initial Study addresses the environmental impacts associated with the NCPA Solar 1 Project – Healdsburg Water Reclamation Facility site (Project) being implemented by the Northern California Power Agency (NCPA) (Figure 1.1-1). This Initial Study has been prepared in accordance with the *California Environmental Quality Act of 1970*, as amended, (CEQA), the *State CEQA Guidelines*, and NCPA's *Local Guidelines for Implementing the California Environmental Quality Act*, as amended. NCPA is the Lead Agency and the City of Healdsburg is a Responsible Agency for the purposes of CEQA for this project.

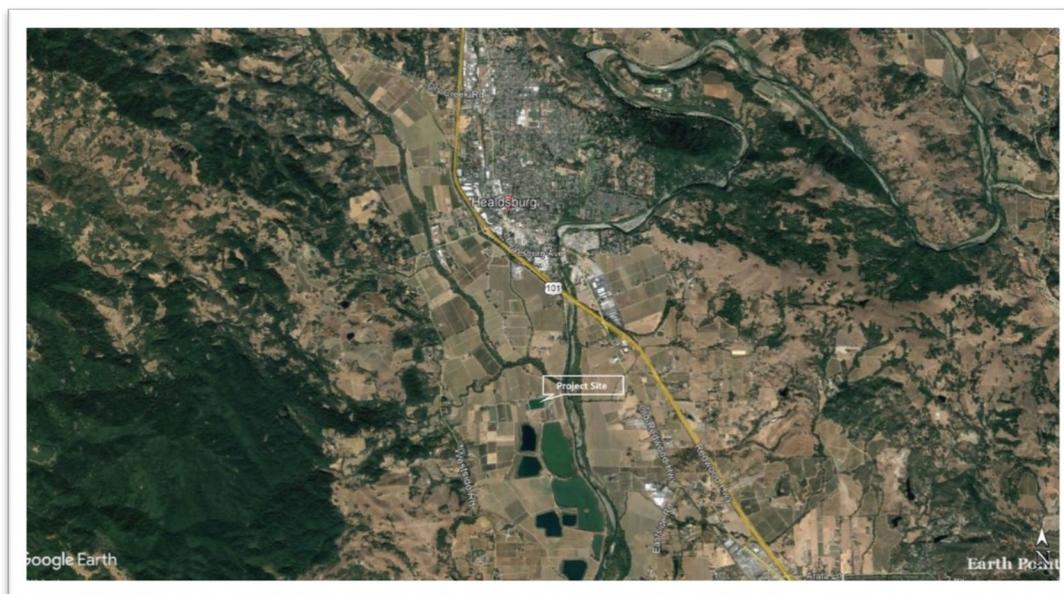


Figure 1.1-1 NCPA Solar Project 1 – Healdsburg Water Reclamation Facility Location

1.2 Project Summary

The objective of the NCPA Solar Project 1 is to develop a fleet of Photovoltaic (PV) Solar Power Plants throughout participating member service territories with construction to be started by the end of 2019. The plants will be managed by NCPA as a single project to be owned and operated by a third-party provider through a power purchase agreement (PPA). After the initial 5 – 7 years of operation, NCPA plans to purchase the plants.

The project will be executed in three phases:

- ❖ Phase 1 – Determine member interest and requirements and identify potential sites.
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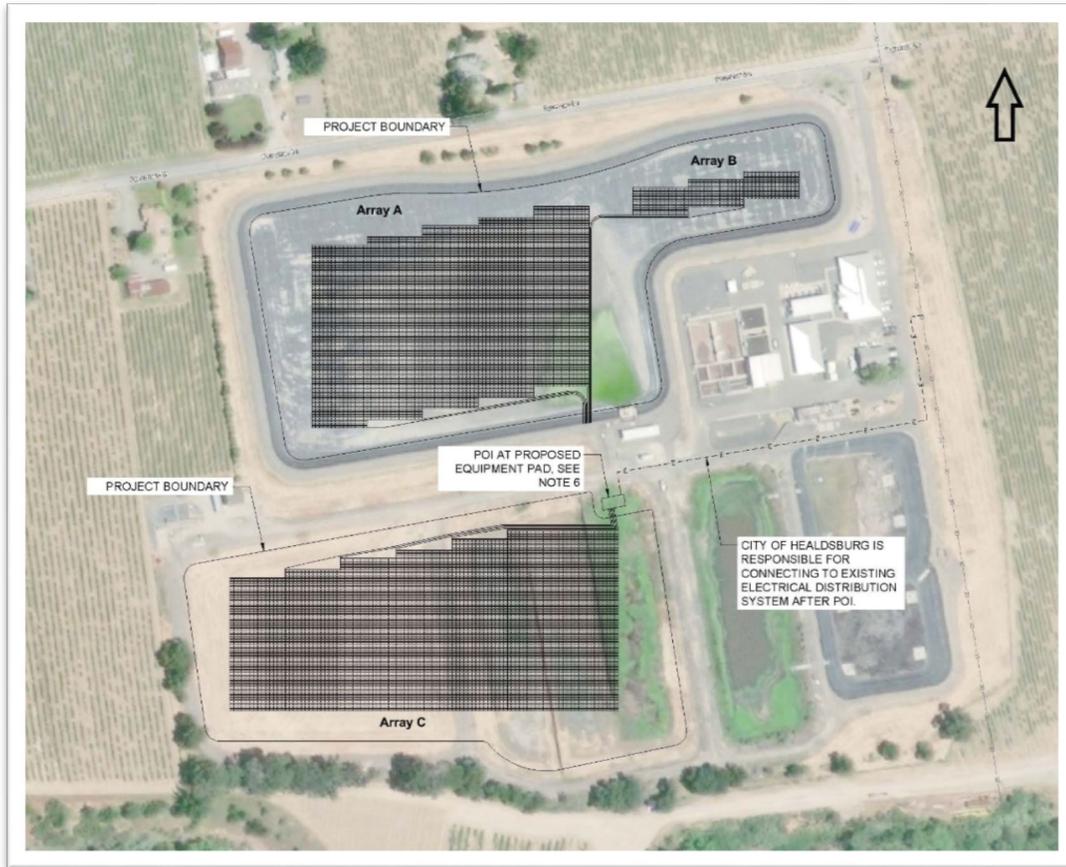


Figure 1.2-2 Proposed Solar Array Locations

1.3 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 and eliminated. Therefore, to fulfill the purpose and intent of CEQA, NCPA, as the lead agency, has caused 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.

1.3.1 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 EIR's; and*
- 7) *Determine whether a previously prepared EIR could be used with the project.*

1.3.2 Contents of an Initial Study

The contents of an Initial Study are defined 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.*

1.3.3 Intended Uses of the Initial Study

The Initial Study will be presented to NCPA's Commission for its use in implementing the California Environmental Quality Act (CEQA). The basic purposes of CEQA as outlined in §15002(a) of the CEQA Guidelines are to:

- 1) *Inform governmental decision-makers and the public about the potential, significant environmental effects of proposed activities.*
- 2) *Identify the ways that environmental damage can be avoided or significantly reduced.*
- 3) *Prevent significant avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible.*
- 4) *Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.*

As pointed out above, one purpose of an Initial Study is:

Provide the Lead Agency with information to use as the basis for deciding whether to prepare an Environmental Impact Report (EIR) or Negative Declaration.

1.3.4 Lead Agency Decision-Making Process

The Lead Agency (i.e., NCPA) would base its decision on the Project on the findings contained within this Initial Study plus the professional knowledge and judgment of its staff and consultants. During the review process, mitigation measures contained in this document should be evaluated with respect to their effectiveness in reducing impacts to a level of insignificance. Public input, including responsible and trustee agencies, should also be requested and evaluated during the review process.

The approval process for the proposed Project will begin with NCPA's Commission making a decision to prepare a Negative Declaration or an Environmental Impact Report for the Project. Should NCPA decide to prepare a Negative Declaration, based on this Initial Study, it would also determine whether or not it would approve of the Project in accordance with §15074 of the State CEQA Guidelines. Should NCPA decide to prepare an Environmental Impact Report for the Project, it would also have to make findings in accordance with §15091 of the State CEQA Guidelines and to certify the Final Environmental Impact Report in accordance with §15090 of the CEQA Guidelines.

1.3.5 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:

City of Healdsburg
Project Approval

2 Project Background and Description

2.1 Introduction

The Northern California Power Agency (NCPA), a California Joint Action Agency, was established in 1968 by a consortium of locally owned electric utilities to make joint investments in energy resources that would ensure an affordable, reliable and clean supply of electricity for customers in its member communities. Today those members include the Cities of Alameda, Biggs, Gridley, Healdsburg, Lodi, Lompoc, Palo Alto, Redding, Roseville, Santa Clara, Shasta Lake, and Ukiah as well as the Bay Area Rapid Transit District, Port of Oakland, Plumas-Sierra Rural Electric Cooperative, and Tahoe Donner Public Utility District.

Over the past four decades, NCPA has constructed and today operates and maintains a fleet of power plants that is among the cleanest in the nation and that provides reliable and affordable electricity to more than 600,000 Californians. NCPA made major investments in renewable energy in the early 1980s when it developed two geothermal power plants and financed and built a 259 MW hydroelectric facility. Thirty years later those resources continue to generate reliable, emission-free electricity for its member communities.

NCPA's 775-megawatt portfolio of power plants is approximately 50% greenhouse gas emission free. Its mix of geothermal, hydroelectric and natural gas resources is well positioned to help its members achieve California's goal of a 60% Renewable Portfolio Standard (RPS) by 2030. NCPA member utilities also have invested heavily in the most environmentally friendly form of electricity – the megawatts that are not used. The Agency members have collectively spent more than \$100 million on energy efficiency since 2006 reducing demand for electricity by more than 350 gigawatt hours during that time.

NCPA's commitment to the environment reflects its status as a not-for-profit public entity whose policies and values are set not by investors but by locally elected or appointed officials who serve as the energy regulators in the cities, towns and districts that are members of the Agency.

2.2 Project Background

Now NCPA intends to implement the NCPA Solar Project 1. The objective of the NCPA Solar Project 1 is to develop a fleet of Photovoltaic (PV) Solar Power Plants throughout participating member service territories to be under construction by the end of 2019. The plants will be managed by the Northern California Power Agency (NCPA) as a single project to be owned and operated by a third-party provider through a power purchase agreement (PPA). After the initial 5 – 7 years of operation, NCPA plans to purchase the plants.

The project will be executed in three phases:

- ❖ Phase 1 – Determine member interest and requirements and identify potential sites.
- ❖ Phase 2 – Site selection and screening, plan development and selection of a third-party provider to fulfill design, construction and operation through a PPA.
- ❖ Phase 3 – Construction and operation per the PPA.

NCPA has now completed Phase 1 and the site selection and screening portion of Phase 2. Six of the member agencies have decided to participate in this project. They are the Cities of Healdsburg, Lodi and Redding as well as the Plumas-Sierra Rural Electric Cooperative. Six potential sites have been selected for further analysis as shown below:

Site	Location	Developable Area (acres)	Estimated Capacity (MW _{dc})
Healdsburg – Water Reclamation	38°35'00.03" N, 122°51'45.37" W	8.13	3.62
Lodi – Pixley Basin	38°07'18.06" N, 121°15'12.14" W	15.0	3.51
Lodi – Century East/West	38°06'26.66" N, 121°16'21.63" W	2.5	0.63
Lodi – Parking Structure	38°08'05.25" N, 121°16'18.58" W	0.9	0.18
Plumas-Sierra – Chilcoot	39°47'56.66" N, 120°09'49.99" W	28.2	6.11
Redding – Airport	40°29'41.73" N, 122°16'46.41" W	54.7	11.40

Due to the timing of implementation and the great distance between the member agencies, it was determined that the most logical approach to satisfying the requirements of CEQA for this project was to issue separate CEQA documents for each member agency’s projects. Therefore, this document focuses on the water reclamation facility site project proposed by the City of Healdsburg.

2.3 Project Description

As shown on Figure 2.3-1, the Healdsburg Water Reclamation Facility is located south of the City at 340 Foreman Lane, Healdsburg.

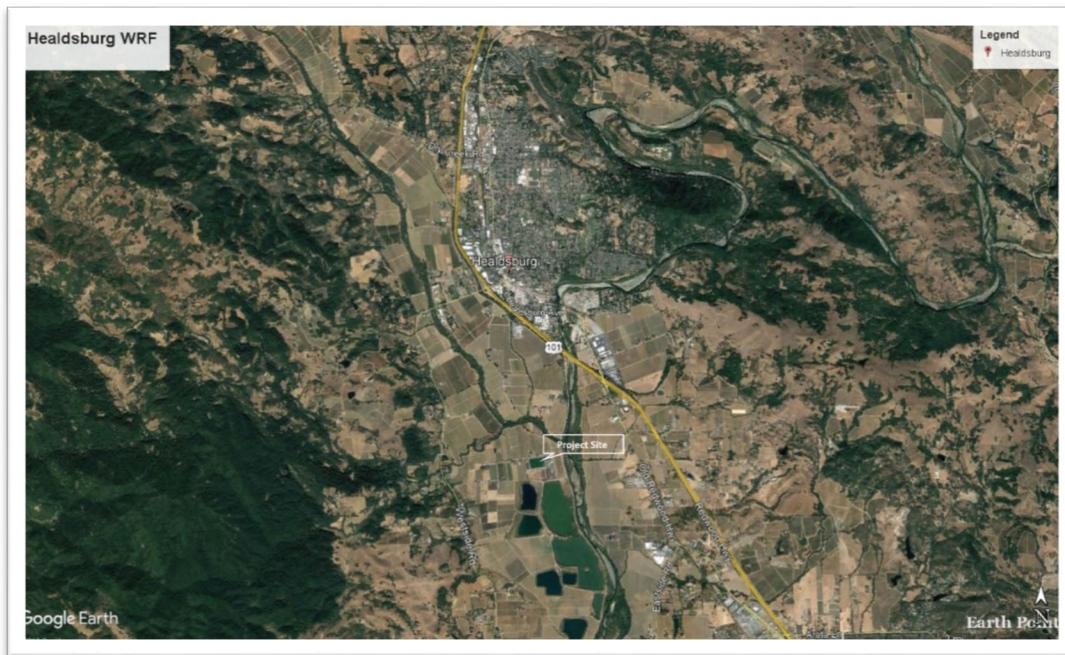


Figure 2.3-1 Healdsburg Water Reclamation Facility Location

As shown on Figure 2.3-2, the Project site is within the confines of the 36-acre water reclamation facility. The proposed technology type for this installation is floating arrays whereby the panels would be mounted on pontoons that are anchored to ballasts located outside the storage ponds. As shown on Figure 2.3-3, the northerly pond would accommodate Arrays A and B. Work is currently underway to remove the levee separating the two southerly ponds. The combined southerly pond would accommodate Array C.



Figure 2.3-2 Healdsburg Water Reclamation Facility Site

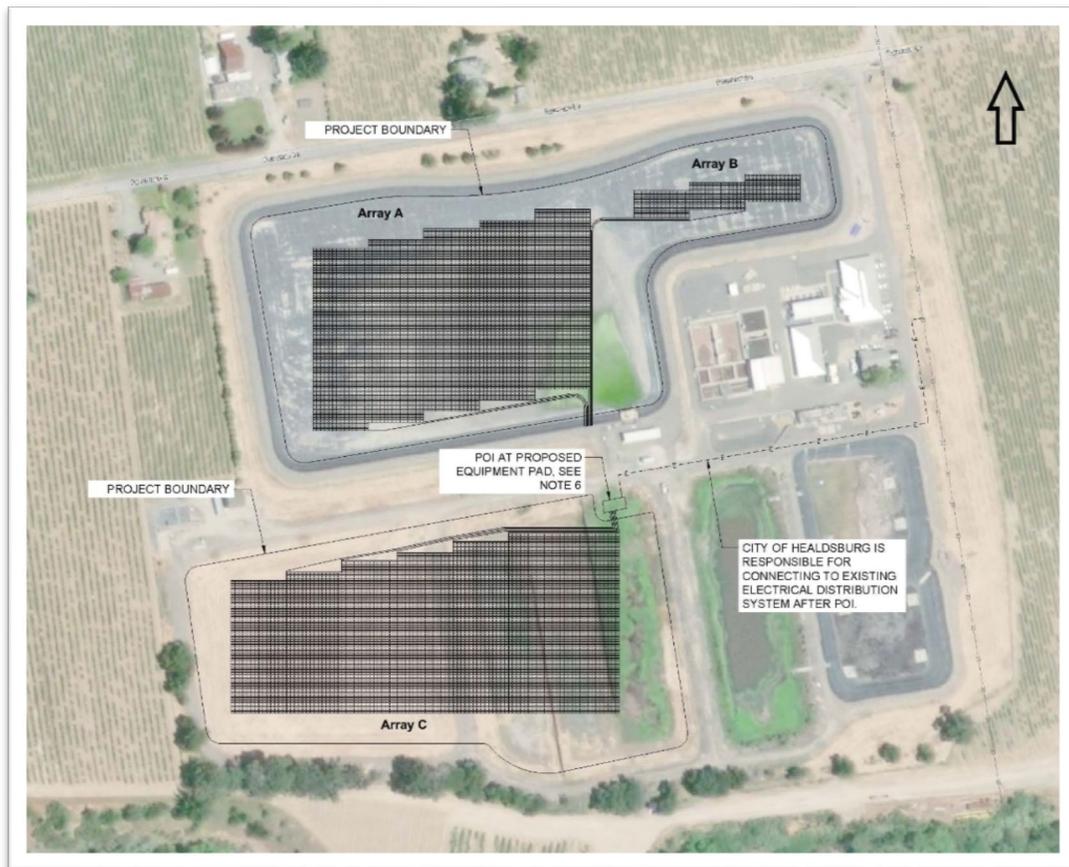


Figure 2.3-3 Conceptual Solar Array Layout

A typical floating array installation is shown on Figure 2.3-4.



Figure 2.3-4 Example of Floating Solar Array

Design criteria for this installation are provided in Table 2.3-1.

**Table 2.3-1
Design Parameters**

Design Parameter	North Pond	South Pond
Project Size	1.70 MW _{dc}	1.92 MW _{dc}
Approximate Pond Size (bottom area)	7.17 acres	7.37 acres
Project Area	3.82 acres	4.31 acres
Floating Devices	5,012	5,656
340 W Modules	5,012	5,656
Total MV Cable Length	3,552 lineal feet	2,878 lineal feet

3 Environmental Checklist, Analysis and Mitigation Measures

3.1 Introduction

1. Project Title: **NCPA Solar Project 1 – Healdsburg Water Reclamation Facility Site**
2. Lead Agency Name and Address: Northern California Power Agency
651 Commerce Drive
Roseville, California 95678-6420
3. Contact Person, Phone Number and Email: Keith S. Dunbar, P.E., BCEE, Hon.D.WRE., F. ASCE
K.S. Dunbar & Associates, Inc.
Environmental Engineering
45375 Vista Del Mar
Temecula, California 92590-4314
(951) 699-2082
ksdpe67@gmail.com
4. Project Location: Within the City of Healdsburg, Sonoma County
Section 5, Township 9 North, Range 9 West, Mount Diablo B&M
38° 35' 00.03" N, -122° 51' 45.37" W
5. Project Sponsor's Name and Address: Northern California Power Agency
651 Commerce Drive
Roseville, California 95678

City of Healdsburg Electric, Water and Wastewater Department
401 Grove Street
Healdsburg, California 95448
6. General Plan Designations: Public/Quasi Public (PQP)
7. Zoning: Public/Quasi Public (PQP)
8. Project Description (Describe the whole action involved, including, but not limited to, later phases of the project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheets, if necessary): NCPA intends to install a solar photovoltaic generation system at the Healdsburg Water Reclamation Facility property. The installed capacity would be 3.62 megawatts, direct current (MW_{dc}).
9. Surrounding Land Uses and Setting: Mixture of residential uses, agricultural land and open space.
10. Other Public Agencies whose Approval is Required (e.g., permits, financing approval, or participation agreement): City of Healdsburg

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.

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

3.3 Determination

On the basis of this initial evaluation:

<input type="checkbox"/>	I find that the proposed project COULD NOT have a significant effect on the environment and a NEGATIVE DECLARATION will be prepared.
<input checked="" type="checkbox"/>	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.
<input type="checkbox"/>	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
<input type="checkbox"/>	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.
<input type="checkbox"/>	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.

K.S. Dunbar for
 Ron Yuen
 Director of Engineering, Generation Services

June 3, 2019
 Date

3.4 Chapter Organization

This section describes how this chapter of the Draft Initial Study and Mitigated Negative Declaration is organized. 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 the State 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. A social or economic 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 the State 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.”

A brief explanation is required for all answers except “No Impact” answers that are adequately supported by the information sources a Lead Agency cites in the parentheses following each question. A “No Impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A “No Impact” answer should be explained where it is based on project-specific factors as well as general standards e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

The following requirements for evaluating environmental impacts are cited directly from the State CEQA Guidelines Appendix G.

- 1) All answers must take into account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- 2) Once the Lead Agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation incorporated, or less than

3 Environmental Checklist, Analysis and Mitigation Measures

significant. “Potentially Significant Impact” is appropriate if there is substantial evidence that an effect is significant. If there are one or more “Potentially Significant Impact” entries when the determination is made, an EIR is required.

- 3) “Negative Declaration: Less Than Significant with Mitigation Incorporated” applies when the incorporation of mitigation measures has reduced an effect from “Potentially Significant Impact” to a “Less Than Significant Impact”. The Lead Agency must describe the mitigation measures, and briefly explain how they reduce the effect to less than significant.
- 4) Earlier analyses may be used where pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. [§15063(c)(3)(D)]. In this case, a brief discussion should identify the following:
 - a) Earlier Analysis Used. Identify and state where they are available for review.
 - b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - c) Mitigation Measures. For effects that are “Less Than Significant with Mitigation Incorporated”, describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
- 5) Lead Agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
- 6) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
- 7) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project’s environmental effects in whatever format is selected.
- 8) The explanation of each issue should identify:
 - a) The significance criteria or threshold, if any, used to evaluate each question; and
 - b) The mitigation measures identified, if any, to reduce the impact to less than significance.

3.5 Aesthetics

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<i>Would the project:</i>				
a. Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.5.1 Environmental Setting

As shown on Figure 3.5-1, the proposed Project site is within the confines of the Healdsburg Water Reclamation Facility. The Project site is bounded by rural residential and agricultural properties to the north and west and open space and agricultural lands to the south and east.



Figure 3.5-1 Proposed Project Site, Healdsburg Water Reclamation Facility

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, there are scenic vistas to vineyards and the distant mountains from the proposed Project site. However, the solar panels would be installed within the existing ponds and would be of low profile not interfering with those views. 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 Foreman Lane Adjacent to Project 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, no further analysis or mitigation is required.

Aesthetics c. *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:

According to the City of Healdsburg's General Plan, the proposed Project site is designated as public/quasi-public. Installation of solar facilities is a permitted use in this 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 Impact.*

Discussion:

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.

Based on the above discussion, the potential for substantial glare from the solar PV panels would be considered 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
<p>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.</p> <p><i>Would the Project:</i></p>				
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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 511104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Result in the loss of forest land or conversion of forest land to non-forest uses.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.6.1 Environmental Setting

As shown previously on Figure 3.5-1, the Project site is within the confines of the Healdsburg Water Reclamation Facility. 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 of the California Resources Agency at the Project site (*resources.ca.gov, 3/12/2019*). Therefore, there would be no impacts and no further analysis or mitigation is required.

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 Public/Quasi Public (P/QP). 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 is no Farmland or forest land at the Project site. Therefore, there would be no impacts and no further analysis or mitigation is required.

3.6.3 Conclusion

No significant 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. <i>Would the Project:</i>				
a. Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Result in cumulatively considerable net increase of any criteria pollutant under an applicable federal or state ambient air quality standard?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Result in other emissions (such as those leading to odors or dust) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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 North Coast 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 Northern Sonoma County Air Pollution Control District. The North Coast Air Basin is in attainment for all federal ambient air quality standards; therefore, an air quality management plan is not required for this air basin.

The 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., Healdsburg Municipal Airport) is provided in Tables 3.7-1 and 3.7-2.

3 Environmental Checklist, Analysis and Mitigation Measures

**Table 3.7-1
Ozone Trends Summary: Healdsburg Municipal Airport
National Standards**

Year	Days > Standard			1-hr Observations				8-hr Observations				Coverage
	8-hr			EENED ¹				0.070 Std.		0.075 Std.		
	0.070	0.075	0.08	Max.	1-Yr	3-Yr	D.V. ²	Max.	D.V. ²	Max.	D.V. ²	
2017	0	0	0	0.083	0.0	0.0	0.074	0.069	0.058	0.069	0.059	98
2016	0	0	0	0.072	0.0	0.0	0.070	0.066	0.058	0.066	0.059	94
2015	0	0	0	0.072	0.0	0.0	0.069	0.063	0.058	0.063	0.058	98
2014	0	0	0	0.070	0.0	0.0	0.070	0.064	0.058	0.064	0.058	99
2013	0	0	0	0.069	0.0	0.0	0.070	0.062	*	0.062	*	97
2012	0	0	0	0.073	0.0	0.0	0.073	0.063	*	0.063	*	99
2011	0	0	0	0.073	0.0	*	0.070	0.064	*	0.064	*	36
2010	*	*	*	*	*	*	*	*	*	*	*	0
2009	0	0	0	0.070	0.0	0.0	0.070	0.063	0.056	0.063	0.056	98
2008	0	0	0	0.080	0.0	0.0	0.070	0.065	0.058	0.065	0.058	99

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, 04/02/2019

**Table 3.7-2
Ozone Trends Summary: Healdsburg Municipal Airport
State Standards**

Year	Days > Standard		1-Hour Observations			8-Hour Averages			Year Coverage
	1-Hour	8-Hour	Max.	EPDC ¹	D.V. ²	Max.	EPDC ¹	D.V. ²	
2017	0	0	0.083	0.0741	0.07	0.069	0.0661	0.066	98
2016	0	0	0.072	0.0722	0.07	0.066	0.0660	0.066	91
2015	0	0	0.072	0.0728	0.07	0.064	0.0668	0.064	98
2014	0	0	0.070	0.0721	0.07	0.064	0.0659	0.064	98
2013	0	0	0.069	0.0708	0.07	0.063	*	0.035	95
2012	0	0	0.073	*	0.07	0.063	*	0.065	99
2011	0	0	0.073	*	0.07	0.065	*	0.065	36
2010	*	*	*	*	*	*	*	*	0
2009	0	0	0	0.0732	0.07	0.064	0.0644	0.064	97
2008	0	0	0.080	0.0739	0.07	0.065	0.0647	0.065	99

Notes: All concentrations expressed in parts per million.

National exceedances shown in **green**.

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, 02/03/2019

Both the ARB and the EPA issue area designations for individual pollutants for California’s air basins. The latest designations for Northern Sonoma County are shown in Table 3.7-3.

**Table 3.7-3
Ambient Air Quality Area Designations for Northern Sonoma County**

Pollutant	State Area Designation	National Area Designation
Ozone	Attainment	Unclassified/Attainment
Particulate Matter Less than 2.5 microns in diameter (PM _{2.5})	Attainment	Unclassified/Attainment
Particulate Matter Less than 10 microns in diameter (PM ₁₀)	Attainment	Unclassified
Carbon Monoxide (CO)	Unclassified	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 ₂ S)	Unclassified	--
Visibility Reducing Particles	Unclassified	--

Source: arb.ca.gov, 4/02/2019

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: No Impact.

Discussion:

Northern Sonoma County has been designated as attainment for all federal Ambient Air Quality Standards. Therefore, as explained above, an Air Quality Plan is not required for the Project area. Consequently, 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 under an applicable federal or state ambient air quality standard)?*

Answer: No Impact.

Discussion:

Although the Northern Sonoma County APCD has not developed recommended thresholds of significance for projects that are subject to CEQA review, the Mendocino County Air Quality Management District (immediately to the north) and the Bay Area Air Quality Management District (immediately to the south) have 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, PM₁₀, 82 pounds per day; and fine particulate matter, PM_{2.5}, 54 pounds per day.

The Northern Sonoma County APCD 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 Northern Sonoma County APCD 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

3 Environmental Checklist, Analysis and Mitigation Measures

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 Northern Sonoma County APCD 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 (CO₂ eq). EPA has suggested a reportable significance threshold of 25,000 tons of CO₂ 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 CO₂ 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 3.7-4.

**Table 3.7-4
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 ₂ eq (1,210 tons per year).	

Criteria Pollutants

It is anticipated that NCPA would install solar equipment at the Healdsburg Water Reclamation Facility site. A typical construction equipment list for this activity follows:

Equipment	Number	Horsepower	Load Factor ¹	Hours per Day
Crane	2	399	0.43	8
Tractor/Backhoe/Loader	1	108	0.55	8
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 0.25 acre (1,000± feet of trench with a 10-foot wide disturbed area).
- ❖ There would be two 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 3.7-5 (detailed model results are contained in Appendix B)¹.

**Table 3.7-5
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	2.79	23.40	27.87	0.04	0.21	0.19
Threshold Limits ^b	54	550	54	150	82	54

^a Use of particulate traps reduces PM₁₀ 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 3.7-5, emissions from heavy construction equipment during solar equipment installation would not exceed the construction-related threshold limits contained in Table 3.7-4.

There would also be 2 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 3.7-6.

**Table 3.7-6
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	0.24	1.13	2.78	0.01	0.14	0.11
Pickups	0.11	1.01	0.10	0.00	0.02	0.01
Totals	0.35	2.14	2.88	0.01	0.16	0.12

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 3.7-7.

**Table 3.7-7
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	

Earthmoving activities would create fugitive dust emissions. It is estimated that fugitive dust emissions from construction activities on disturbed soil approximate 5 pounds per acre per day (PM₁₀) 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 0.25 acres would be disturbed at the peak day of activity. Therefore, the resulting PM₁₀ emissions would be 0.49 pounds per day. SCAQMD also estimates that the PM_{2.5} emissions in fugitive dust are equal to 21 percent of the PM₁₀ emissions in fugitive dust (SCAQMD, October 2006). Therefore, the PM_{2.5} emissions would be 0.10 pounds per day.

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.

The total estimated emissions from the installation of the solar equipment at the Healdsburg Water Reclamation Facility site are shown in Table 3.7-8

**Table 3.7-8
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	2.79	23.40	27.87	0.04	0.21	0.19
On-Road Vehicles	0.35	2.14	2.88	0.01	0.16	0.12
Worker Commutes	0.29	2.51	0.24	0.01	0.05	0.03
Fugitive Dust	0.00	0.00	0.00	0.00	0.49	0.10
Totals	3.43	28.05	30.99	0.06	0.91	0.44
Threshold Limits ^b	54	550	54	150	82	54

^a Use of particulate traps reduces PM₁₀ 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 3.7-8, the total estimated emissions from installation of the solar equipment at the Healdsburg Water Reclamation Facility site would not exceed the construction-related threshold limits for significance presented in Table 3.7-4. Therefore, there would be no impact and no further analysis or mitigation is required,

Operation and maintenance personnel might make two or three trips per week to the Project site. Consequently, there would be essentially no emissions associated with vehicle travel to and from the site during operation and maintenance of the new facilities. Operation of the actual facilities would produce essentially no emissions.

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: No Impact.

Discussion:

As shown above, all emissions from construction of the Project would be less than significant based on the threshold limits shown in Table 3.7-4. 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 or dust) adversely affecting a substantial number of people?

Answer: No Impact.

Discussion:

As shown above in Table 3.7-8, the fugitive dust emissions would be less than significant based on threshold criteria shown in Table 3.7-4. 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

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

3.8 Biological Resources

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<i>Would the project:</i>				
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Have a substantial adverse effect on state or federally protected (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.8.1 Environmental Setting

A habitat and jurisdictional assessment was conducted by ELMT Consultant's Biologist Travis J. McGill on April 16, 2019 to document baseline conditions and assess the potential for special-status² 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 (CNDDDB), and other electronic databases as potentially occurring in the general vicinity of the Project site. EMLT's complete report is included as Appendix C of this document.

Existing Site Conditions

The Project site is located on two ponds, each roughly 7-acres, totaling 14-acres. The site is surrounded by agricultural fields on three sides, with the nearest residences located on adjacent parcels to the west of the site, approximately 45-feet from site parcel edge and north at approximately 65-feet and 125-feet from the site parcel edge. According to the National Wetland Inventory (NWI) data, a wetland feature has been mapped on the southern portion of the parcel (proposed Array C). The Federal Emergency

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.

Management Agency (FEMA) data indicates that a majority of the site is located in an area above the 500-year flood level, and a small portion on the southern parcel is located within the 100-year flood zone.

The proposed project footprint is relatively flat at an approximate elevation of 90 feet above mean sea level, with the exception of the side slopes of the ponds that have been dug out to create the onsite basins. Based on the US Department of Agriculture's National Resources Conservation Services' (NRCS) Web Soil Survey, the project site is underlain by the following soil units: Yolo sandy loam, overwash (0 to 5 percent slopes), and Yolo loam (0 to 10 percent slopes). Refer to Exhibit 4, *Soils*, in Attachment A in ELMT's report in Appendix C. Soils on-site have been mechanically disturbed and heavily compacted from development of the WRF.

Vegetation

Due to existing land uses, no native plant communities or natural communities of special concern were observed on the Project site. The Project site primarily consists of the existing WRF that consist of existing ponds and associated infrastructure and buildings that are subject to ongoing anthropogenic disturbances. These disturbances have eliminated the natural plant communities that once occurred within the boundaries of the Project site. Refer to Attachment B, *Site Photographs*, for representative site photographs in ELMT's report in Appendix C. 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 and developed. Refer to Exhibit 5, *Vegetation* in Attachment A in ELMT's report in Appendix C. Within the proposed Project footprint, developed areas consist of the existing buildings and structures associated with the WRF, and the disturbed areas within the Project footprint consist of the areas that have been subject to routine anthropogenic disturbances. It should be noted that the southern ponds that will form Array C are earthen lined and support non-native and early succession/ruderal plant species. Plant species observed onsite include filaree (*Erodium sp.*), wild radish (*Raphanus raphanistrum*), yellow sweet clover (*Millilotus officinalis*), wild oat (*Avena sp.*), mouse barley (*Hordeum murinum*), milk thistle (*Silybum marianum*), ripgut (*Bromus diandrus*), mulefat (*Baccharis salicifolia*), blackberry (*Rubus ursinus*), short-podded mustard (*Hirschfeldia incana*), cheeseweed (*Malva parviflora*), prickly lettuce (*Lactuca serriola*), and curly dock (*Rumex crispus*).

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 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 fish were observed in the onsite ponds during the field investigation. The ponds only support water for portions of the year and do not provide a perennial water source or connect to natural water features that would provide suitable habitat for fish species. The only fish species that have the potential to occur in the ponds are fish that are exotic or introduced such as mosquitofish (*Gambusia affinis*) and bluegill (*Lepomis macrochirus*). No special-status fish species are expected to occur within the Project site.

Amphibians

No amphibians were observed within the ponds during the field investigation. The ponds only support water for portions of the year and do not provide a perennial water source or connect to natural water features that would provide long term habitat for amphibian species. The only amphibian species that have the potential to occur in the ponds are tree frog (*Pseudacris regilla*). No special-status amphibian species are expected to occur within 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*), and alligator lizard (*Elgaria multicarinata*). Due to the high level of anthropogenic disturbances on-site no special-status reptilian species are expected to occur within the Project site. Further, when the ponds onsite are filled with water, they have the potential to support introduced/exotic turtles such as red-eared slider (*Trachemys scripta elegans*).

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 (*Zenaidura macroura*), house finch (*Haemorhous mexicanus*), American crow (*Corvus brachyrhynchos*), killdeer (*Charadrius vociferus*), turkey vulture (*Cathartes aura*), Canada goose (*Branta canadensis*), bufflehead (*Bucephala albeola*), red-tailed hawk (*Buteo jamaicensis*), black phoebe (*Sayornis nigricans*), California towhee (*Melospiza crissalis*), golden crowned sparrow (*Zonotrichia atricapilla*), mallard (*Anas platyrhynchos*), and northern rough-winged swallow (*Stelgidopteryx serripennis*). Due to routine disturbance associated with the existing WRF, the Project site does not provide suitable habitat for special-status bird species known to occur in the area.

Mammals

During the field investigation no mammalian species were 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 California ground squirrel (*Otospermophilus beecheyi*), 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 opportunities.

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 still 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.

It should be noted that the Russian River, Mill Creek, and Dry Creek support natural habitats which allow wildlife to move through the region in search of food, shelter, or nesting habitat. The Project site is separated from the influences of the Russian River, Mill Creek, and Dry Creek by agricultural fields and the proposed Project will be confined to existing disturbed/developed areas. Implementation of the proposed Project is not expected to result in temporary and/or permanent impacts to potential wildlife movement opportunities along the Russian River, Mill Creek, and Dry Creek 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 (Corps) Regulatory Branch 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 CDFW regulates alterations to streambed and bank under Fish and Game Code Sections 1600 et seq., and the Regional Board regulates discharges into surface waters pursuant to Section 401 of the CWA and the California Porter-Cologne Water Quality Control Act.

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 the NWI data, a wetland feature has been mapped as supporting a freshwater pond on the southern portion of the parcel (proposed Array C). The mapped freshwater pond is located on the southern portion of the Project site where the existing water retention basins were created. During the field investigation, no evidence of a freshwater pond was observed onsite within the existing water retention basins. As a result, no impacts to the NWI mapped freshwater pond will occur from the proposed Project.

Special-Status Biological Resources

The CNDDDB 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 Healdsburg and Guerneville 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 thirty-three (33) special-status plant species, thirty-seven (37) special-status wildlife species, and one (1) special-status plant community as having potential to occur within the Healdsburg and Guerneville 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 ELMT’s report in Appendix C.

Special-Status Plants

According to the CNDDDB and CNPS, thirty-three (33) special-status plant species have been recorded in the Healdsburg and Guerneville quadrangles (refer to Attachment C) in ELMT’s report in Appendix C. No special-status plant species were observed onsite during the habitat assessment. The Project site consists of the existing WRF that has been subject to various anthropogenic disturbances and development. 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 are presumed to be absent from the Project site. No focused surveys are recommended.

Special-Status Wildlife

According to the CNDDDB, thirty-seven (37) special-status wildlife species have been reported in the Healdsburg and Guerneville quadrangles (refer to Attachment C in ELMT’s report in Appendix C.). No special-status wildlife species were observed onsite during the habitat assessment. The Project site consists of the existing WRF that has been subject to various anthropogenic

disturbances and development. These disturbances have eliminated the natural plant communities that once occurred on-site which have greatly reduced potential foraging opportunities for 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 low potential to support great egret (*Ardea alba*), and great blue heron (*Ardea herodias*). Both of these species are not federally, or state listed. All remaining special-status wildlife species were determined to have a low potential to occur or are presumed to be absent from the Project site because it has been heavily disturbed from onsite disturbances. No focused surveys are recommended.

Special-Status Plant Communities

According to the CNDDDB, one (1) special-status plant community has been reported in the Healdsburg and Guerneville USGS 7.5-minute quadrangles: Northern Hardpan Vernal Pool. 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 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* in Attachment A in ELMT's report in Appendix C. The nearest designated Critical Habitat is located approximately 0.15 mile east of the Project site for steelhead (*Oncorhynchus mykiss*) and Chinook salmon (*Oncorhynchus tshawytscha*) associated with Dry Creek and the Russian River. Therefore, the loss or adverse modification of Critical Habitat from site development will not occur and consultation with the USFWS for impacts to Critical Habitat will not be required for implementation of the proposed Project.

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 acclimated to routine disturbances. Additionally, the trees that border the Project site provide suitable nesting opportunities.

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 should be conducted prior to any ground disturbance or vegetation removal activities that may disrupt the birds during the nesting season. Therefore, NCPA will add the following to its contract documents for this Project:

- ❖ 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.

It should be noted that the City of Healdsburg will be performing work within the proposed Project footprint prior to the implementation of the solar project. If disturbances within the Project footprint continue to occur after the City completes its work and before the solar project starts, a pre-construction nesting bird clearance survey will not be required due to the decreased potential for nesting to occur. However, if there is a gap between projects, especially during the breeding season, a pre-construction survey will be required prior to the initiation of the proposed solar project.

Implementation of the above mitigation measure will ensure that the impacts to nesting birds are less than significant.

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 above, 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.

According to the NWI data, a wetland feature has been mapped as supporting a freshwater pond on the southern portion of the parcel (proposed Array C). The mapped freshwater pond is located on the southern portion of the Project site where the existing water retention basins were created. During the field investigation, no evidence of a freshwater pond was observed onsite within the existing water retention basins. As a result, no impacts to the NWI mapped freshwater pond will occur from the proposed Project. 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:

As stated above, the Russian River, Mill Creek, and Dry Creek support natural habitats which allow wildlife to move through the region in search of food, shelter, or nesting habitat. The Project site is separated from the influences of the Russian River, Mill Creek, and Dry Creek by agricultural fields and the proposed Project will be confined to existing disturbed/developed areas. Implementation of the proposed Project is not expected to result in temporary and/or permanent impacts to potential wildlife movement opportunities along the Russian River, Mill Creek, and Dry Creek 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

Implementation of the above mitigation measures will insure that the impacts to biological resources are reduced to a level of less than significant.

3.9 Cultural Resources

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<i>Would the project:</i>				
a. Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Cause a substantial adverse change in the significance of an archeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Disturb any human remains, including those interred outside of dedicated cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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 NCPA Solar Project 1 – Healdsburg Water reclamation Facility (WRF) located at 340 Foreman Lane in the City of Healdsburg, Sonoma County, California.

The Phase 1 study includes 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 D 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. Anza recommends a finding of **no impact to historical resources** under CEQA. No further cultural resources study is recommended; however, standard mitigation measures are recommended to avoid potential impacts from the unanticipated discovery of cultural resources during project-related ground disturbing activities.

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 requested a search of cultural resource records housed at the California Historical Resources Information System (CHRIS), Northwest Information Center (NWIC) located at Sonoma State University. The search was conducted by NWIC on April 22, 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). The CHRIS search included a review of the NRHP, 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 three historic built resources within 0.5 mile of the project site (Table 2 in Anza’s report in Appendix D). None of these resources is closer than 0.4 mile to the project site.

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 with Mitigation Incorporated.*

Discussion:

The records search revealed the presence of one prehistoric archaeological site (P-49-00598) within 0.4 miles of the Project site. This prehistoric lithic artifact deposit would not be impacted by Project implementation as it is well outside the Project site.

Although there were no archaeological sites discovered on the Project site, there is always the possibility of an inadvertent discovery of an unknown site during excavation. Therefore, NCPA will include the following mitigation measures in its contract documents for this Project.

- ❖ In the unlikely event that potentially significant archaeological materials are encountered during construction activities, all work shall be halted in the vicinity of the archaeological discovery until a qualified archaeologist can visit the site of discovery, assess the significance of the archaeological resource, and provide proper management recommendations. If the discovery proves to be significant, additional work, such as data recovery excavation, may be warranted. The treatment and disposition of cultural material that might be discovered during excavation shall be in accordance with applicable laws and regulations.
- ❖ All sacred items, should they be encountered within the Project sites, shall be avoided and preserved as the preferred mitigation, if feasible. All cultural materials that are collected during excavation and other earth disturbing activities on the Project sites, with the exception of sacred items, burial goods and human remains which will be addressed in any required Treatment Agreement, shall be tribally curated according to the current repository standards. The collections and associated records shall be transferred, including title, to the closest tribe to the Project site.

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

Answer: *Less than Significant with Mitigation Incorporated.*

Discussion:

No human remains were discovered on-site. However, there is always the potential to inadvertently discover human remains during excavation. Therefore, NCPA will include the following in its standard contract documents for this Project.

- ❖ In the event of an accidental discovery or recognition of any human remains, the County Coroner shall be notified and construction activities at the affected work site shall be halted. If the coroner determines the remains to be Native American: (1) the coroner shall contact the Native American Heritage Commission (NAHC) within 24-hours, and (2) the NAHC shall identify the person or persons it believes to be the most likely descended from the deceased Native American. The treatment and disposition of human remains that might be discovered during excavation shall be in accordance with applicable laws and regulations.

3.9.3 Conclusion

Implementation of the above mitigation measures would ensure that any impact to cultural resources would be reduced to a level of less than significant.

3.10 Energy

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<i>Would the project:</i>				
a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Conflict or obstruct a state of local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.10.1 Environmental Setting

The City of Healdsburg has owned and operated its own electric utility for more than 100 years. The utility now serves more than 11,000 residents and 1,000 commercial customers. Because the City owns geothermal and hydroelectric power plants, it provides electricity with a high renewable and carbon free content. During most years, the City's electric energy ranges between 50 to 60% carbon free with roughly 41% of that energy coming from the nearby Geysers. During 2017, the renewable energy content was 37% geothermal, 1% small hydro, and 39% large hydro. Only 23% of its energy supply was from non-renewable sources.

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.

It is proposed to install solar photovoltaic electric generation systems at the Healdsburg water reclamation site. The installed capacity would be 3.6 MW_{dc}. It is anticipated that these facilities would generate a total of approximately 2,700 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 of local plan for renewable energy or energy efficiency?*

Answer: No Impact.

Discussion:

The addition of approximately 3.6 MW_{dc} of renewable energy generation would assist NCPA and the City of Healdsburg in continuing to meet their goals of a 60 percent Renewable Portfolio Standard (RPS) by 2030. Therefore, implementation of the Project would not conflict or obstruct implementation of that plan. 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
<i>Would the project:</i>				
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.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i. Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii. Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii. Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.11.1 Environmental Setting

Geologic Setting

The Project site is northern Sonoma County in the central portion of the Russian River watershed. The region is within the central portion of the Coast Ranges geomorphic province of California, a region characterized by north-west trending valleys and mountain ranges. This alignment of valleys and ridges has developed in response to uplift, folding and faulting along the San Andreas system of active faults. The Project area is underlain by alluvium (Qal). These sediments were deposited by ancestral streams and consist of clay, silt, sand and gravel. Older alluvium also exists along the Russian River.

Seismicity

The following discussion on seismicity is taken from the General Plan Background Report prepared by the City of Healdsburg.

Seismicity in Healdsburg is directly related to activity on the San Andreas fault system, including major active faults in the region and within the City. The active Healdsburg-Rogers Creek fault passes through the eastern and northern areas of the City. The Healdsburg-Rogers Creek fault is a right-lateral strike-slip fault (i.e., the land west of the fault generally moves north with respect to the land east of the fault during large earthquakes). It has been the source of significant earthquakes during historic time.

Other major active faults in the region include the San Andreas, 19 miles to the west, and the Maacama, four miles to the east. Other, more distant, active faults in the region include the West Napa, Green Valley, Hayward, San Gregorio, Calaveras, Concord and Greenville faults. Table 3.11-1 shows the distance to these faults from Healdsburg and the maximum earthquake each fault is capable of producing.

**Table 3.11-1
Fault Parameters**

Fault	Distance and Direction from Healdsburg	Maximum Moment Magnitude
Healdsburg-Rogers Creek	6 miles east of Project site*	7.0
Maacama	4.5 miles north	6.9
San Andreas	19 miles west	7.9
Hunting Creek	29 miles northeast	6.9
West Napa	28 miles southeast	6.5
Concord-Green Valley	40 miles east	6.9
Cordelia	43 miles southeast	6.7
Hayward	46 miles southeast	7.1
San Gregorio	52 miles south	7.3

*Based on California Division of Mines and Geology's Earthquake Zones of Required Investigation Map.

Soils

According to the U.S. Department of Agriculture's National Conservation Service's Web Soils Survey for Sonoma County, soils at the site are composed of Yolo sandy loam, overwash, 0 to 5% slopes (YmB) and Yolo loam. 0 to 10% slopes, moist (YnA). The Yolo series are very deep well-drained soils formed in alluvium from rocks.

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 in Table 3.11-2, the nearest Alquist-Priolo Earthquake Fault Zone (northern extent of the Healdsburg-Rogers Creek fault) is approximately 6 miles east of the proposed Project site. Therefore, 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, the Proposed Project will not expose people or critical structures to adverse effects resulting from seismic-related ground failure, including liquefaction. In addition, the Proposed Project facilities are specifically designed to withstand seismic conditions anticipated to occur at the Proposed Project site. Seismic conditions expected to occur in the Proposed Project area can be mitigated by special design using reasonable construction and/or maintenance practices common to the Sonoma County area. Any potential impacts 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 low. Any potential impacts would be considered less than significant; therefore, 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.. Therefore, 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 Yolo soil types in the Project area have a moderate potential for wind erosion. Less than 0.25 acres of these soils could be exposed during installation of the solar equipment at the Healdsburg Water Reclamation Facility site. However, as shown in the Air Quality section, watering the disturbed areas of the site twice daily would ensure that there would be impacts due to erosion.

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 would become unstable. 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 with Mitigation Incorporated.*

Discussion:

Although the site has been previously disturbed, there is always the possibility of an inadvertent discovery of paleontological resources during construction. However, NCPA's construction documents for the Project will include the following best management practices:

- ❖ In the unlikely event that potentially significant paleontological materials (e.g., fossils) are encountered during construction of the project, all work shall be halted 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. If the discovery proves to be significant, additional work, such as data recovery excavation, may be warranted. The treatment and disposition of paleontological material that might be discovered during excavation shall be in accordance with applicable laws and regulations.

3.11.3 Conclusion

Strict adherence to NCPA's best management practices outlined above would insure that no significant impacts to geology and soils would occur; therefore, no further analysis or additional mitigation is required.

3.12 Greenhouse Gas Emissions

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<i>Would the Project:</i>				
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment, based on any applicable threshold of significance?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emission of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.12.1 Environmental Setting

Under Assembly Bill 32 (AB 32) greenhouse gases (GHGs) are defined as carbon dioxide (CO₂), methane (CH₄), nitrous oxide (NO₂), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulfur hexafluoride (SF₆),

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 six 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
HFC-23 (Hydrofluorocarbons)	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
CF ₄ (Perfluorocarbons)	50,000	6,500
C ₂ F ₆	10,000	9,200
C ₄ F ₁₀	2,600	7,000
C ₆ F 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 *California Greenhouse Gas Emission for 2000 to 2016 Trends of Emissions and Other Indicators*, California uses the annual statewide greenhouse gas (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 CO₂ equivalent (MMTCo₂e), 12 MMTCo₂e 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 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 Global Warming Potential (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 (CO₂ and CH₄) are estimated at 165 metric tons during 2019. The Northern Sonoma County APCD 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 3.6 MW_{dc} of renewable energy generation would assist NCPA and the City of Healdsburg in meeting its goals of a 60 percent Renewable Portfolio Standard (RPS) by 2030. 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

No 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
<i>Would the project:</i>				
a. Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Create a significant hazard to the public or the environment through reasonably upset accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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, and if so, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.13.1 Environmental Setting

Hazards

Seismic and Geologic Hazards

Seismic and geologic hazards were discussed in Section 3.11.

Fire

According to Cal Fire maps, the Project site is not within a State Responsibility Area or a Fire Hazard Severity Zone.

Flooding

The Project site is shown on the Federal Emergency Management Agency's Flood Insurance Rate Map 060378 as an Area of Minimal Flood Risk (Zone X).

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 Envirostor database. The SEMS search did not reveal any sites in the Project area.

Envirostor

Envirostor is a database maintained and primarily used by the California Department of Toxic Substances Control (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 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 Geotracker search did not reveal any active sites near the Project site.

Leaking Underground Storage Tank Information System (LUSTIS)

The State Water Resources Control Board (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.

Site Mitigation Program Property Database (formerly CalSites)

The California Environmental Protection Agency's Department of Toxic Substances Control (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's Government Code §65962.5 requires the California Department of Toxic Substances Control 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. There are no active sites 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 with Mitigation Incorporated.*

Discussion:

Implementation of the proposed Project would not create any significant hazards as a result of the routine transport, use, storage, or disposal of hazardous materials. However, construction would include the temporary use and transport of fuels, lubricating fluids, solvents and other hazardous materials. The contractor would be required to adhere to the requirements of a *Health and Safety Plan* that it would develop for the Project pursuant to Chapter 6.95, Division 20 of the Health and Safety Code (§§ 25500—25532) as shown in the following mitigation measures.

During project construction, the construction contractor shall implement the following measures to address the potential environmental constraints associated with the presence of hazardous materials associated with construction of the Project to the satisfaction of NCPA:

- ❖ The contractor shall prepare a Health and Safety Plan in compliance with the requirements of Chapter 6.95, Division 20 of the Health and Safety Code (§25500 – 25532). The plan shall include measures to be taken in the event of an accidental spill.
- ❖ The contractor shall enforce strict on-site handling rules to keep construction and maintenance materials out of receiving waters and storm drains. In addition, the contractor shall store all reserve fuel supplies only within the confines of designated construction staging areas; refuel equipment only with the designated construction staging areas; and regularly inspect all construction equipment for leaks.
- ❖ The construction staging area shall be designed to contain contaminants such as oil, grease, and fuel products to ensure that they do not drain towards receiving waters or storm drain inlets.

Hazards and Hazardous Materials. b. *Would the project create a significant hazard to the public or the environment through reasonably upset accident conditions involving the release of hazardous materials into the environment?*

Answer: *Less than Significant with Mitigation Incorporated.*

Discussion:

Construction 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 the above mitigation measures would result in less-than-significant impacts. Therefore, no further analysis or additional 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: *No Impact.*

Discussion:

There are no known schools, existing or proposed, within one-quarter mile of the Project site. 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: *No Impact.*

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. Therefore, no further analysis or mitigation is required.

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, and if so, would the project result in a safety hazard or excessive noise for people residing or working in the project area?*

Answer: No Impact.

Discussion:

The Project site is not within an airport land use plan or within two miles of a public airport or public use airport. Therefore, there would be no 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. h. *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 not within a high fire severity zone or a state fire responsibility area. Therefore, there would be no impacts and no further analysis or mitigation is required.

3.13.3 Conclusion

Implementation of the above mitigation measures will ensure that the impacts associated with hazards and hazardous materials are reduced to a less than significant level 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
<i>Would the project:</i>				
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable ground management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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;	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv. Impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.14.1 Environmental Setting

The Project site is within the Russian River Basin which covers approximately 1,500 square miles in Mendocino and Sonoma Counties. It is approximately 110 miles long and terminates at the Pacific Ocean in Jenner. Major reservoirs and lakes include Lake Mendocino and Lake Sonoma.

The Russian River Watershed falls under the jurisdiction of the California Regional Water Quality Control Board, North Coast Region. The Regional Board has established beneficial uses and water quality objectives for the Russian River in its Water Quality Control Plan for the North Coast Region.

The Project site lies over the Healdsburg Groundwater Subbasin within the upper reaches of the greater Santa Rosa Plain geologic unit.

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: No Impact.

Discussion:

It is anticipated that less than one acre of soils would be disturbed during construction of the Project. Therefore, the Project would not 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)]. Consequently, no impacts are anticipated and no further analysis or mitigation is required.

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 pontoons within the ponds at the water reclamation facility and have no effect on runoff from the site. Therefore, no impacts to the existing drainage pattern of the site would occur. 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 result in flooding on- or off-site?*

Answer: No Impact.

Discussion:

As discussed above, no impacts to the existing drainage pattern of the site would occur. Consequently, no further analysis or mitigation is required.

Hydrology and Water Quality. c.iii. *Would the project 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. Consequently, no further analysis or mitigation is required.

Hydrology and Water Quality. c.iv. *Would the project impede or redirect flood flows?*

Answer: No Impact.

Discussion:

As discussed above, no impacts to the existing drainage pattern of the site would occur. 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 the Federal Emergency Management Agency's Flood Insurance Rate Map 060378, the proposed Project site is within an Area of Minimal Flood Risk (Zone X). Therefore, there would be no impacts 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 would have no effect on water quality and therefore 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

No significant impacts were identified; 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
<i>Would the project:</i>				
a. Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.15.1 Environmental Setting

The City of Healdsburg Land Use Map designates the Project site as Public/Quasi-Public (P/QP). This designation allows the installation of government-owned facilities which would apply to the proposed solar installations. 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 within the confines of the water reclamation facility. There are a few rural residences north and west of the Project site; however, implementation of the Project would not change the access to these residences and, therefore, 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 water reclamation facility site is presently zoned public/quasi-public (P/QP). Solar installations are permitted uses in the designated land use. 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
<i>Would the project:</i>				
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.16.1 Environmental Setting

The area south and west of the water reclamation facility was historically the site of sand and gravel mining activities (e.g., Basalt and Syar Industries). However, the County of Sonoma’s Land Use Map (LU-2c, Healdsburg and Environs) shows the entire area surrounding the water reclamation facility site as Land Intensive Agriculture.

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
<i>Would the project result in:</i>				
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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 rural land uses adjacent to a mix of residential and agricultural uses.

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 40 to 45 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 agricultural equipment, 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 9.32.07.A. of the Healdsburg Municipal Code includes the following restrictions related to construction noise and vibration:

Noise sources associated with or vibration created by construction, repair, remodeling, or grading of any real property or during authorized seismic surveys are permitted, provided such activities do not take place between the nighttime hours of 6:00 p.m. and 7:30 a.m. daily, or at any time on Sunday or a legal holiday, and provided the noise level created by such activities and any vibration created does not endanger the public health, welfare, and safety.

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 groundborne vibration or groundborne noise levels?*

Answer: *No Impact.*

Discussion:

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 Integrity	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. The nearest residences to any part of the project site is approximately 150 feet. As shown in Table 3.17-3, the ground vibration from small bulldozers and loaded trucks would not be perceptible to those residences within 150 feet of the construction activity.

**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.

3.17.3 Conclusion

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

3.18 Population and Housing

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<i>Would the project:</i>				
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.18.1 Environmental Setting

The 2010 Census indicated a population of 11,466 and a housing stock of 4,737 units in the City of Healdsburg (www.usa.com, 04/08/2019).

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 Healdsburg Water Reclamation Facility. 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-controlled 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
<i>Would the project:</i>				
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. Police Protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3. Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4. Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5. Other Public Facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.19.1 Environmental Setting

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

- ❖ Police Protection: City of Healdsburg Police Department
Sonoma County Sheriff's Department
- ❖ Fire Protection: City of Healdsburg Fire Department
- ❖ Schools: Healdsburg Unified School District

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 services?*

Answer: No Impact.

Discussion:

Implementation of the Project would not result in a need for expansions to other public services. 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
<i>Would the project:</i>				
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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
<i>Would the project:</i>				
a. Conflict with a plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle lanes and pedestrian paths?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. For a land use project, would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)(1)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. For a transportation project, would the project conflict with CEQA Guidelines section 15064.3, subdivision (b)(3)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.23.1 Environmental Setting

Regional access to the Project site is via Highway 101.

The California Department of Transportation’s (Caltrans) latest traffic counts (2017) for this highway near the Project area are shown in Table 3.23-1.

**Table 3.23-1
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 101						
South Healdsburg	5,100	62,000	57,800	3,700	43,500	40,500
Westside Road	3,700	43,500	40,500	4,100	49,500	45,200
Dry Creek Road	4,100	49,500	45,200	3,500	39,500	35,700

¹ AADT = Average Annual Daily Traffic
Source: Caltrans 2019, www.dot.ca.gov (4/11/2019)

3.23.2 Discussion and Mitigation Measures

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

Answer: No Impact.

Discussion:

The Project consists of solar photovoltaic installation at city-owned property at the Healdsburg Water Reclamation Facility. 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 other 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.

3.24 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	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.24.1 Environmental Setting

NAHC Sacred Lands File Search

On March 26, 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 April 15, 2019, Katy Sanchez, Associate Environmental Planner 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 positive. Please contact the Mishewal Wappo Tribe of Alexander Valley on the attached list for more information. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

As shown below, a letter was sent to Scott Gabaldon, Chairman of the Mishewal-Wappo Tribe of Alexander Valley on March 27, 2019. To date, he has not responded.

AB 52 Consultation

On March 27, 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 Healdsburg:

Chris Wright, Chairperson
 Dry Creek Rancheria of Pomo Indians
 1550 Airport Road, Suite 101
 Santa Rosa, California 95401

Loren Smith, Tribal Historic Preservation Officer
 Kashia Band of Pomo Indians or the Stewarts Point
 1420 Guerneville Road, Suite 1
 Santa Rosa, California 95403

Marjorie Mejia, Chairperson
Lytton Rancheria of California
437 Aviation Boulevard
Santa Rosa, California 95403

Scott Gabaldon, Chairman
Mishewal-Wappo Tribe of Alexander Valley
2275 Silk Road
Windsor, California 95492

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

3.24.2 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 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, 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:

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 Proposed Project area. 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 a resource determined by a lead agency, in its discretion and supported by substantial evidence, to be significant according to the historical register criteria in Public Resources Code §5023.1(c), and considering the significance of the resource to a California Native American tribe.*

Answer: No Impact.

Discussion:

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 Proposed Project area. Therefore, 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 Utilities and Service Systems

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<i>Would the project:</i>				
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.25.1 Environmental Setting

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

- ❖ Water City of Healdsburg Department of Electric, Water and Wastewater
- ❖ Wastewater City of Healdsburg Department of Electric, Water and Wastewater
- ❖ Electricity City of Healdsburg Department of Electric, Water and Wastewater
- ❖ Natural Gas Pacific Gas & Electric
- ❖ Trash Recology

3.25.2 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 Healdsburg Water Reclamation Facility. 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.

3.25.3 Conclusion

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

3.26 Wildfire

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<i>If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:</i>				
a. Impair and adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.26.1 Environmental Setting

Data provided by Calfire indicate that the Project area is not within a high fire severity zone or a state fire responsibility area.

3.26.2 Discussion and Mitigation Measures

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

Answer: No Impact.

Discussion:

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

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

Wildlife. 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.

Wildlife. 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.

3.26.3 Conclusion

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

3.27 Mandatory Findings of Significance

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<i>Would the project:</i>				
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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.)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.27.1 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 measures included in Sections 3.5 through 3.26 above 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:

To facilitate recycled water storage, the City of Healdsburg is in the process of re-lining several decommissioned storage ponds. This includes the southern pond which will contain Solar Array C. Due to the fact that these ponds were previously used for the treatment and storage of wastewater, the rehabilitation work is being completed under a Notice of Exemption (reconstruction of existing facilities with no or negligible expansion). The rehabilitation work will be completed prior to construction of the solar facilities. Combined, the impacts from these two projects would not exceed any of the thresholds discussed in Sections 3.5 through 3.26. In addition, compliance with the mitigation measures included in Sections 3.5 through 3.26 above will ensure that implementation of the proposed Project does not have impacts that are individually limited, but cumulatively considerable.

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 with Mitigation Incorporated.*

Discussion:

Compliance with the mitigation measures included in Sections 3.5 through 3.26 above 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.

3.27.2 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.

4 Persons and Organizations Consulted

On June 3, 2019, K.S. Dunbar & Associates, Inc., the Northern California Power Agency's environmental consultant, mailed copies of the Notice of Intent to Adopt a Mitigated Negative Declaration with a link to the Northern California Power Agency's website where the Initial Study and Mitigated Negative Declaration could be electronically downloaded to the following;

4.1 Federal Agencies

Jennifer Norris, Field Supervisor
Sacramento Fish & Wildlife Office
U.S. Fish & Wildlife Service
2800 Cottage Way, Room W-2605
Sacramento, California 95825-1888

Michael S. Jewell, Chief
Regulatory Division
U.S. Army Corps of Engineers – Sacramento District
1325 J Street, Room 1350
Sacramento, California 95814-2922

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

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

Matthais St. John, Executive Officer
California Regional Water Quality Control Board, North Coast Region
5550 Skyland Boulevard, Suite A
Santa Rosa, California 95403-1072

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

4.3 County Agencies

Rob Bamford
Air Pollution Control Officer/Executive Officer
Northern Sonoma County Air Pollution Control District
150 Matheson Street
Healdsburg, California 95448

Johannes J. Hoevertz, Director
Department of Transportation and Public Works
Sonoma County
La Plaza B
2300 County Center Drive
Santa Rosa, California 95403

4.4 City Agencies

Terry Crowley, Utilities Director
Electric, Water and Wastewater Department
City of Healdsburg
401 Grove Street
Healdsburg, California 95448

Maya DeRosa, Director
Building and Planning Director
City of Healdsburg
401 Grove Street
Healdsburg, California 95448

4.5 Interested Entities

Chris Wright, Chairperson
Dry Creek Rancheria of Pomo Indians
1550 Airport Boulevard, Suite 101
Santa Rosa, California 95401

Loren Smith, Tribal Historic Preservation Officer
Kashia Band of Pomo Indians of the Stewarts Point
1420 Guerneville Road, Suite 1
Santa Rosa, California 95403

Marjarie Mejia, Chairperson
Lytton Rancheria of California
437 Aviation Boulevard
Santa Rosa, California 95403

Scott Gabalon, Chairman
Mishewai-Wappo Tribe of Alexander Valley
2275 Silk Road
Windsor, California 95492

Patricia Hermasillo, Chairperson
Cloverdale Rancheria of Pomo Indians
555 S. Cloverdale Boulevard, Suite A
Cloverdale, California 95425

Gregg Sarris, Chairperson
Federation Indians of Graton Rancheria
6400 Redwood Drive, Suite 300
Rohnert Park, California 94928

Jose Simon, Chairperson
Middletown Rancheria of Pomo Indians
Post Office Box 1035
Middletown, California 96461-1035

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:

K.S. Dunbar & Associates, Inc.

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Erica D. Dunbar, President
Keith S. Dunbar, P.E., BCEE, Hon.D.WRE., F. ASCE, Project Manager

Anza Resource Consultants

(Cultural Resources)
Kevin Hunt, President
Katherine Collins, M.A., RPA, Principal Investigator
Spencer Bietz, GIS Specialist

ELMT Consulting

(Biological Resources)
Thomas J. McGill, Managing Director
Travis J. McGill, Director/Biologist

5.2 Report Contributors

Northern California Power Agency

Ron Yuen, Director of Engineering, Generation Services

City of Healdsburg

Terry Crowley, Utilities Director

6 References

- Air Resources Board. 2000. *Risk Guidance for the Permitting of New Stationary Diesel-Fueled Engines*.
- Air Resources Board. 2019. www.arb.ca.gov, 3/08/2019
- Air Resources Board. 2018. *California Greenhouse Gas Emissions for 2000 to 2016 Trends of Emissions and Other Indicators. 2018 Edition*.
- Anza Resource Consultants. 2019. *Cultural Resources Survey for the Northern California Power Agency Solar Project 1 – Healdsburg Wastewater Reclamation Facility Sonoma County, California*. K.S. Dunbar & Associates, Inc., April.
- Association of Environmental Professionals. 2019. *2019 CEQA, California Environmental Quality Act, Statutes & Guidelines*.
- Bay Area Air Quality Management District. 2017. *CEQA Guidelines*. May.
- Burns and McDonnell. 2018. *Healdsburg Phase 2B Site Screening and Fatal Flaw Evaluation*. Northern California Power Agency. July 18.
- Burns & McDonnell. 2019. *Healdsburg WRF Site Plan Development, Northern California Power Agency, Project No. 107642, Revision 2*, February 13.
- California Department of Transportation. 2019. *List of Scenic Highways in California*. www.dot.ca.gov, 3/11/2019.
- California Department of Transportation. 2019. *Traffic Counts*. www.dot.ca.gov, 3/11/2019.
- California Department of Transportation. 2017. *California Manual on Uniform Traffic Control Devices. 2014 Edition, Revision 2*. April 7, 2017.
- California Department of Transportation. 2013. *Transportation and Construction Vibration Guidance Manual*. September
- California Department of Toxic Substances Control. 2019. www.dtsc.ca.gov. 3/11/2019.
- California Department of Water Resources. 2010. *Guidelines, Proposition 84 & Proposition 1E, Integrated Regional Water Management*. August.
- California Natural Resources Agency. 2019. *Proposed Regulatory Text for the State CEQA Guidelines*.
- California Regional Water Quality Control Board, North Coast Region. 2018. *The Water Quality Control Plan for the North Coast Region*. June.
- City of Healdsburg Building and Planning Department. 2010. *Healdsburg 2030 General Plan, Background Report*. January 4.
- City of Healdsburg. 2010. *Healdsburg 2030 General Plan*. January 4.
- City of Healdsburg Utilities Department. 2018. *Annual Electric System Report*.
- ELMT Consulting. 2019. *Habitat and Jurisdictional Assessment for the Northern California Power Agency Solar Project 1 – Healdsburg Water Reclamation Facility Located in the City of Healdsburg, Sonoma County, California*. K.S. Dunbar & Associates, Inc. May.
- K.S. Dunbar & Associates, Inc., 2014. *Initial Study and Mitigated Negative Declaration, Solar Photovoltaic Renewable Energy Initiative – Phase II*. Eastern Municipal Water District. July.
- K.S. Dunbar & Associates, Inc., 2018. *Initial Study, Solar Photovoltaic Renewable Energy Initiative – Phase III*, Eastern Municipal Water District. August.
- Meister Consultants Group. 2014. *Solar and Glare*. Prepared for the U.S. Department of Energy. June.

- Mendocino County Air Quality Management District. 2010. *Adopted Air Quality CEQA Thresholds of Significance*. June 2.
- SCAQMD. 2006. *Final Methodology to Calculate Particulate Matter (PM) 2.5 and PM 2.5 Significance Thresholds*. October.
- SCAQMD. 2016. *Draft Final 2016 Air Quality Management Plan*. December.
- SCAQMD. 2016. *Appendix I, Health Effects. Draft Final 2016 Air Quality Management Plan*. December.
- SCAQMD. 1999. *CEQA Air Quality Handbook*. Revised March 2011. www.aqmd.gov. 5/24/2014
- SCAQMD. 2008. *Localized Significance Thresholds*. July. www.aqmd.gov. 5/24/2014
- U.S. Department of Agriculture, Natural Resources Conservation Service, Web Soil Survey, Sonoma County California. www.websoilsurvey.gov, 4/05/2019.
- SCAQMD. 2008. *Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold*. October. www.usa.com, 4/06/2019

Appendix A
Mitigated Negative Declaration



Mitigated Negative Declaration NCPA Solar Project 1 – Healdsburg WRF Site

1. Name of project:	NCPA Solar Project 1 – Healdsburg Water Reclamation Facility Site		
2. Project location – Identify street address and cross streets or attach a map showing the project site (preferably a USGS 7½' or 15' topographical map identified by quadrangle name):	See attachment.		
3. Entity or Person undertaking project:			
A. Entity			
(1) Name:	Northern California Power Agency		
(2) Address:	651 Commerce Drive, Roseville, California 95678-6420		
B. Other (Private)			
(1) Name:			
(2) Address:			
<p>Northern California Power Agency, having reviewed the Initial Study of this proposed project, having reviewed the written comments received prior to the public meeting of the Northern California Power Agency, having reviewed the recommendations of the Northern California Power Agency's Staff, 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 Northern California Power Agency's findings are as follows:</p> <p style="padding-left: 40px;">The Initial Study concluded that all significant impacts can be reduced to a level of less than significant by implementation of the Mitigation Monitoring and Reporting Program developed for this Project.</p>			
The Northern California Power Agency finds that the Mitigated Negative Declaration reflects its independent judgment. A copy of the Initial Study and Mitigation Monitoring and Reporting Program are attached.			
The location and custodian of the documents and any other materials which constitute the record of proceedings upon which the Northern California Power Agency based its decision to adopt this Mitigated Negative Declaration are as follows:			
Custodian:	Ron Yuen Director of Engineering, Generation Services	Location:	Northern California Power Agency 651 Commerce Driver Roseville, California 95678-6420
Phone:	(916) 781-4258		
Date:		Signature	

Overview of the Proposed Project:

The objective of the NCPA Solar Project 1 is to develop a fleet of Photovoltaic (PV) Solar Power Plants throughout participating member service territories construction to be started before the end of 2019. The plants will be managed by the Northern California Power Agency (NCPA) as a single project to be owned and operated by a third-party provider through a power purchase agreement (PPA). After the initial 5 – 7 years of operation, NCPA plans to purchase the plants.

The project will be executed in three phases:

- ❖ Phase 1 – Determine member interest and requirements and identify potential sites.
- ❖ Phase 2 – Site selection and screening, plan development and selection of a third-party provider to fulfill design, construction and operation through a PPA.
- ❖ Phase 3 – Construction and operation per the PPA.

NCPA has now completed Phase 1 and the site selection and screening portion of Phase 2. Burns & McDonnell was retained by NCPA to complete Phase 2 Site Screening, Plan Development, and Procurement services for each site selected by the member agencies. The City of Healdsburg selected a site at its water reclamation facility for development. That site is the subject of this Initial Study and Mitigated Negative Declaration (IS&MND).

Location of the Proposed Project

As shown on Figure 1, the Healdsburg Water Reclamation Facility is located south of the City at 340 Foreman Lane, Healdsburg, Sonoma County, California.

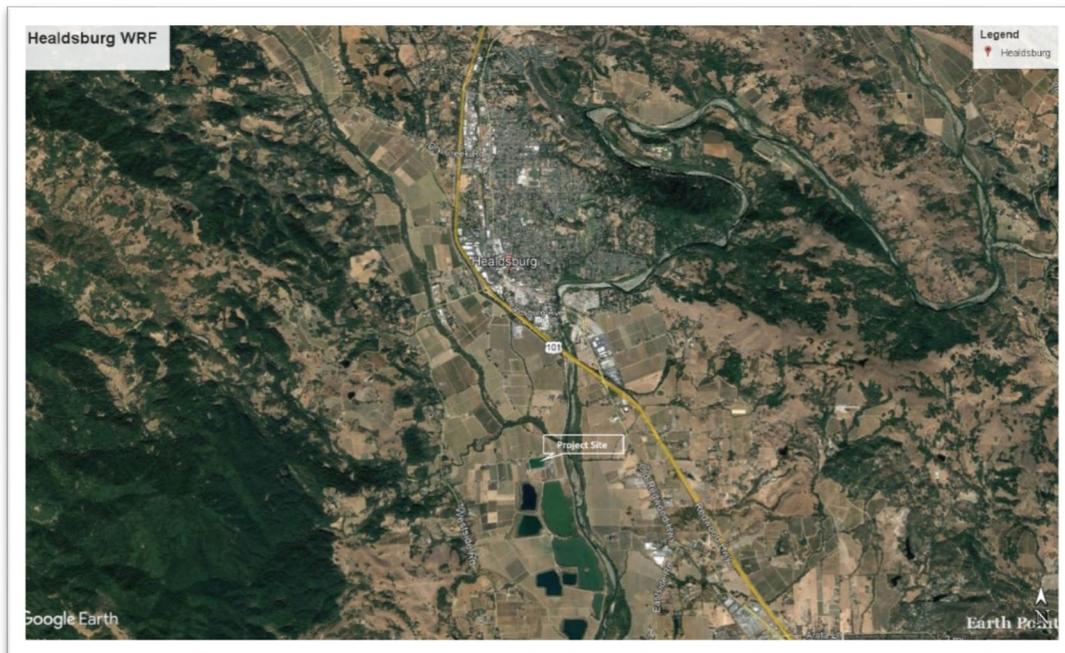


Figure 1 Healdsburg Water Reclamation Facility Location

The Project site is located within a 36-acre waste reclamation facility site that is situated between Foreman Lane to the north and Cohn Road to the south. The proposed technology type for the solar project is floating arrays, whereby the panels would be

mounted on pontoons that are anchored to ballasts located outside the ponds. As shown on Figure 2, the site would accommodate three arrays totaling 8.13 acres. The total installed capacity would be approximately 3.62 MW_{dc}.

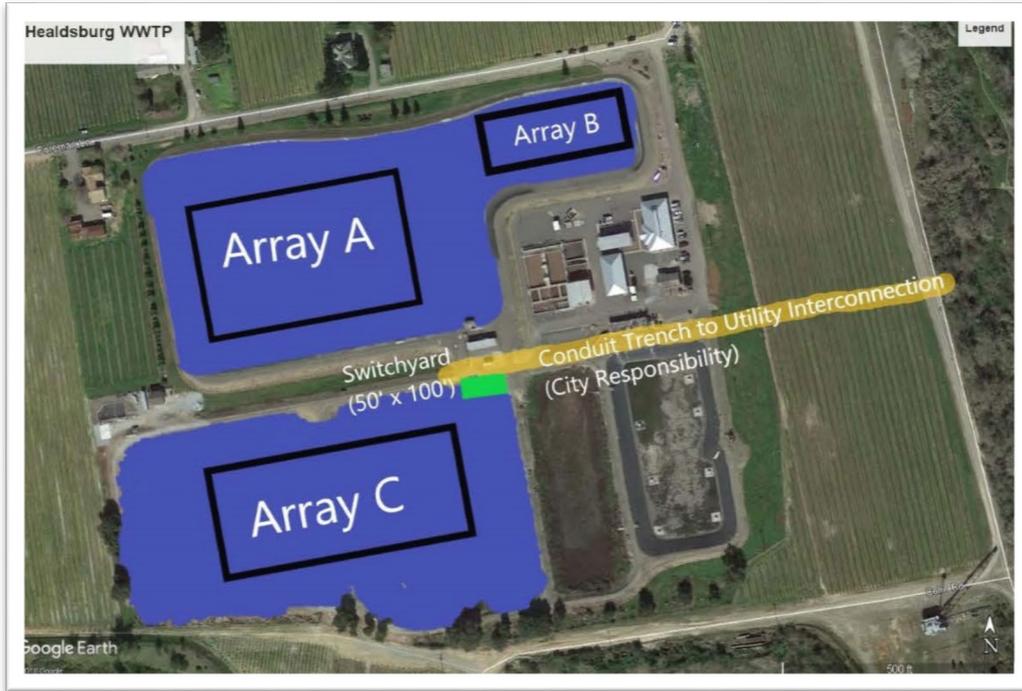


Figure 1 Proposed Solar Array Locations

Appendix B
Air Quality Modeling Results

Estimated Construction Emissions from Off-Road Heavy Duty Construction Equipment During Solar Equipment Installation

2019 Construction Year

Equipment	Emission Factor gr/hp-hr	Emission Factor lb/hp-hr	Number	horsepower	load factor	hours/day	Emissions pounds per day	Mitigated Emissions pounds per day
			Reactive Organic Gases (ROG)					
Crane	0.3491	0.00076894	2	399	0.43	8	2.11	
Tractors/Backhoes/Loaders	0.3678	0.00081013	1	108	0.55	8	0.38	
Water Trucks	0.2635	0.00058040	1	500	0.5	2	0.29	
Totals							2.79	

Equipment	Emission Factor gr/hp-hr	Emission Factor lb/hp-hr	Number	horsepower	load factor	hours/day	Emissions pounds per day	Mitigated Emissions pounds per day
			Carbon Monoxide (CO)					
Crane	2.96983	0.00654148	2	399	0.43	8	17.96	
Tractors/Backhoes/Loaders	3.63777	0.00801271	1	108	0.55	8	3.81	
Water Trucks	1.48346	0.00326753	1	500	0.5	2	1.63	
Totals							23.40	

Equipment	Emission Factor gr/hp-hr	Emission Factor lb/hp-hr	Number	horsepower	load factor	hours/day	Emissions pounds per day	Mitigated Emissions pounds per day
			Oxides of Nitrogen (NO_x)					
Crane	4.29654	0.00946374	2	399	0.43	8	25.98	22.08
Tractors/Backhoes/Loaders	3.69287	0.00813407	1	108	0.55	8	3.87	3.29
Water Trucks	2.66851	0.00587778	1	500	0.5	2	2.94	2.50
Totals							32.78	27.87

Equipment	Emission Factor gr/hp-hr	Emission Factor lb/hp-hr	Number	horsepower	load factor	hours/day	Emissions pounds per day	Mitigated Emissions pounds per day
			Oxides of Sulfur (SO_x)					
Crane	0.0049	0.00001079	2	399	0.43	8	0.03	
Tractors/Backhoes/Loaders	0.0049	0.00001079	1	108	0.55	8	0.01	
Water Trucks	0.0049	0.00001079	1	500	0.5	2	0.01	
Totals							0.04	

Equipment	Emission Factor gr/hp-hr	Emission Factor lb/hp-hr	Number	horsepower	load factor	hours/day	Emissions pounds per day	Mitigated Emissions pounds per day
			Respirable Particulate Matter (PM₁₀)					
Crane	0.173	0.00038106	2	399	0.43	8	1.05	0.16
Tractors/Backhoes/Loaders	0.2465	0.00054295	1	108	0.55	8	0.26	0.04
Water Trucks	0.097	0.00021366	1	500	0.5	2	0.11	0.02
Totals							1.41	0.21

Equipment	Emission Factor gr/hp-hr	Emission Factor lb/hp-hr	Number	horsepower	load factor	hours/day	Emissions pounds per day	Mitigated Emissions pounds per day
			Fine Particulate Matter (PM_{2.5})					
Crane	0.1592	0.00035066	2	399	0.43	8	0.96	0.14
Tractors/Backhoes/Loaders	0.2268	0.00049956	1	108	0.55	8	0.24	0.04
Water Trucks	0.0893	0.00019670	1	500	0.5	2	0.10	0.01
Totals							1.30	0.19

Equipment	Emission Factor gr/hp-hr	Emission Factor lb/hp-hr	Number	horsepower	load factor	hours/day	Emissions pounds per day	Mitigated Emissions pounds per day
			Carbon Dioxide (CO₂)					
Crane	483.1422	1.06418987	2	399	0.43	8	2,921	
Tractors/Backhoes/Loaders	486.8508	1.07235859	1	108	0.55	8	510	
Water Trucks	485.3832	1.06912599	1	500	0.5	2	535	
Totals							3,965	

Equipment	gr/hp-hr	Emission Factor lb/hp-hr	Number	horsepower	load factor	hours/day	Emissions pounds per day	Mitigated Emissions pounds per day
Crane	0.1529	0.00033678	2	399	0.43	8	0.92	
Tractors/Backhoes/Loaders	0.1537	0.00033855	1	108	0.55	8	0.16	
Water Trucks	0.1536	0.00033833	1	500	0.5	2	0.17	
Totals							1.25	

Methane (CH₄)

Appendix C
Biological Resources Technical Report



May 2, 2019

K.S. DUNBAR & ASSOCIATES

Contact: Keith S. Dunbar, P.E., BCEE, Hon.D.WRE, F.ASCE
45375 Vista Del Mar
Temecula, California 92590

SUBJECT: Habitat and Jurisdictional Assessment for the Northern California Power Agency Solar Project 1 – Healdsburg Water Reclamation Facility Located in the City of Healdsburg, Sonoma County, California

Introduction

This report contains the findings of ELMT Consulting’s (ELMT) habitat and jurisdictional assessment for the Northern California Power Agency (NCPA) Solar Project 1 – Healdsburg Water Reclamation Facility (WRF) (project site or site) located in the City of Healdsburg, Sonoma County, California. The habitat and jurisdictional assessment was conducted by biologist Travis J. McGill on April 16, 2019 to document baseline conditions and assess the potential for special-status¹ 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 (CNDDDB), and other electronic databases as potentially occurring in the general vicinity of the project site.

Project Location

The project site is generally located south and west of U.S. Route 101, east of the Sonoma Mountains, and north of State Route 116 in the City of Healdsburg, Sonoma County, California. The project site is depicted on the Healdsburg quadrangle of the United States Geological Survey’s (USGS) 7.5-minute topographic map series within an unsectioned portion of Township 9 North, Range 8 West. Specifically, the project site is located at 340 Foreman Lane within a 36-acre existing waste water treatment plant between Foreman Lane to the north and Cohn Road to the south. Refer to Exhibits 1 thru 3 in Attachment A.

Project Description

The proposed project will be located on two ponds, each roughly 7-acres. The north pond will contain Array A and Array B and the south pond will contain Array C. Currently, the pond that encompasses Array C is separated into two ponds by an embankment; however, work is underway to remove the embankment and combine the two ponds. The ponds are emptied by May 1st of each year to allow the maximum amount of

¹ 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.

storage during the summer seasons. In the summer months, irrigation and other uses will draw from the ponds. As a result, the water level in the ponds will range from two feet below top of embankment to fully empty. The solar photovoltaic (“PV”) arrays must rise and fall with the changing water levels throughout the year without damaging the existing pond liner, embankment, or the solar PV system itself.

Based on the site layout in, the aggregate project size across all three arrays is estimated to be 3.6 MW direct current (“MWdc”) or 2.7 MW alternating current with an assumed DC/AC ratio of 1.3. The proposed technology type for the solar project is floating arrays, whereby the panels will be mounted to pontoons that are anchored to ballasts located outside the treatment ponds. The current treatment pond will be developed to house both Arrays A and B. Healdsburg indicated it has plans to pond the two areas just south of the existing treatment pond, shown as Array C.

Methodology

A literature review and records search were conducted to determine which special-status biological resources have the potential to occur on or within the general vicinity of the project site. In addition to the literature review, a general habitat assessment or field investigation of the project site was conducted to document existing conditions and assess the potential for special-status biological resources to occur within the project site.

Literature Review

Prior to conducting the field investigation, a literature review and records search was conducted for special-status biological resources potentially occurring on or within the vicinity of the project site. Previously recorded occurrences of special-status plant and wildlife species and their proximity to the project site were determined through a query of the CDFW’s QuickView Tool in the Biogeographic Information and Observation System (BIOS), CNDDDB Rarefind 5, the California Native Plant Society’s (CNPS) Electronic Inventory of Rare and Endangered Vascular Plants of California, Calflora Database, compendia of special-status species published by CDFW, and the United States Fish and Wildlife Service (USFWS) species listings.

All available reports, survey results, and literature detailing the biological resources previously observed on or within the vicinity of the project site were reviewed to understand existing site conditions and note the extent of any disturbances that have occurred within the project site that would otherwise limit the distribution of special-status biological resources. Standard field guides and texts were reviewed for specific habitat requirements of special-status and non-special-status biological resources, as well as the following resources:

- Google Earth Pro historic aerial imagery (1993-2019);
- United States Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS), Soil Survey²;
- USFWS Critical Habitat designations for Threatened and Endangered Species; and

2 A soil series is defined as a group of soils with similar profiles developed from similar parent materials under comparable climatic and vegetation conditions. These profiles include major horizons with similar thickness, arrangement, and other important characteristics, which may promote favorable conditions for certain biological resources.

- USFWS Endangered Species Profiles.

The literature review provided a baseline from which to inventory the biological resources potentially occurring within the project site. The CNDDDB database was used, in conjunction with ArcGIS software, to locate the nearest recorded occurrences of special-status species and determine the distance from the project site.

Habitat Assessment/Field Investigation

Following the literature review, biologist Travis J. McGill inventoried and evaluated the condition of the habitat within the project site on April 16, 2019. Plant communities and land cover types identified on aerial photographs during the literature review were verified by walking meandering transects throughout the project site. In addition, aerial photography was reviewed prior to the site investigation to locate potential natural corridors and linkages that may support the movement of wildlife through the area. These areas identified on aerial photography were then walked during the field investigation.

All plant and wildlife species observed, as well as dominant plant species within each plant community, were recorded. Plant species observed during the field investigation were identified by visual characteristics and morphology in the field. Unusual and less familiar plant species were photographed during the field investigation and identified in the laboratory using taxonomical guides. Wildlife detections were made through observation of scat, trails, tracks, burrows, nests, and/or visual and aural observation. In addition, site characteristics such as soil condition, topography, hydrology, anthropogenic disturbances, indicator species, condition of on-site plant communities and land cover types, and presence of potential jurisdictional drainage and/or wetland features were noted.

Soil Series Assessment

On-site and adjoining soils were researched prior to the field investigation using the USDA NRCS Soil Survey for Sonoma County, California. In addition, a review of the local geological conditions and historical aerial photographs was conducted to assess the ecological changes that the project site have undergone.

Plant Communities

Plant communities were mapped using 7.5-minute USGS topographic base maps and aerial photography. The plant communities were classified in accordance with Sawyer, Keeler-Wolf and Evens (2009), delineated on an aerial photograph, and then digitized into GIS Arcview. The Arcview application was used to compute the area of each plant community and/or land cover type in acres.

Plants

Common plant species observed during the field investigation were identified by visual characteristics and morphology in the field and recorded in a field notebook. Unusual and less familiar plants were photographed in the field and identified in the laboratory using taxonomic guides. Taxonomic nomenclature used in this study follows the 2012 Jepson Manual (Hickman 2012). In this report, scientific names are provided immediately following common names of plant species (first reference only).

Wildlife

Wildlife species detected during the field investigation by sight, calls, tracks, scat, or other sign were recorded during surveys in a field notebook. Field guides used to assist with identification of wildlife species during the survey included *The Sibley Field Guide to the Birds of Western North America* (Sibley 2003), *A Field Guide to Western Reptiles and Amphibians* (Stebbins 2003), and *A Field Guide to Mammals of North America* (Reid 2006). Although common names of wildlife species are well standardized, scientific names are provided immediately following common names in this report (first reference only).

Jurisdictional Drainages and Wetlands

Aerial photography was reviewed prior to conducting a field investigation in order to locate and inspect any potential natural drainage features, ponded areas, or water bodies that may fall under the jurisdiction of the United States Army Corps of Engineers (Corps), Regional Water Quality Control Board (Regional Board), or CDFW. In general, surface drainage features indicated as blue-line streams on USGS maps that are observed or expected to exhibit evidence of flow are considered potential riparian/riverine habitat and are also subject to state and federal regulatory jurisdiction. In addition, ELMT reviewed jurisdictional waters information through examining historical aerial photographs to gain an understanding of the impact of land-use on natural drainage patterns in the area. The USFWS National Wetland Inventory (NWI) and Environmental Protection Agency (EPA) Water Program “My Waters” data layers were also reviewed to determine whether any hydrologic features and wetland areas have been documented on or within the vicinity of the project site.

Existing Site Conditions

The project site is located on two ponds, each roughly 7-acres, totaling 14-acres. The site is surrounded by agricultural fields on three sides, with the nearest residences located on adjacent parcels to the west of the site, approximately 45-feet from site parcel edge and north at approximately 65-feet and 125-feet from the site parcel edge. According to the NWI data, a wetland feature has been mapped on the southern portion of the parcel (proposed Array C). The Federal Emergency Management Agency (FEMA) data indicates that a majority of the site is located in an area above the 500-year flood level, and a small portion on the southern parcel is located within the 100-year flood zone.

The proposed project footprint is relatively flat at an approximate elevation of 90 feet above mean sea level, with the exception of the side slopes of the ponds that have been dug out to create the onsite basins. Based on the NRCS USDA Web Soil Survey, the project site is underlain by the following soil units: Yolo sandy loam, overwash (0 to 5 percent slopes), and Yolo loam (0 to 10 percent slopes). Refer to Exhibit 4, *Soils*, in Attachment A. Soils on-site have been mechanically disturbed and heavily compacted from development of the WRF.

Vegetation

Due to existing land uses, no native plant communities or natural communities of special concern were observed on the project site. The project site primarily consists of the existing WRF that consist of existing ponds and associated infrastructure and buildings that are subject to ongoing anthropogenic disturbances. These disturbances have eliminated the natural plant communities that once occurred within the boundaries of the project site. Refer to Attachment B, *Site Photographs*, 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 and developed. Refer to Exhibit 5, *Vegetation* in Attachment A. Within the proposed project footprint, developed areas consist of the existing buildings and structures associated with the WRF, and the disturbed areas within the project footprint consist of the areas that have been subject to routine anthropogenic disturbances. It should be noted that the southern ponds that will form Array C are earthen lined and support non-native and early succession/ruderal plant species. Plant species observed onsite include filaree (*Erodium sp.*), wild radish (*Raphanus raphanistrum*), yellow sweet clover (*Mililotus officinalis*), wild oat (*Avena sp.*), mouse barley (*Hordeum murinum*), milk thistle (*Silybum marianum*), riggut (*Bromus diandrus*), mulefat (*Baccharis salicifolia*), blackberry (*Rubus ursinus*), short-podded mustard (*Hirschfeldia incana*), cheeseweed (*Malva parviflora*), prickly lettuce (*Lactuca serriola*), and curly dock (*Rumex crispus*).

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 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 fish were observed in the onsite ponds during the field investigation. The ponds only support water for portions of the year and do not provide a perennial water source or connect to natural water features that would provide suitable habitat for fish species. The only fish species that have the potential to occur in the ponds are fish that are exotic or introduced such as mosquitofish (*Gambusia affinis*) and bluegill (*Lepomis macrochirus*). No special-status fish species are expected to occur within the project site.

Amphibians

No amphibians were observed within the ponds during the field investigation. The ponds only support water for portions of the year and do not provide a perennial water source or connect to natural water features that would provide long term habitat for amphibian species. The only amphibian species that have the potential to occur in the ponds are tree frog (*Pseudacris regilla*). No special-status amphibian species are expected to occur within 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*), and alligator lizard (*Elgaria multicarinata*). Due to the high level of anthropogenic disturbances on-site no special-status reptilian species are expected to occur within project site. Further, when the ponds onsite are filled with water, they have the potential to support introduced/exotic turtles such as red-eared slider (*Trachemys scripta elegans*).

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*), house finch (*Haemorhouse mexicanus*), American crow (*Corvus brachyrhynchos*), killdeer (*Charadrius vociferus*), turkey vulture (*Cathartes aura*), Canada goose (*Branta canadensis*), bufflehead (*Bucephala albeola*), red-tailed hawk (*Buteo jamaicensis*), black phoebe (*Sayornis nigricans*), California towhee (*Melospiza crissalis*), golden crowned sparrow (*Zonotrichia atricapilla*), mallard (*Anas platyrhynchos*), and northern rough-winged swallow (*Stelgidopteryx serripennis*). Due to routine disturbance associated with the existing WRF, the project site does not provide suitable habitat for special-status bird species known to occur in the area.

Mammals

During the field investigation no mammalian species were 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 California ground squirrel (*Otospermophilus beecheyi*), 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 opportunities. 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 still 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.

It should be noted that the Russian River, Mill Creek, and Dry Creek support natural habitats which allow wildlife to move through the region in search of food, shelter, or nesting habitat. The project site is separated from the influences of the Russian River, Mill Creek, and Dry Creek by agricultural fields and the proposed project will be confined to existing disturbed/developed areas. Implementation of the proposed project is not expected to result in temporary and/or permanent impacts to potential wildlife movement opportunities along the Russian River, Mill Creek, and Dry Creek 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 Corps Regulatory Branch 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 CDFW regulates alterations to streambed and bank under Fish and Wildlife Code Sections 1600 et seq., and the Regional Board regulates discharges into surface waters pursuant to Section 401 of the CWA and the California Porter-Cologne Water Quality Control Act.

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 the NWI data, a wetland feature has been mapped as supporting a freshwater pond on the southern portion of the parcel (proposed Array C). The mapped freshwater pond is located on the southern portion of the project site where the existing water retention basins were created. During the field investigation, no evidence of a freshwater pond was observed onsite within the existing water retention basins. As a result, no impacts to the NWI mapped freshwater pond will occur from the proposed project.

Special-Status Biological Resources

The CNDDDB 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 Healdsburg and Guerneville 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 thirty-three (33) special-status plant species, thirty-seven (37) special-status wildlife species, and one (1) special-status plant community as having potential to occur within the Healdsburg and Guerneville 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*.

Special-Status Plants

According to the CNDDDB and CNPS, thirty-three (33) special-status plant species have been recorded in the Healdsburg and Guerneville quadrangles (refer to Attachment C). No special-status plant species were observed onsite during the habitat assessment. The project site consists of the existing WRF that has been subject to various anthropogenic disturbances and development. 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 are presumed to be absent from the project site. No focused surveys are recommended.

Special-Status Wildlife

According to the CNDDDB, thirty-seven (37) special-status wildlife species have been reported in the Healdsburg and Guerneville quadrangles (refer to Attachment C). No special-status wildlife species were observed onsite during the habitat assessment. The project site consists of the existing WRF that has been subject to various anthropogenic disturbances and development. These disturbances have eliminated the natural plant communities that once occurred on-site which have greatly reduced potential foraging opportunities for 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 low potential to support great egret (*Ardea alba*), and great blue heron (*Ardea herodias*). Both of these species are not federally, or state listed. All remaining special-status wildlife species were determined to have a low potential to occur or are presumed to be absent from the project site since the project sites have been heavily disturbed from onsite disturbances. No focused surveys are recommended.

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, impacts to the aforementioned species will be less than significant.

Special-Status Plant Communities

According to the CNDDDB, one (1) special-status plant community has been reported in the Healdsburg and Guerneville USGS 7.5-minute quadrangles: Northern Hardpan Vernal Pool. 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 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 with federally designated Critical Habitat. Refer to Exhibit 6, *Critical Habitat*

in Attachment A. The nearest designated Critical Habitat is located approximately 0.15 mile east of the project site for steelhead (*Oncorhynchus mykiss*) and Chinook salmon (*Oncorhynchus tshawytscha*) associated with Dry Creek and the Russian River. Therefore, the loss or adverse modification of Critical Habitat from site development will not occur and consultation with the USFWS for impacts to Critical Habitat will not be required for implementation of the proposed project.

Recommendations

Migratory Bird Treaty Act and Fish and Game Code

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 should be conducted prior to any ground disturbance or vegetation removal activities that may disrupt the birds during the nesting season.

If construction occurs between February 1st and August 31st, a pre-construction clearance survey for nesting birds should 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 (generally 300 feet for migratory and non-migratory song birds and 500 feet raptors and special-status species) will be determined by the wildlife biologist, in coordination with the CDFW, and will depend on the level of noise and/or surrounding disturbances, line of sight between the nest and the construction activity, ambient noise, 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.

Conclusion

Based on the proposed project footprint and existing site conditions discussed in this report, none of the special-status plant or wildlife species known to occur in the general vicinity of the project site are expected to be directly or indirectly impacted from implementation of the proposed project. With completion of the recommendations provided above, no impacts to year-round, seasonal, or special-status avian residents will occur from implementation of the proposed project. Therefore, it was determined that implementation of the project will have “no effect” on federally or State listed species known to occur in the general vicinity of the project site. Additionally, the development of the project will not impact designated Critical Habitats or regional wildlife movement corridors/linkages.

Please do not hesitate to contact Tom McGill at (951) 285-6014 or tmcgill@elmtconsulting.com or Travis McGill at (909) 816-1646 or travismcgill@elmtconsulting.com should you have any questions this report.

Sincerely,



Thomas J. McGill, Ph.D.
Managing Director



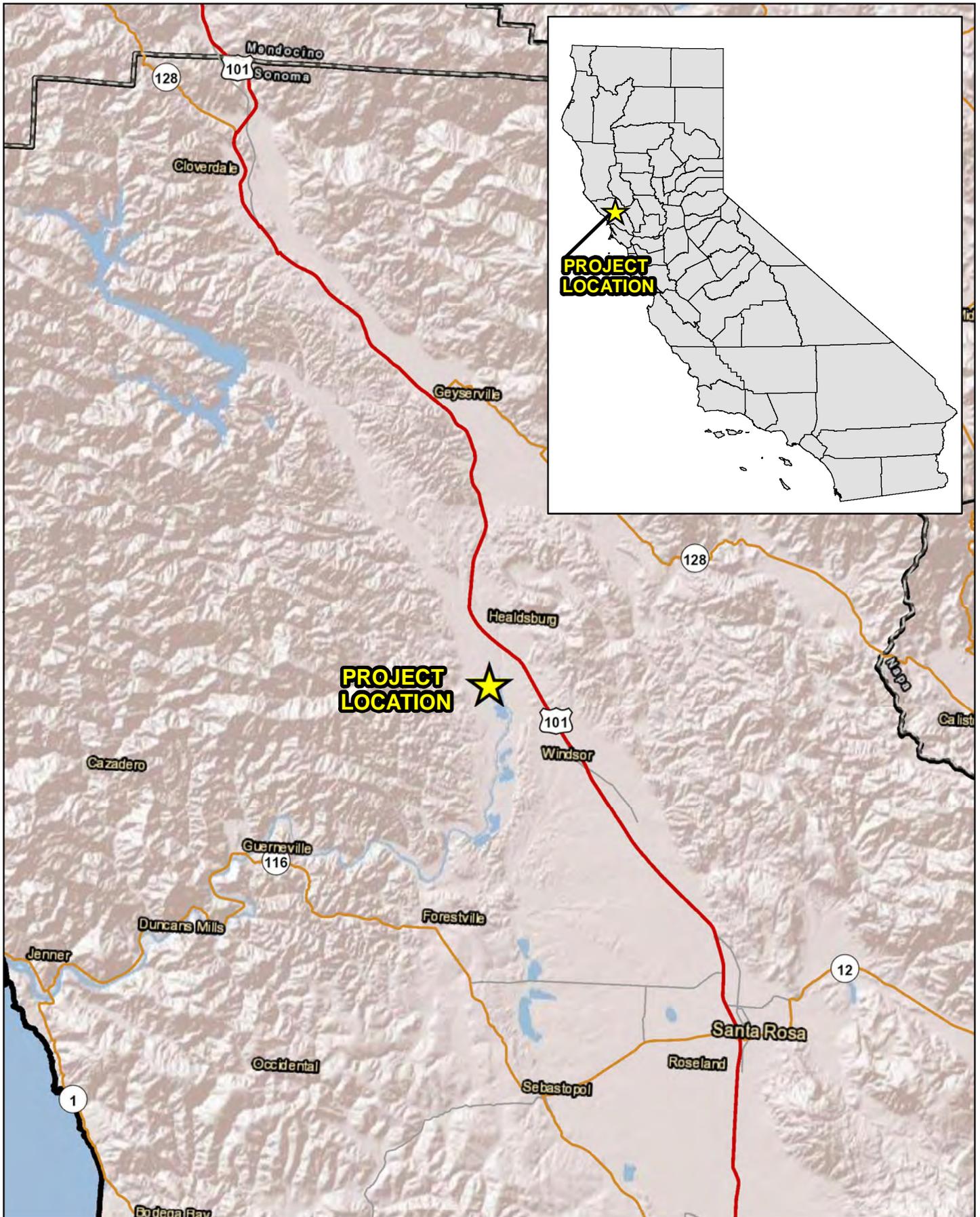
Travis J. McGill
Director

Attachments:

- A. *Project Exhibits*
- B. *Site Photographs*
- C. *Potentially Occurring Special-Status Biological Resources*
- D. *Regulations*

Attachment A

Project Exhibits



NCPA SOLAR PROJECT 1 - HEALDSBURG WRF SITE
HABITAT AND JURISDICTIONAL ASSESSMENT

Regional Vicinity



Source: World Transportation, World Shaded Relief, Sonoma County



NCPA SOLAR PROJECT 1 - HEALDSBURG WRF SITE
HABITAT AND JURISDICTIONAL ASSESSMENT



Source: USA Topographic Map, Sonoma County

Site Vicinity

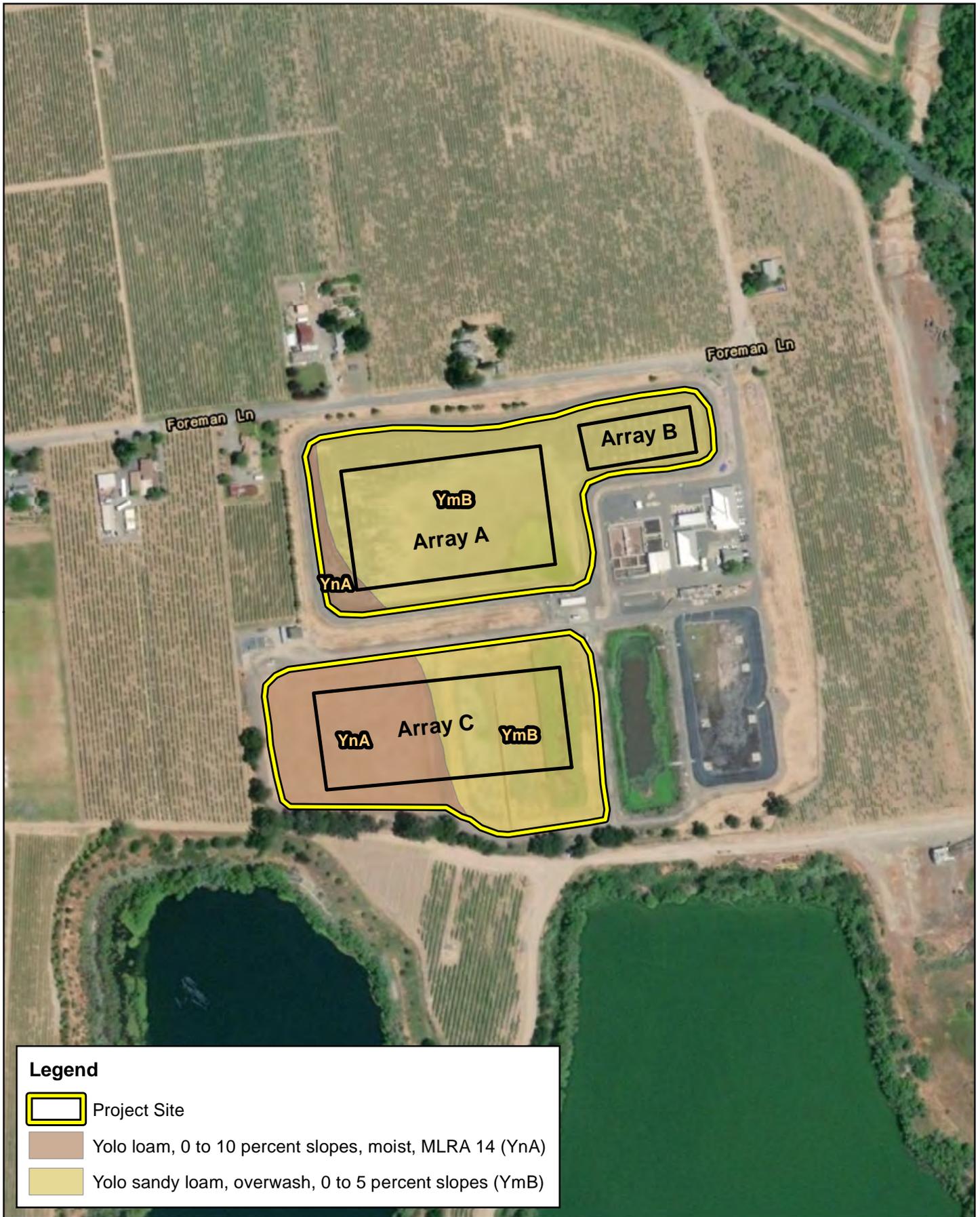


NCPA SOLAR PROJECT 1 - HEALDSBURG WRF SITE
HABITAT AND JURISDICTIONAL ASSESSMENT

Project Site



Source: ESRI World Imagery, Sonoma County



Legend

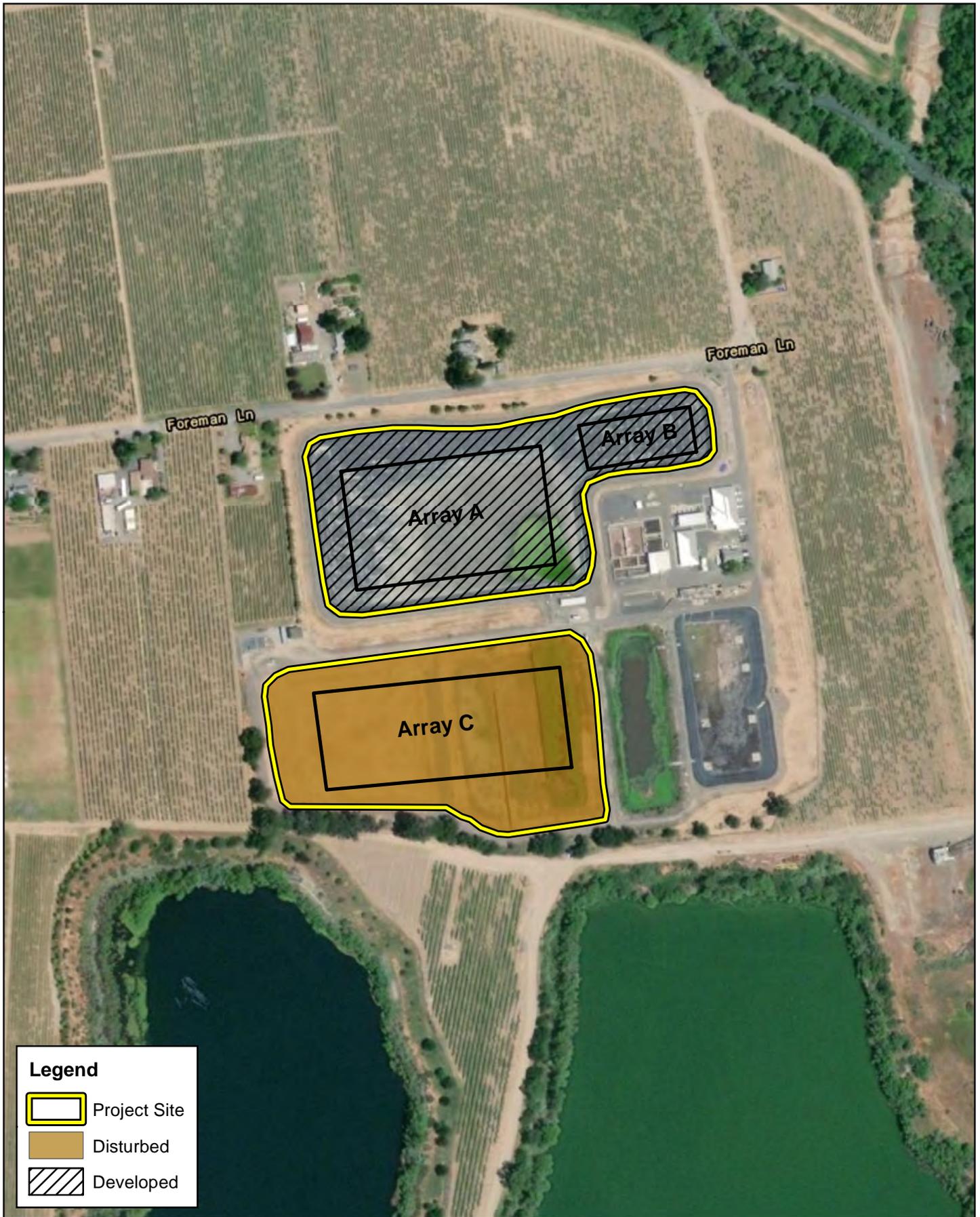
- Project Site
- Yolo loam, 0 to 10 percent slopes, moist, MLRA 14 (YnA)
- Yolo sandy loam, overwash, 0 to 5 percent slopes (YmB)

NCPA SOLAR PROJECT 1 - HEALDSBURG WRF SITE
HABITAT AND JURISDICTIONAL ASSESSMENT



Source: ESRI World Imagery, NRCS Soil Survey Geographic Database, Sonoma County

Soils

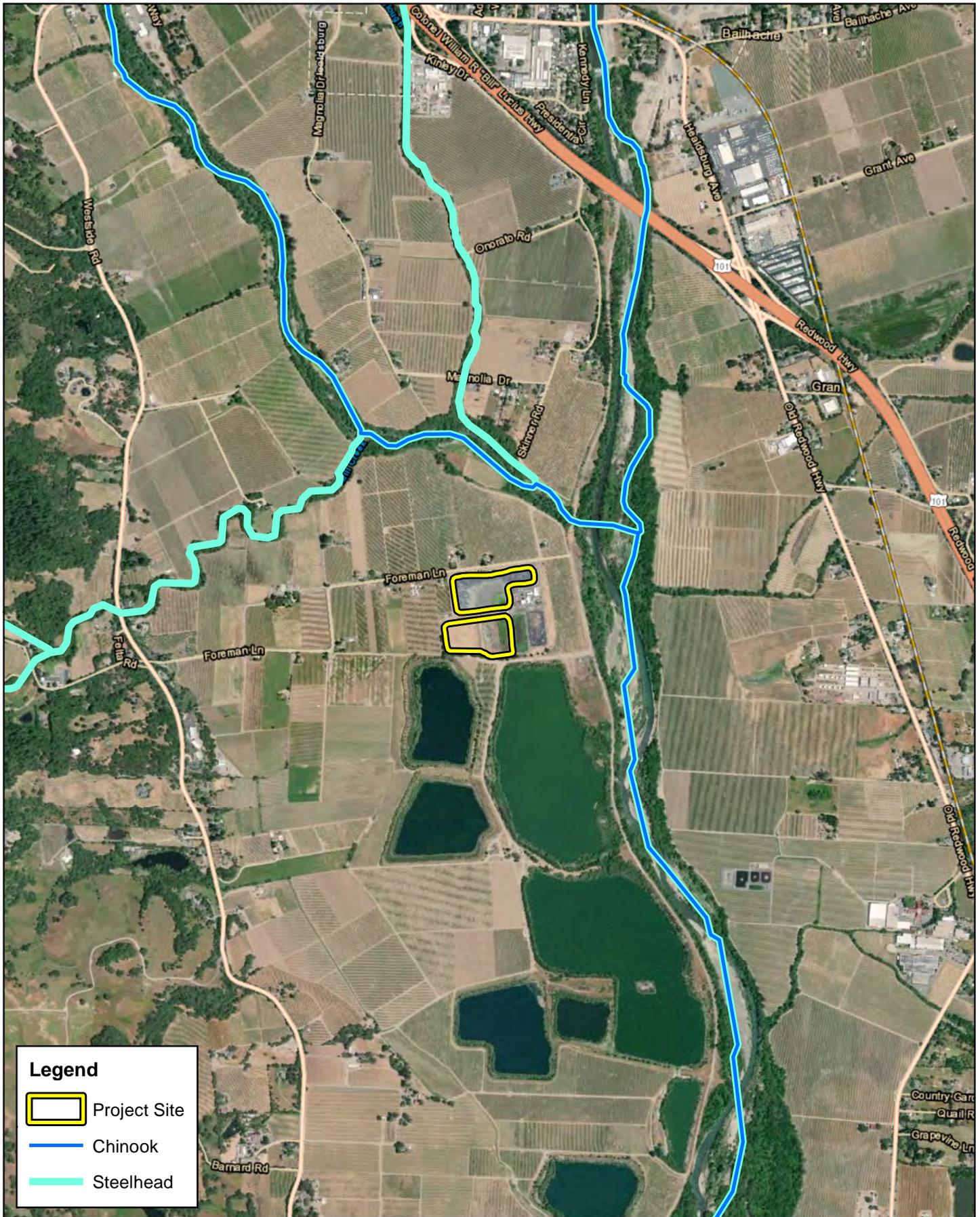


NCPA SOLAR PROJECT 1 - HEALDSBURG WRF SITE
HABITAT AND JURISDICTIONAL ASSESSMENT

Vegetation



Source: ESRI World Imagery, Sonoma County

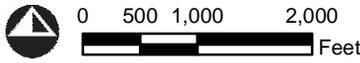


Legend

- Project Site
- Chinook
- Steelhead

NCPA SOLAR PROJECT 1 - HEALDSBURG WRF SITE
HABITAT AND JURISDICTIONAL ASSESSMENT

Critical Habitat



Source: ESRI World Imagery, USFWS Critical Habitat, Sonoma County

Attachment B

Site Photographs



Photograph 1: From the eastern boundary of the north pond looking west.



Photograph 2: From the northeast corner of the north pond looking southwest.



Photograph 3: From the northwest corner of the north pond looking east along the northern boundary of the pond.



Photograph 4: From the southwest corner of the north pond looking northeast.



Photograph 5: View of the southeast corner of the north pond.



Photograph 6: From the northeast corner of the southern pond looking southwest.



Photograph 7: From the southeast corner of the southern pond looking northwest.



Photograph 8: Looking northeast across the eastern portion of the southern pond.



Photograph 9: From the southeast corner of the western portion of the southern pond looking northwest.



Photograph 10: From the northwest corner of the western portion of the southern pond looking southeast.

Attachment C

Potentially Occurring Special-Status Biological Resources

Scientific Name	Common Name	Federal Status	State Status	CDFW Listing	CNPS Rare Plant Rank	Potential to Occur
Special-Status Wildlife Species						
<i>Accipiter cooperii</i>	Cooper's hawk	None	None	WL	-	Moderate
<i>Ammodramus savannarum</i>	grasshopper sparrow	None	None	SSC	-	Presumed Absent
<i>Antrozous pallidus</i>	pallid bat	None	None	SSC	-	Presumed Absent
<i>Ardea alba</i>	great egret	None	None	-	-	Low
<i>Ardea herodias</i>	great blue heron	None	None	-	-	Low
<i>Athene cucularia</i>	burrowing owl	None	None	SSC	-	Presumed Absent
<i>Bombus caliginosus</i>	obscure bumble bee	None	None	-	-	Presumed Absent
<i>Bombus occidentalis</i>	western bumble bee	None	None	-	-	Presumed Absent
<i>Corynorhinus townsendii</i>	Townsend's big-eared bat	None	None	SSC	-	Presumed Absent
<i>Dicamptodon ensatus</i>	California giant salamander	None	None	SSC	-	Presumed Absent
<i>Dubiraphia giulianii</i>	Giuliani's dubiraphian riffle beetle	None	None	-	-	Presumed Absent
<i>Elanus leucurus</i>	white-tailed kite	None	None	FP	-	Presumed Absent
<i>Emys marmorata</i>	western pond turtle	None	None	SSC	-	Presumed Absent
<i>Entosphenus tridentatus</i>	Pacific lamprey	None	None	SSC	-	Presumed Absent
<i>Erethizon dorsatum</i>	North American porcupine	None	None	-	-	Presumed Absent
<i>Gonidea angulata</i>	western ridged mussel	None	None	-	-	Presumed Absent
<i>Hysteroecarpus traskii</i>	Russian River tule perch	None	None	SSC	-	Presumed Absent
<i>Icteria virens</i>	yellow-breasted chat	None	None	SSC	-	Presumed Absent
<i>Lasiurus cinereus</i>	hoary bat	None	None	-	-	Presumed Absent
<i>Lavinia exilicauda exilicauda</i>	Sacramento hitch	None	None	SSC	-	Presumed Absent
<i>Lavinia symmetricus navarroensis</i>	Navarro roach	None	None	SSC	-	Presumed Absent
<i>Lavinia symmetricus ssp. 4</i>	Clear Lake - Russian River roach	None	None	SSC	-	Presumed Absent
<i>Linderiella occidentalis</i>	California linderiella	None	None	-	-	Presumed Absent
<i>Margaritifera falcata</i>	western pearlshell	None	None	-	-	Presumed Absent
<i>Mylopharodon conocephalus</i>	hardhead	None	None	SSC	-	Presumed Absent
<i>Oncorhynchus keta</i>	chum salmon	None	None	-	-	Presumed Absent
<i>Oncorhynchus kisutch pop. 2</i>	coho salmon - southern Oregon / northern California ESU	Threatened	Threatened	-	-	Presumed Absent
<i>Oncorhynchus kisutch pop. 4</i>	coho salmon - central California coast ESU	Endangered	Endangered	-	-	Presumed Absent
<i>Oncorhynchus mykiss irideus pop. 16</i>	steelhead - northern California DPS	Threatened	None	-	-	Presumed Absent
<i>Oncorhynchus mykiss irideus pop. 8</i>	steelhead - central California coast DPS	Threatened	None	-	-	Presumed Absent
<i>Oncorhynchus tshawytscha pop. 17</i>	chinook salmon - California coastal ESU	Threatened	None	-	-	Presumed Absent
<i>Pandion haliaetus</i>	osprey	None	None	WL	-	Presumed Absent
<i>Rana boylei</i>	foothill yellow-legged frog	None	Candidate Threatened	SSC	-	Presumed Absent
<i>Rana draytonii</i>	California red-legged frog	Threatened	None	SSC	-	Presumed Absent
<i>Taricha rivularis</i>	red-bellied newt	None	None	SSC	-	Presumed Absent
<i>Taricha torosa</i>	Coast Range newt	None	None	SSC	-	Presumed Absent
<i>Vulpes vulpes patwin</i>	Sacramento Valley red fox	None	None	-	-	Presumed Absent
Special-Status Plant Species						
<i>Amorpha californica var. napensis</i>	Napa false indigo	None	None	-	1B.2	Presumed Absent
<i>Arctostaphylos bakeri ssp. sublaevis</i>	The Cedars manzanita	None	Rare	-	1B.2	Presumed Absent
<i>Arctostaphylos hispidula</i>	Howell's manzanita	None	None	-	4.2	Presumed Absent
<i>Blennosperma bakeri</i>	Sonoma sunshine	Endangered	Endangered	-	1B.1	Presumed Absent
<i>Brodiaea leptandra</i>	narrow-anthered brodiaea	None	None	-	1B.2	Presumed Absent

<i>Calamagrostis ophitidis</i>	serpentine reed grass	None	None	-	4.3	Presumed Absent
<i>Calochortus raichei</i>	The Cedars fairy-lantern	None	None	-	1B.2	Presumed Absent
<i>Carex comosa</i>	bristly sedge	None	None	-	2B.1	Presumed Absent
<i>Castilleja ambigua var. ambigua</i>	johnny-nip	None	None	-	4.2	Presumed Absent
<i>Ceanothus confusus</i>	Rincon Ridge ceanothus	None	None	-	1B.1	Presumed Absent
<i>Ceanothus purpureus</i>	holly-leaved ceanothus	None	None	-	1B.2	Presumed Absent
<i>Centromadia parryi ssp. parryi</i>	pappose tarplant	None	None	-	1B.2	Presumed Absent
<i>Cordylanthus tenuis ssp. capillaris</i>	Pennell's bird's-beak	Endangered	Rare	-	1B.2	Presumed Absent
<i>Cypripedium montanum</i>	mountain lady's-slipper	None	None	-	4.2	Presumed Absent
<i>Downingia pusilla</i>	dwarf downingia	None	None	-	2B.2	Presumed Absent
<i>Erigeron biolettii</i>	streamside daisy	None	None	-	3	Presumed Absent
<i>Fritillaria liliacea</i>	fragrant fritillary	None	None	-	1B.2	Presumed Absent
<i>Hemizonia congesta ssp. congesta</i>	congested-headed hayfield tarplant	None	None	-	1B.2	Presumed Absent
<i>Hesperex caulescens</i>	hogwallow starfish	None	None	-	4.2	Presumed Absent
<i>Hosackia gracilis</i>	harlequin lotus	None	None	-	4.2	Presumed Absent
<i>Juglans hindsii</i>	Northern California black walnut	None	None	-	1B.1	Presumed Absent
<i>Kopsiopsis hookeri</i>	small groundcone	None	None	-	2B.3	Presumed Absent
<i>Lasthenia burkei</i>	Burke's goldfields	Endangered	Endangered	-	1B.1	Presumed Absent
<i>Leptosiphon acicularis</i>	bristly leptosiphon	None	None	-	4.2	Presumed Absent
<i>Lessingia hololeuca</i>	woolly-headed lessingia	None	None	-	3	Presumed Absent
<i>Limnanthes vinculans</i>	Sebastopol meadowfoam	Endangered	Endangered	-	1B.1	Presumed Absent
<i>Microseris paludosa</i>	marsh microseris	None	None	-	1B.2	Presumed Absent
<i>Monardella viridis</i>	green monardella	None	None	-	4.3	Presumed Absent
<i>Navarretia leucocephala ssp. bakeri</i>	Baker's navarretia	None	None	-	1B.1	Presumed Absent
<i>Navarretia leucocephala ssp. plieantha</i>	many-flowered navarretia	Endangered	Endangered	-	1B.2	Presumed Absent
<i>Perideridia gairdneri ssp. gairdneri</i>	California Gairdner's yampah	None	None	-	4.2	Presumed Absent
<i>Ranunculus lobbii</i>	Lobb's aquatic buttercup	None	None	-	4.2	Presumed Absent
<i>Usnea longissima</i>	Methuselah's beard lichen	None	None	-	4.2	Presumed Absent

Special-Status Plant Community

Northern Hardpan Vernal Pool	-	-	Sensitive Habitat	-	Absent
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U.S. Fish and Wildlife Service (Fed) - Federal

END- Federal Endangered
THR- Federal Threatened

California Department of Fish and Wildlife (CA) - California

END- California Endangered
THR- California Threatened
Candidate- Candidate for listing under the California Endangered Species Act
FP- California Fully Protected
SSC- Species of Special Concern
WL- Watch List

California Native Plant Society (CNPS)**California Rare Plant Rank**

1B Plants Rare, Threatened, or Endangered in California and Elsewhere
2B Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere
3 Plants About Which More Information is Needed – A Review List

CNPS Threat Ranks

0.1- Seriously threatened in California
0.2- Moderately threatened in California
0.3- Not very threatened in California

Attachment D

Regulations

Special status species are native species that have been afforded special legal or management protection because of concern for their continued existence. There are several categories of protection at both federal and state levels, depending on the magnitude of threat to continued existence and existing knowledge of population levels.

Federal Regulations

Endangered Species Act of 1973

As defined within the Federal Endangered Species Act (FESA) of 1973, an endangered species is any animal or plant listed by regulation as being in danger of extinction throughout all or a significant portion of its geographical range. A threatened species is any animal or plant that is likely to become endangered within the foreseeable future throughout all or a significant portion of its geographical range. Without a special permit, federal law prohibits the “take” of any individuals or habitat of federally listed species. Under Section 9 of the FESA, take is defined as “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct.” The term “harm” has been clarified to include “any act which actually kills or injures fish or wildlife, and emphasizes that such acts may include significant habitat modification or degradation that significantly impairs essential behavioral patterns of fish or wildlife.” The presence of any federally threatened or endangered species within a project area generally imposes severe constraints on development, particularly if development would result in “take” of the species or its habitat. Under the regulations of the FESA, the United States Fish and Wildlife Service (USFWS) may authorize “take” when it is incidental to, but not the purpose of, an otherwise lawful act.

Critical Habitat is designated for the survival and recovery of species listed as threatened or endangered under the ESA. Critical Habitat includes those areas occupied by the species, in which are found physical and biological features that are essential to the conservation of an FESA listed species and which may require special management considerations or protection. Critical Habitat may also include unoccupied habitat if it is determined that the unoccupied habitat is essential for the conservation of the species.

Whenever federal agencies authorize, fund, or carry out actions that may adversely modify or destroy Critical Habitat, they must consult with USFWS under Section 7 of the ESA. The designation of Critical Habitat does not affect private landowners, unless a project they are proposing uses federal funds, or requires federal authorization or permits (e.g., funding from the Federal Highway Administration or a permit from the U.S. Army Corps of Engineers (Corps)).

If the USFWS determines that Critical Habitat will be adversely modified or destroyed from a proposed action, the USFWS will develop reasonable and prudent alternatives in cooperation with the federal institution to ensure the purpose of the proposed action can be achieved without loss of Critical Habitat. If the action is not likely to adversely modify or destroy Critical Habitat, USFWS will include a statement in its biological opinion concerning any incidental take that may be authorized and specify terms and conditions to ensure the agency is in compliance with the opinion.

Migratory Bird Treaty Act

Pursuant to the Migratory Bird Treaty Act (MBTA) (16 U.S. Government Code [USC] 703) of 1918, as amended in 1972, federal law prohibits the taking of migratory birds or their nests or eggs (16 USC 703; 50 CFR 10, 21). The statute states:

Unless and except as permitted by regulations made as hereinafter provided in this subchapter, it shall be unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, kill, attempt to take, capture, or kill...any migratory bird, any part, nest, or egg of any such bird...included in the terms of the [Migratory Bird] conventions...

The MBTA covers the taking of any nests or eggs of migratory birds, except as allowed by permit pursuant to 50 CFR, Part 21. Disturbances causing nest abandonment and/or loss of reproductive effort (i.e., killing or abandonment of eggs or young) may also be considered “take.” This regulation seeks to protect migratory birds and active nests.

In 1972, the MBTA was amended to include protection for migratory birds of prey (e.g., raptors). Six families of raptors occurring in North America were included in the amendment: Accipitridae (kites, hawks, and eagles); Cathartidae (New World vultures); Falconidae (falcons and caracaras); Pandionidae (ospreys); Strigidae (typical owls); and Tytonidae (barn owls). The provisions of the 1972 amendment to the MBTA protects all species and subspecies of the families listed above. The MBTA protects over 800 species including geese, ducks, shorebirds, raptors, songbirds and many relatively common species.

State Regulations

California Environmental Quality Act (CEQA)

The California Environmental Quality Act (CEQA) provides for the protection of the environment within the State of California by establishing State policy to prevent significant, avoidable damage to the environment through the use of alternatives or mitigation measures for projects. It applies to actions directly undertaken, financed, or permitted by State lead agencies. If a project is determined to be subject to CEQA, the lead agency will be required to conduct an Initial Study (IS); if the IS determines that the project may have significant impacts on the environment, the lead agency will subsequently be required to write an Environmental Impact Report (EIR). A finding of non-significant effects will require either a Negative Declaration or a Mitigated Negative Declaration instead of an EIR. Section 15380 of the CEQA Guidelines independently defines “endangered” and “rare” species separately from the definitions of the California Endangered Species Act (CESA). Under CEQA, “endangered” species of plants or animals are defined as those whose survival and reproduction in the wild are in immediate jeopardy, while “rare” species are defined as those who are in such low numbers that they could become endangered if their environment worsens.

California Endangered Species Act (CESA)

In addition to federal laws, the state of California implements the CESA which is enforced by CDFW. The CESA program maintains a separate listing of species beyond the FESA, although the provisions of each act are similar.

State-listed threatened and endangered species are protected under provisions of the CESA. Activities that may result in “take” of individuals (defined in CESA as; “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill”) are regulated by CDFW. Habitat degradation or modification is not included in the definition of “take” under CESA. Nonetheless, CDFW has interpreted “take” to include the destruction of nesting, denning, or foraging habitat necessary to maintain a viable breeding population of protected species.

The State of California considers an endangered species as one whose prospects of survival and reproduction are in immediate jeopardy. A threatened species is considered as one present in such small numbers throughout its range that it is likely to become an endangered species in the near future in the absence of special protection or management. A rare species is one that is considered present in such small numbers throughout its range that it may become endangered if its present environment worsens. State threatened and endangered species are fully protected against take, as defined above.

CDFW has also produced a species of special concern list to serve as a species watch list. Species on this list are either of limited distribution or their habitats have been reduced substantially, such that a threat to their populations may be imminent. Species of special concern may receive special attention during environmental review, but they do not have formal statutory protection. At the federal level, USFWS also uses the label species of concern, as an informal term that refers to species which might be in need of concentrated conservation actions. As the Species of Concern designated by USFWS do not receive formal legal protection, the use of the term does not necessarily ensure that the species will be proposed for listing as a threatened or endangered species.

Fish and Game Code

Fish and Game Code Sections 3503, 3503.5, 3511, and 3513 are applicable to natural resource management. For example, Section 3503 of the Code makes it unlawful to destroy any birds’ nest or any birds’ eggs that are protected under the MBTA. Further, any birds in the orders Falconiformes or Strigiformes (Birds of Prey, such as hawks, eagles, and owls) are protected under Section 3503.5 of the Fish and Game Code which makes it unlawful to take, possess, or destroy their nest or eggs. A consultation with CDFW may be required prior to the removal of any bird of prey nest that may occur on a project site. Section 3511 of the Fish and Game Code lists fully protected bird species, where the CDFW is unable to authorize the issuance of permits or licenses to take these species. Pertinent species that are State fully protected by the State include golden eagle (*Aquila chrysaetos*) and white-tailed kite (*Elanus leucurus*). Section 3513 of the Fish and Game Code makes it unlawful to take or possess any migratory nongame bird as designated in the MBTA or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the MBTA.

Native Plant Protection Act

Sections 1900–1913 of the Fish and Game Code were developed to preserve, protect, and enhance Rare and Endangered plants in the state of California. The act requires all state agencies to use their authority to carry out programs to conserve Endangered and Rare native plants. Provisions of the Native Plant Protection Act prohibit the taking of listed plants from the wild and require notification of the CDFW at

least ten days in advance of any change in land use which would adversely impact listed plants. This allows the CDFW to salvage listed plant species that would otherwise be destroyed.

California Native Plant Society Rare and Endangered Plant Species

Vascular plants listed as rare or endangered by the CNPS, but which have no designated status under FESA or CESA are defined as follows:

California Rare Plant Rank

- 1A- Plants Presumed Extirpated in California and either Rare or Extinct Elsewhere
- 1B- Plants Rare, Threatened, or Endangered in California and Elsewhere
- 2A- Plants Presumed Extirpated in California, But More Common Elsewhere
- 2B- Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere
- 3- Plants about Which More Information is Needed - A Review List
- 4- Plants of Limited Distribution - A Watch List

Threat Ranks

- .1- Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
- .2- Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
- .3- Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known).

There are three key agencies that regulate activities within inland streams, wetlands, and riparian areas in California. The Corps Regulatory Branch regulates activities pursuant to Section 404 of the Federal Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act. Of the State agencies, the CDFG regulates activities under the Fish and Game Code Section 1600-1616, and the Regional Board regulates activities pursuant to Section 401 of the CWA and the California Porter-Cologne Water Quality Control Act.

Federal Regulations

Section 404 of the Clean Water Act

Since 1972, the Corps and U.S. Environmental Protection Agency (EPA) have jointly regulated the filling of “waters of the U.S.,” including wetlands, pursuant to Section 404 of the Clean Water Act (CWA). The Corps has regulatory authority over the discharge of dredged or fill material into the waters of the United States under Section 404 of the CWA. The Corps and EPA define “fill material” to include any “material placed in waters of the United States where the material has the effect of: (i) replacing any portion of a water of the United States with dry land; or (ii) changing the bottom elevation of any portion of the waters of the United States.” Examples include, but are not limited to, sand, rock, clay, construction debris, wood chips, and “materials used to create any structure or infrastructure in the waters of the United States.” In order to further define the scope of waters protected under the CWA, the Corps and EPA published the Clean Water Rule on June 29, 2015. Pursuant to the Clean Water Rule, the term “waters of the United States” is defined as follows:

- (i) All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide.
- (ii) All interstate waters, including interstate wetlands¹.
- (iii) The territorial seas.
- (iv) All impoundments of waters otherwise defined as waters of the United States under the definition.
- (v) All tributaries² of waters identified in paragraphs (i) through (iii) mentioned above.
- (vi) All waters adjacent³ to a water identified in paragraphs (i) through (v) mentioned above, including wetlands, ponds, lakes, oxbows, impoundments, and similar waters.

¹ The term *wetlands* means those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

² The terms *tributary* and *tributaries* each mean a water that contributes flow, either directly or through another water (including an impoundment identified in paragraph (iv) mentioned above), to a water identified in paragraphs (i) through (iii) mentioned above, that is characterized by the presence of the physical indicators of a bed and banks and an ordinary high water mark.

³ The term *adjacent* means bordering, contiguous, or neighboring a water identified in paragraphs (i) through (v) mentioned above, including waters separated by constructed dikes or barriers, natural river berms, beach dunes, and the like.

- (vii) All prairie potholes, Carolina bays and Delmarva bays, Pocosins, western vernal pools, Texas coastal prairie wetlands, where they are determined, on a case-specific basis, to have a significant nexus to a water identified in paragraphs (i) through (iii) mentioned above.
- (viii) All waters located within the 100-year floodplain of a water identified in paragraphs (i) through (iii) mentioned above and all waters located within 4,000 feet of the high tide line or ordinary high water mark of a water identified in paragraphs (i) through (v) mentioned above, where they are determined on a case-specific basis to have a significant nexus to a waters identified in paragraphs (i) through (iii) mentioned above.

The following features are not defined as “waters of the United States” even when they meet the terms of paragraphs (iv) through (viii) mentioned above:

- (i) Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of the Clean Water Act.
- (ii) Prior converted cropland.
- (iii) The following ditches:
 - (A) Ditches with ephemeral flow that are not a relocated tributary or excavated in a tributary.
 - (B) Ditches with intermittent flow that are not a relocated tributary, excavated in a tributary, or drain wetlands.
 - (C) Ditches that do not flow, either directly or through another water, into a water of the United States as identified in paragraphs (i) through (iii) of the previous section.
- (iv) The following features:
 - (A) Artificially irrigated areas that would revert to dry land should application of water to that area cease;
 - (B) Artificial, constructed lakes and ponds created in dry land such as farm and stock watering ponds, irrigation ponds, settling basins, fields flooded for rice growing, log cleaning ponds, or cooling ponds;
 - (C) Artificial reflecting pools or swimming pools created in dry land;
 - (D) Small ornamental waters created in dry land;
 - (E) Water-filled depressions created in dry land incidental to mining or construction activity, including pits excavated for obtaining fill, sand, or gravel that fill with water;
 - (F) Erosional features, including gullies, rills, and other ephemeral features that do not meet the definition of a tributary, non-wetland swales, and lawfully constructed grassed waterways; and
 - (G) Puddles.
- (v) Groundwater, including groundwater drained through subsurface drainage systems.
- (vi) Stormwater control features constructed to convey, treat, or store stormwater that are created in dry land.

- (vii) Wastewater recycling structures constructed in dry land; detention and retention basins built for wastewater recycling; groundwater recharge basins; percolation ponds built for wastewater recycling; and water distributary structures built for wastewater recycling.

Section 401 of the Clean Water Act

Pursuant to Section 401 of the CWA, any applicant for a federal license or permit to conduct any activity which may result in any discharge to waters of the United States must provide certification from the State or Indian tribe in which the discharge originates. This certification provides for the protection of the physical, chemical, and biological integrity of waters, addresses impacts to water quality that may result from issuance of federal permits, and helps insure that federal actions will not violate water quality standards of the State or Indian tribe. In California, there are nine Regional Water Quality Control Boards (Regional Board) that issue or deny certification for discharges to waters of the United States and waters of the State, including wetlands, within their geographical jurisdiction. The State Water Resources Control Board assumed this responsibility when a project has the potential to result in the discharge to waters within multiple Regional Boards.

State Regulations

Fish and Game Code

Fish and Game Code Sections 1600 et. seq. establishes a fee-based process to ensure that projects conducted in and around lakes, rivers, or streams do not adversely impact fish and wildlife resources, or, when adverse impacts cannot be avoided, ensures that adequate mitigation and/or compensation is provided.

Fish and Game Code Section 1602 requires any person, state, or local governmental agency or public utility to notify the CDFW before beginning any activity that will do one or more of the following:

- (1) substantially obstruct or divert the natural flow of a river, stream, or lake;
- (2) substantially change or use any material from the bed, channel, or bank of a river, stream, or lake;
or
- (3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into a river, stream, or lake.

Fish and Game Code Section 1602 applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes in the State. CDFW's regulatory authority extends to include riparian habitat (including wetlands) supported by a river, stream, or lake regardless of the presence or absence of hydric soils and saturated soil conditions. Generally, the CDFW takes jurisdiction to the top of bank of the stream or to the outer limit of the adjacent riparian vegetation (outer drip line), whichever is greater. Notification is generally required for any project that will take place in or in the vicinity of a river, stream, lake, or their tributaries. This includes rivers or streams that flow at least periodically or permanently through a bed or channel with banks that support fish or other aquatic life and watercourses having a surface or subsurface flow that support or have supported riparian vegetation. A Section 1602 Streambed Alteration Agreement would be required if impacts to identified CDFW jurisdictional areas occur.

Porter Cologne Act

The California *Porter-Cologne Water Quality Control Act* gives the State very broad authority to regulate waters of the State, which are defined as any surface water or groundwater, including saline waters. The Porter-Cologne Act has become an important tool in the post SWANCC and Rapanos regulatory environment, with respect to the state’s authority over isolated and insignificant waters. Generally, any person proposing to discharge waste into a water body that could affect its water quality must file a Report of Waste Discharge in the event that there is no Section 404/401 nexus. Although “waste” is partially defined as any waste substance associated with human habitation, the Regional Board also interprets this to include fill discharged into water bodies.

Appendix D
Cultural Resources Technical Report



**CULTURAL RESOURCES SURVEY
FOR THE
NORTHERN CALIFORNIA POWER AGENCY
SOLAR PROJECT 1 – HEALDSBURG WASTEWATER RECLAMATION FACILITY
SONOMA COUNTY, CALIFORNIA**

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USGS Quadrangle
Healdsburg, California
Anza Project No. 19-0007

April 2019

EXECUTIVE SUMMARY

Anza Resource Consultants (Anza) was retained by K.S. Dunbar & Associates, Inc. to conduct a Phase I cultural resources study for the Northern California Power Agency (NCPA) Solar Project 1 – Healdsburg Wastewater Reclamation Facility (WRF) located at 340 Foreman Lane the City of Healdsburg, Sonoma County, California. The NCPA Solar Project 1 – Healdsburg WRF Project would occupy approximately 14 acres (atop two ponds) within the existing 36-acre WRF. The proposed project is subject to the California Environmental Quality Act (CEQA) with NCPA serving as lead agency.

This study includes a cultural resources records search, Sacred Lands File search and Native American scoping, a pedestrian survey of the project site, and preparation of this technical report in compliance with the cultural resources requirements of CEQA.

The cultural resource records search, Native American scoping, and pedestrian survey identified no cultural resources within or adjacent to the project site. Anza recommends a finding of *no impact to historical resources* under CEQA. No further cultural resources study is recommended; however, the following standard measures are recommended to avoid potential impacts from the unanticipated discovery of cultural resources during project related ground disturbing activities.

CULTURAL RESOURCES WORKER SENSITIVITY TRAINING

Prior to the start of construction, NCPA shall hold a pre-grading meeting. The Project Archaeologist shall attend the pre-grading meeting with NCPA’s Project Administrator, Field Engineering Inspector and any contractors to conduct a Cultural Resources Worker Sensitivity Training for all construction personnel working on the proposed Project. The training shall include an overview of potential cultural resources that could be encountered during ground disturbing activities; the requirements of the monitoring program; the protocols that apply in the event inadvertent discoveries of cultural resources are identified, including who to contact and appropriate avoidance measures until the find(s) can be properly evaluated, and any other appropriate protocols.

UNANTICIPATED DISCOVERY OF CULTURAL RESOURCES

If cultural resources are encountered during ground-disturbing activities, work in the immediate area must halt and an archaeologist meeting the Secretary of the Interior’s Professional Qualifications Standards for archaeology (National Park Service 1983) must be contacted immediately to evaluate the find. If the discovery proves to be significant under CEQA, additional work such as data recovery excavation may be warranted.

UNANTICIPATED DISCOVERY OF HUMAN REMAINS

The discovery of human remains is always a possibility during ground disturbing activities. If human remains are found, the State of California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the county coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. In the event of an unanticipated discovery of human remains, the county coroner must be notified immediately. If the human remains are determined to be prehistoric, the coroner will notify the Native American Heritage Commission, which will determine and notify a Most Likely Descendant. The Most Likely Descendant shall complete the inspection of the site within 48 hours of notification and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

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APPENDICES

Appendix A. Record Search Summary
Appendix B. Native American Scoping

1. INTRODUCTION

Anza Resource Consultants (Anza) was retained by K.S. Dunbar & Associates, Inc. to conduct a Phase I cultural resources study for the Northern California Power Agency (NCPA) Solar Project 1 – Healdsburg Wastewater Reclamation Facility (project) located at 340 Foreman Lane the City of Healdsburg, Sonoma County, California (Figure 1). This study has been prepared in accordance with the California Environmental Quality Act (CEQA) statutes and guidelines (Section 1.2). This cultural resources study includes a cultural resources records search, a summary of Native American scoping for the project, pedestrian survey, and the preparation of this report following the *Archaeological Resources Management Report (ARMR): Recommended Content and Format* guidelines (California Office of Historic Preservation 1990).

1.1 PROJECT DESCRIPTION

The objective of the NCPA Solar Project 1 – Healdsburg Wastewater Reclamation Facility is to develop a photovoltaic (PV) solar power plant within the 36-acre existing wastewater reclamation facility (“WRF”) owned by the City of Healdsburg. The WRF is situated between Foreman Lane to the north and Cohn Road to the south. The proposed project will be located on two ponds, each roughly seven acres. The north pond will contain Array A and Array B, and the south pond will contain Array C. Currently, the pond that encompasses Array C is separated into two ponds by an embankment. However, the embankment will be removed prior to project construction. The project entails the construction of floating PV solar generation arrays atop the ponds that can operate when the ponds are full, empty, or any level in between. The City of Healdsburg will be responsible for the utility tie-in from the point of interconnection, located on the northeast corner of the embankment of the south pond.

1.2 REGULATORY SETTING

1.2.1 State

CEQA requires a lead agency determine whether a project may have a significant effect on historical resources (Public Resources Code [PRC], Section 21084.1). A historical resource is a resource listed in, or determined to be eligible for listing, in the California Register of Historical Resources (CRHR), a resource included in a local register of historical resources or any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant (State CEQA Guidelines, Section 15064.5[a][1-3]).

A resource shall be considered historically significant if it meets any of the following criteria:

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

In addition, if it can be demonstrated that a project will cause damage to a unique archaeological resource, the lead agency may require reasonable efforts be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that resources cannot be left undisturbed,

mitigation measures are required (PRC, Section 21083.2[a], [b], and PRC, Section 21083.2(g) defines a unique archaeological resource as an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, the probability is high that it meets any of the following criteria:

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information;
2. Has a special and particular quality such as being the oldest of its type or the best available example of its type; or
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

California Assembly Bill 52 of 2014 (AB 52) took effect July 1, 2015, and expanded CEQA by establishing a formal consultation process for California tribes within the CEQA process. The bill specifies that any project that may affect or cause a substantial adverse change in the significance of a tribal cultural resource would require a lead agency to “begin consultation with a California Native American tribe that is traditional and culturally affiliated with the geographic area of the proposed project.” According to the legislative intent for AB 52, “tribes may have knowledge about land and cultural resources that should be included in the environmental analysis for projects that may have a significant impact on those resources.” Section 21074 of AB 52 also defines a new category of resources under CEQA called “tribal cultural resources.” Tribal cultural resources are defined as “sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe” and is either listed on or eligible for the California Register of Historical Resources or a local historic register, or if the lead agency chooses to treat the resource as a tribal cultural resource. See also PRC 21074 (a)(1)(A)-(B).

1.2.2 Sonoma County

The Open Space & Resource Conservation Element of the Sonoma County General Plan 2020 presents a goal (Goal OSRC-19) supported by objectives and policies to:

Protect and preserve significant archaeological and historical sites that represent the ethnic, cultural, and economic groups that have lived and worked in Sonoma County, including Native American populations. Preserve unique or historically significant heritage or landmark trees (Sonoma County Permit and Resource Management Department 2008).

This goal and its objectives and policies encourage the identification and protection of significant Native American and historic cultural resources.

1.2.3 City of Healdsburg

The Healdsburg 2030 General Plan Update Revised Draft Environmental Impact Report includes policies and policy implementation measures for the identification and protection of significant Native American and historic cultural resources (City of Healdsburg 2009a). These policies include recommendations for project specific records searches at the Northwest Information Center (Policy Implementation Measure HCR-8) and Sacred Lands File searches with the Native American Heritage Commission (Policy Implementation Measure HCR-9).

1.3 PERSONNEL

Anza Principal and Senior Cultural Resources Specialist Kevin Hunt requested the Sacred Lands File search, conducted the survey, and was the primary author of this report. Principal Investigator Katherine Collins, M.A., Registered Professional Archaeologist (RPA), coauthored this report and served as principal investigator for the study. Ms. Collins meets the Secretary of the Interior's Professional Qualifications Standards for prehistoric and historic archaeology (National Park Service 1983). GIS Specialist Spencer Bietz prepared all maps and figures.

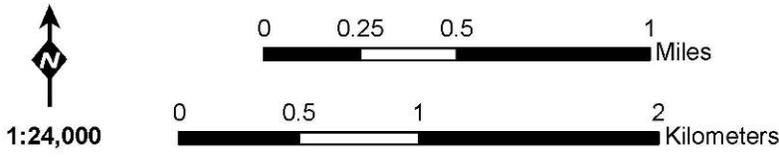
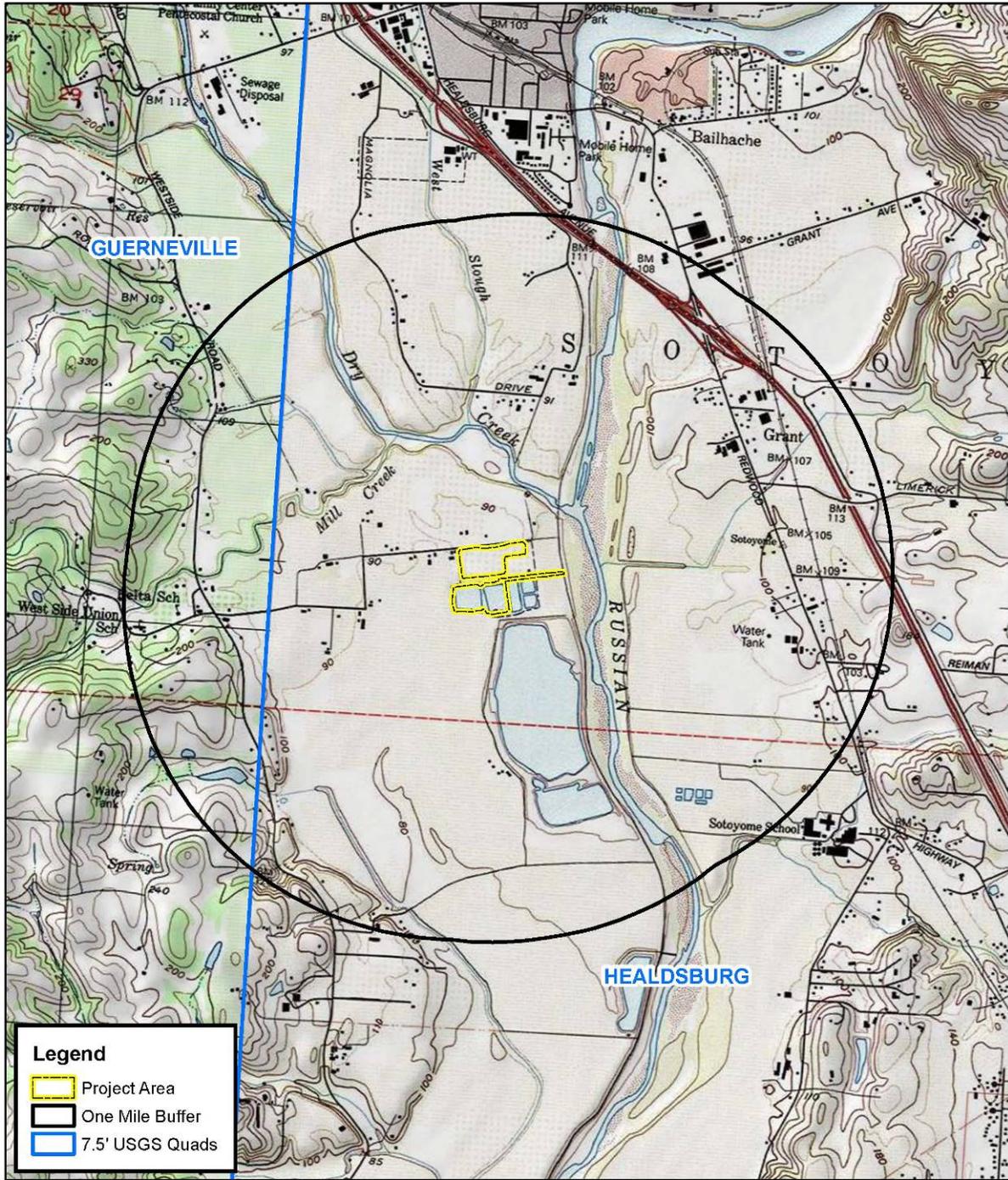


Figure 1. Project Location Map

2. ENVIRONMENTAL SETTING

The Healdsburg WRF is located in the floodplain of the Russian River Valley, on the west side of the river at an elevation of approximately 90 feet (27.4 meters) above mean sea level. The facility has oak trees along the perimeter and is surrounded by vineyards on adjacent properties. Healdsburg is the northern edge of the Russian River American Viticultural Area (i.e., wine-grape growing region) and is noted for a cool climate heavily affected by fog because of its proximity to the Pacific Ocean. As noted by the Water Education Foundation (n.d.), “The Russian River is one of the most flood-prone rivers in California, routinely overflowing during wet years.” This fact was illustrated in February 2019 when the Russian River swelled to its highest level in more than 20 years and flooded the Healdsburg WRF. The City of Healdsburg is located at the nexus of three agricultural valleys: the Russian River Valley, Dry Creek Valley and Alexander Valley (City of Healdsburg 2009b). The agricultural lands are circumscribed by subsystems of the Coastal Mountain Range. The Healdsburg region has an inland Mediterranean-type climate with wet winters and dry summers. Rainfall totals vary widely, with mountain areas west of the city sometimes receiving more than 60 inches of rain annually, while the rain-shadowed valleys typically receive approximately 40 inches (City of Healdsburg 2009b).

The project site is underlain by Quaternary Holocene stream terrace deposits (Delattre 2011). These deposits are generally defined as sand, gravel, silt, and minor clay deposited in overbank and point-bar settings along streams. These deposits occupy a relatively flat surface with little or no dissecting, generally less than 35 feet above the active channel. The project site is currently surrounded by agricultural uses; however, the nearby Russian River and Dry Creek host riparian habitats and in prehistoric times, the project site likely had seasonal wetlands, based on its location within the floodplain of the Russian River. Historically, the Healdsburg region possessed a broad range of fauna including deer, bear, squirrel, rodents, snakes, pond turtle, lizards, birds – including many raptors, fish – such as Coho salmon and Russian River tule perch, and insects.

3. CULTURAL SETTING

The project site is within the Northwest Coast region of California. This region is generally defined as the coastal zone and inland valleys north of the San Francisco Bay to the Oregon border.

3.1 PREHISTORIC OVERVIEW

Northwest Coast prehistory is divided into four chronological periods: Pleistocene/Holocene Transition (11,500 to 8000 cal B.C.), Early Holocene (8000 to 5000 cal B.C.), Middle Holocene (5000 to 2000 cal B.C.), and Late Holocene (Post-2000 cal B.C.) (Hildebrandt 2007). This chronological framework is used by researchers to understand how prehistoric cultures adapted and coped with environmental and social change. Within this framework researchers recognized certain sets of cultural and technological traits that appeared to span long periods of time and covered large areas. These sets of traits were referred to as either “horizons” or “patterns” in the literature. Smaller (local) units of patterns were referred to as “aspects” and “phases” (Fredrickson 1973, 1974, Moratto 1984, Hildebrandt 2007). Below is a brief overview of prehistoric occupation history in the project vicinity.

During the **Pleistocene-Holocene Transition** (11500 to 8000 cal B.C.) a set of cultural traits known as the Post Pattern emerged on the Northwest Coast. This pattern is exemplified by the presence of fluted, clovis-like, projectile points and chipped stone crescents. These type artifacts were initially recovered from the Borax Lake site near Clear Lake (CA-LAK-36). Fluted points have also been found near the coast in Mendocino County and crescents found Bodega Head and near Santa Rosa. Other than these artifact types, very little else has been found in association with the Post Pattern culture (Hildebrandt 2007, Moratto 1984).

In the **Early Holocene** (8000 to 5000 cal B.C.), the Borax Lake Pattern emerges in the Clear Lake basin, the mountains of Mendocino County, and the Santa Rosa plain, as well as other places along the Northwest Coast (Hildebrandt 2007). Sites associated with this pattern contain manos and metates (grinding stones) along with mortars and pestles, indicating that various seeds and/or acorns formed an important part of the diet. Characteristic tools also include wide-stem, non-stem, and concave base projectile points, which typically were manufactured from local raw material (e.g., obsidian and chert) (Fredrickson 1974, Moratto 1984). Archaeological sites associated with the Borax Lake Pattern include the archetype Borax Lake site (CA-LAK-36) in Lake County, CA-MEN-1711 in Mendocino County, and CA-SON-20 in Sonoma County (Moratto 1984, Hildebrandt 2007).

During the **Middle Holocene** (5000 to 2000 cal B.C.), around 3000 cal B.C., a new set of cultural traits known as the Mendocino Pattern emerged in a variety of places in the Northwest Coast. Typical Mendocino Pattern artifacts include side-notched, corner-notched, and concave base dart points, mano and metates, various types of flake tools and cobble tools such as cobble mortar and pestles. Excavations at several sites (CA-MEN-1704, CA-SON-458, CA-SON-299 and CA-SON-867) along the Mendocino and Sonoma coast indicate the Mendocino Pattern persisted in this region until cal A.D. 500. Mendocino Pattern sites likely represented temporary hunting camps or short-term forager bases (Hildebrandt 2007).

The **Late Holocene** (Post-2000 cal B.C.) saw the re-emergence of Berkeley Pattern cultural traits in the Northwest Coast after a hiatus from the archeological record. Berkeley Pattern traits re-emerged around 1200 cal B.C. and lasted until cal A.D. 800. The Berkeley Pattern is characterized by the intensive use of acorns, in addition to game hunting and fishing resulting in a higher degree of sedentism. Berkeley Pattern artifact assemblages include leaf-shaped (Excelsior) and stemmed projectile points, a highly developed bone tool industry, several types of fishing implements including spears, harpoons, hooks, and net sinkers, baked clay objects, and a high frequency of mortar and pestles. Intensive analysis of Berkeley and Mendocino Pattern sites indicate both cultures likely overlapped in time. At about 500 cal A.D. there

appears to be a migration of Berkeley Pattern peoples into the Santa Rosa Plain and Warm Springs areas, ultimately reaching the coast. This migration is attributed to the expansion of Pomo speaking peoples from their homeland in the Clear Lake area, who presumably replaced the earlier Yukian-speaking peoples that occupied the region (Hildebrandt 2007). Subsequent to cal A.D. 500 Augustine Pattern sites appeared in the Northwest Coast but appear to be ephemeral, seasonal occupation sites.

3.2 ETHNOGRAPHIC OVERVIEW

The project site is located within the traditional tribal territory of the Southern Pomo people. The Southern Pomo spoke one of seven distinct, mutually unintelligible Pomo languages which are part of the Hokan language family. Other Pomo-speaking groups include the Northern Pomo, Central Pomo, Eastern Pomo, Southeastern Pomo, Northeastern Pomo, and Southwestern Pomo (Kashaya). Collectively, the seven Pomo-speaking culture groups occupied an area from just south of the present-day City of Santa Rosa northward approximately 90 miles, and from the Pacific coast inland to the Sacramento Valley (Mithun 1999). Within this area, the Southern Pomo occupied area just south of the City of Santa Rosa to approximately 40 miles north, and from the eastern drainage of the Russian River to the border of Kashaya and Central Pomo territory, with a small extension between these two territories to the Pacific Ocean (McLendon and Oswalt 1978). Although linguistically divergent, the various Pomo culture groups shared numerous social and cultural characteristics.

Sociopolitical organization among the Pomo was based on the kin group. Typically, the nuclear family consisting of about five to seven persons and comprised the basic social unit of any extended kin group. These groups lived in multi-family dwellings for much of the year, dividing into separate dwellings to conduct seasonal fishing and collecting activities. These extended kin groups would come together to form a triblet, which would range between 100 and 2,000 people. The triblets functioned as independent political units and were led by a chief. The nature of the chieftainship among the Pomo was unique among California native groups as there appears to be at least two levels of leadership. There was the triblet chief whose primary function included serving as an advisor, meeting visitors, making peace, and presiding over ceremonies. The position of triblet chief could be hereditary or an elected office. The second level of chieftainship was that of leader of individual kin groups. If a triblet consisted of multiple kin groups then a triblet chief could be selected from one the hereditary chiefs that led each kin group (Kroeber 1925, Bean and Theodoratus 1978).

The basic subsistence strategy of the Pomo was seasonally mobile hunting and gathering. Acorn gathering, of which seven species were collected, was the primary staple. Other plant foods included Buckeye nuts, seeds from various grass species and various types of berries, roots, and bulbs. Salt was obtained individually or through trade. Hunting was conducted individually or as a communal affair. Important big-game animals included deer, elk, and antelope with smaller game such as rabbit and squirrel also an important source of food. The primary hunting weapon was the bow and arrow, although a club or heavy spear was also used to hunt bear. Along the coast seals and sea lions were hunted using a club. Fish were obtained in lakes, streams, and the ocean using traps, weirs, or fishhooks (Bean and Theodoratus 1978).

Pomo material culture consisted of a variety of implements such as the mortar and pestle used for processing animal and plant material. Many times mortars were used with a bottomless basket hopper. Cutting implements were made from obsidian and chert and often attached to wooden handles or shafts to make arrows and axes. Bone was primarily used to make awls and fishhooks. The Pomo were especially known for their basketry skills which included a wide variety of forms. Coiled ware was made in two forms (single or three-rod), twined ware came in seven forms. Pomo baskets ranged from very flat plate-

like styles to almost perfect spheres and were decorated with horizontal and banded patterns with some incorporating feathers and beads in their design (Bean and Theodoratus 1978).

The arrival of European explorers along the California coast and subsequent colonization of California by the Spanish greatly impacted Pomo lifeways. Beginning in 1821, with the establishment of Mission San Rafael Arcangel at what today is the city of San Rafael in Marin County, the Spanish began the work of missionizing the local native population. Priests from Mission San Rafael Arcangel began recruiting natives from as far north as the present-day city of Santa Rosa in Southern Pomo territory. In 1823 Mission San Francisco Solano was established in Sonoma County, closer to Pomo territory. During this time some 600 Pomo were baptized at the missions. At the same time Russians were exploring and settling in Pomo territory. The Russian established trade agreements with the Pomo and the settlement of Fort Ross in Kashaya territory. Many Pomo learned to speak Russian and adopted some aspects of Russian culture and religion. Drastic changes occurred for the Pomo beginning in 1822 when California became part of the Mexican Republic. Between 1834 and 1847 thousands of Pomo were captured as part of the slave trade or died from military campaigns. In addition, outbreaks of smallpox and cholera during this period killed thousands more. The formal annexation of California to the United States in 1850 brought additional hardships as many Pomo were ushered onto reservations and their land taken (Bean and Theodoratus 1978). Nonetheless, the Pomo have survived and today there are an estimated 5,000 people of Pomo descent, with many living on or near several rancherias and the Coyote Valley and Round Valley reservations (White 2019).

3.3 HISTORIC OVERVIEW

The historic period for the State of California generally begins with the establishment of the first Spanish mission and presidio in San Diego in 1769. This marks the beginning of the Spanish period of California history which lasted until 1822, when news of Mexico’s independence from Spain in 1821 finally reached California. The Spanish period saw the establishment of a permanent European presence in California in the form of 21 missions located along the coast between San Diego and Sonoma, four military presidios located in San Diego, Monterey, San Francisco and Santa Barbara, and three pueblos (towns) that later became the cities of Los Angeles, San Jose and Santa Cruz (Robinson 1948). The Spanish period ended with Mexican independence from the Spanish crown in 1822. The Mexican period of California history saw the seizure of lands once held by the missions through the Mexican Secularization Act of 1833 and the redistribution of those lands to individuals in the form of land grants known as “ranchos” (Robinson 1948). During this period the Mexican government in California issued approximately 700 land grants to Mexican citizens and foreign immigrants (Shumway 1988). The outbreak of war between the United States and Mexico and the ultimate signing of the Treaty of Guadalupe Hidalgo in 1848 ended the Mexican period and signaled the beginning of the American period of California history. The early American period is marked by the discovery of gold at Sutter’s Mill in 1848, which resulted in a gold rush that saw a massive influx of settlers from other parts of the United States and around the world, greatly impacting California’s native population. In 1869 the transcontinental railroad was completed linking California with the rest of the United States. The gold rush and the establishment of the railroad played major roles in the development of California into a national and worldwide leader in agricultural and industrial production. These early developments also resulted in making California one of the most racially and ethnically diverse states in the Union.

3.3.1 Sonoma County

The history of Sonoma County began in 1850 as one of the original 27 counties of the State of California. Early European exploration of what would become Sonoma County included a 1602 expedition along the California coast by Sebastian Vizcaino that reached Bodega Bay. Vizcaino did not name Bodega Bay

during his journey that was left to a subsequent exploration by Juan Francisco Bodega y Cuadra, who entered the bay in 1775. Bodega Bay was the site of a landing by naturalist Archibald Menzies in 1793. Menzies and his party traveled the region collecting botanical samples and meeting the local native tribes. In 1741 Russians began exploring the North American west coast between Alaska and California. In 1811 the Russians established a permanent settlement in Sonoma County at Kuskov in the Salmon Creek Valley, and at Fort Ross twelve miles north of the mouth of the Russian River in 1812. In order to check continued Russian settlement in California, the Mexican government instituted a program of occupation and settlement in the Sonoma County area. This resulted in the establishment of Mission San Francisco Solano in 1823, the only mission established during the Mexican period. In 1835 Mexican General Mariano Guadalupe Vallejo established Pueblo de Sonoma next to Mission San Francisco Solano, which later became the City of Sonoma. During this same period the Mexican government issued some 24 land-grants in Sonoma County, encompassing most of the County's land (Shumay 1988, Hoover 2002). Economic development in Sonoma County continued during the early American Period with the establishment of logging along the coast, wheat and potato farming, and the nascent wine industry. As with previous periods, cattle ranching remained a primary occupation in the county. The coming of the railroads facilitated the movement of goods and the establishment of processing plants and factories along the rail lines. These initial industries still comprise a major component of the counties' economy today with the addition of tourism primarily related to the wine making industry (County of Sonoma 2019).

3.3.2 City of Healdsburg

Healdsburg was established in 1851 when Ohio-born Harmon Heald built a log cabin along what is today the 300 block of Healdsburg Avenue. A year later he added a store and a post office in 1854. All the while Mr. Heald bought up as much land in the area as he could and in 1857 subdivided his landholdings and laid out the town of Healdsburg. The town was incorporated in 1867, eight years after his death. In 1867 the Northwestern Pacific Railroad entered Healdsburg and marked the beginning of its economic development as a center for agricultural production and winemaking. Today agriculture and winemaking dominate the local economy and promote wine-based tourism (Hoover et al. 2002).

4. BACKGROUND RESEARCH

4.1 CALIFORNIA HISTORICAL RESOURCE INFORMATION SYSTEM

Anza requested a search of cultural resource records housed at the California Historical Resources Information System (CHRIS), Northwest Information Center (NWIC) located at Sonoma State University. The search was conducted by NWIC on April 22, 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). The CHRIS search included a review of the NRHP, 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.

4.1.1 Previous Studies

The NWIC records search identified ten cultural resources studies that were conducted within a 0.5-mile radius of the project site, one of which is mapped adjacent to the project site (S-007109) and another mapped within the project site but noted as a survey with approximated mapping (S-016018; Table 1).

Table 1. Previous Cultural Resource Studies within a 0.5-Mile Radius of the Project Site

Report Number	Author	Year	Title	Proximity to Project Site
S-007109	David Chavez	1985	Archaeological Resources Evaluation for the Basalt Rock Company Reclamation Project, Russian River, Sonoma County, California (letter report)	Adjacent to southwest corner of project site
S-013728	Janine M. Loyd	1992	An Archaeological Survey for the Lot Line Adjustment of the Schmidt Property, 774/788 Magnolia Drive, Healdsburg, Sonoma County, California	Outside
S-015260	Peggy Shannon	1993	An Archaeological Reconnaissance for Syar Industries' Healdsburg Mining and Reclamation Plan, Sonoma County, California	Outside
S-016018	Scott Patterson, Pamela Roberts, Robert Orlins, and Nancy Whitney	n.d.	Warm Springs Dam, Lake Sonoma Project, Archaeological Survey, Downstream Area, Lower Dry Creek Valley	Within (but noted by NWIC as approximate location; not to current standards)
S-021438	Jay M. Flaherty	1999	Cultural Resource Reconnaissance, Obsidian Winery (APN 110-08-11) near Healdsburg, Sonoma County, California	Outside
S-021706	Miley Paul Holman and Randy Wiberg	1999	Results of an Archaeological Field Inspection of the Phase 5 Mining Site (APN-110-080-06 and 07) Healdsburg, Sonoma County, California (letter report)	Outside

Report Number	Author	Year	Title	Proximity to Project Site
S-026998	Katherine Flynn	2003	A Cultural Resources Evaluation of the Bank Stabilization Project on the Schwab Property at 1320 Magnolia Drive, Healdsburg, Sonoma County, California	Outside
S-027189	Miley Paul Holman	2002	Archaeological Field Inspection of the Phase 6 Mining Site, APN 110-09-20, Healdsburg, Sonoma County, California	Outside
S-037605	Vicki Beard	2010	A Cultural Resources Survey for the City of Healdsburg's Recycled Water System Project, Sonoma County, California	Outside
S-038938	Jessica Tudor	2011	A Cultural Resources Study of the City of Healdsburg Geysers Pipeline Connection, Healdsburg, Sonoma County, California	Outside

Source: NWIC, April 2019

4.1.2 Previously Recorded Resources

One prehistoric archaeological site (P-49-00598) and three historic built resources were identified within 0.5 mile of the project site (Table 2). None of these resources is closer than 0.4 mile to the project site.

Table 2. Previously Recorded Cultural Resources within 0.5-Mile of the Project Site

Primary Number	Trinomial	Description	NRHP/CRHR Eligibility Status	Recorded Year (By Whom)	Relationship to Project Site
P-49-000598	CA-SON-000633	"Johnson's Big Oak Site;" prehistoric lithic artifact deposit	Insufficient information	1975 (P. Roberts)	Approximately 0.4 mile west
-	-	581 Foreman Lane – Johnson's Vineyards or the Chester Von Grafen House. A 1921 Mediterranean style residence	Code 3S: Appears eligible for NRHP as an individual property through survey evaluation	1983 (Langhart Museum)	Approximately 0.4 mile west
-	-	1320 Magnolia Drive – Riverdale Orchard (constructed 1865)	Code 3S: Appears eligible for NRHP as an individual property through survey evaluation	1983 (Langhart Museum)	Approximately 0.4 mile north
-	-	1385 Magnolia – G.W. Harmon Nursery (constructed 1895)	Code 3S: Appears eligible for NRHP as an individual property through survey evaluation.	1983 (Langhart Museum)	Approximately 0.5 mile north

Source: NWIC, April 2019

4.2 NATIVE AMERICAN SCOPING

K.S. Dunbar & Associates, Inc. requested a review of the Sacred Lands File (SLF) by the Native American Heritage Commission. The NAHC sent a response on April 15, 2019, stating that a search of the SLF was completed with positive results (Appendix B). The NAHC provided a list of eight Native American contacts that may have knowledge regarding Native American cultural resources within or near the project site.

K.S. Dunbar & Associates, Inc. mailed letters dated April 16, 2019, to the eight Native American contacts asking if they had knowledge regarding cultural resources of Native American origin within or near the project site (Appendix B). As of April 30, 2019, no responses have been received.

5. FIELDWORK

5.1 SURVEY METHODS

Anza Principal and Senior Cultural Resources Specialist Kevin Hunt conducted a pedestrian survey of the project site on April 26, 2019. Mr. Hunt surveyed the project site using transects spaced 5 to 10 meters apart and oriented north-south within unpaved portions of the site. The entire project site was surveyed.

Mr. Hunt 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.

5.2 RESULTS

The project site is intensively developed as a wastewater treatment facility. The northern pod is entirely lined with heavy plastic sheeting and ground visibility was zero percent (Photograph 1). The two southern ponds (to be merged prior to project development) had mixed grasses present with poor ground visibility (10 to 15 percent) and very wet conditions in the southeastern pond (Photographs 2 and 3). In the southwestern pond, grasses obscured most ground visibility, but rodent burrow spoil piles provided some sediment to examine (Photograph 2). The southeastern pond also had two fences oriented north-south within it (Photograph 3). The gen-tie line corridor is within a completely paved access road between the ponds with zero ground visibility. The survey was negative; that is, no cultural (i.e., archaeological, historic built, or tribal cultural) resources were identified within the project site.



Photograph 1. View of northern pond, facing northeast.



Photograph 2. View of southwestern pond, facing east-southeast.



Photograph 3. View of southeastern pond facing west.

6. MANAGEMENT RECOMMENDATIONS

The cultural resource records search, Native American scoping, and pedestrian survey identified no cultural resources within or adjacent to the project site. No further cultural resources study is recommended; however, the following standard measures are recommended to avoid potential impacts from the unanticipated discovery of cultural resources during project related ground disturbing activities.

6.1 CULTURAL RESOURCES WORKER SENSITIVITY TRAINING

Prior to the start of construction, NCPA shall hold a pre-grading meeting. The Project Archaeologist shall attend the pre-grading meeting with NCPA's Project Administrator, Field Engineering Inspector and any contractors to conduct a Cultural Resources Worker Sensitivity Training for all construction personnel working on the proposed project. The training shall include an overview of potential cultural resources that could be encountered during ground disturbing activities; the requirements of the monitoring program; the protocols that apply in the event inadvertent discoveries of cultural resources are identified, including who to contact and appropriate avoidance measures until the find(s) can be properly evaluated, and any other appropriate protocols.

6.2 UNANTICIPATED DISCOVERY OF CULTURAL RESOURCES

If cultural resources are encountered during ground-disturbing activities, work in the immediate area must halt and an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology (National Park Service 1983) must be contacted immediately to evaluate the find. If the discovery proves to be significant under CEQA, additional work such as data recovery excavation may be warranted.

6.3 UNANTICIPATED DISCOVERY OF HUMAN REMAINS

The discovery of human remains is always a possibility during ground disturbing activities. If human remains are found, the State of California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the county coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. In the event of an unanticipated discovery of human remains, the county coroner must be notified immediately. If the human remains are determined to be prehistoric, the coroner will notify the Native American Heritage Commission, which will determine and notify a Most Likely Descendant. The Most Likely Descendant shall complete the inspection of the site within 48 hours of notification and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

7. REFERENCES

Bean, Lowell and Dorothea Theodoratus

- 1978 “Western Pomo and Northeastern Pomo.” In *Handbook of North American Indians, California*, edited by Robert F. Heizer, 289–305, vol. 8, William G. Sturtevant, general editor. Washington D.C: Smithsonian Institution.

California Office of Historic Preservation

- 1990 *Archaeological Resource Management Reports (ARMR): Recommended Contents and Format*. Department of Parks and Recreation. Office of Historic Preservation: Sacramento, California.

County of Sonoma

- 2019 “Sonoma County Historic Overview.” *County of Sonoma* website. Accessed April 22, 2019. <https://sonomacounty.ca.gov/PRMD/Planning/Historic-Resources/Sonoma-County-History/>.

Delattre, Marc P.

- 2011 Preliminary Geologic Map of the Healdsburg 7.5’ Quadrangle, California. Electronic document accessed April 29, 2019: ftp://ftp.consrv.ca.gov/pub/dmg/rgmp/Prelim_geo_pdf/Healdsburg24k_preliminary.pdf.

Fredrickson, David A.

- 1973 Early Cultures of the North Coast Ranges, California. Unpublished Ph.D. dissertation, Department of Anthropology, University of California, Davis.
- 1974 “Cultural Diversity in Early California: A View from the North Coast Ranges.” *Journal of California Anthropology* 1(1):41–53.

Healdsburg, City of

- 2009a Revised Draft Environmental Impact Report, IV. Environmental Impact Analysis F. Cultural Resources. Online at: <https://www.ci.healdsburg.ca.us/DocumentCenter/View/679/Cultural-Resources-PDF>, accessed April 29, 2019.
- 2009b Revised Draft Environmental Impact Report, IV. Environmental Impact Analysis E. Biological Resources. Online at: <https://www.ci.healdsburg.ca.us/DocumentCenter/View/678/Biological-Resources-PDF>, accessed April 29, 2019.

Hildebrandt, William R.

- 2007 “Northwest California: Ancient Lifeways among Forested Mountains, Flowing Rivers, Rocky Ocean Shores.” In *California Prehistory: Colonization, Culture, and Complexity*, edited by Terry L. Jones and Kathryn A. Klar, 83-97. Lanham, MD: Altamira Press.

Hoover, Mildred, Hero Eugene Rensch, Ethel Grace Rensch, and William N. Abeloe

- 2002 *Historic Spots in California*. Fifth Edition. Stanford, CA: Stanford University Press.

Kroeber, A.L.

- 1925 *Handbook of the Indians of California*. Bureau of American Ethnology Bulletin 78. New York, NY: Dover Publications, Inc.

McLendon, Sally and Robert L. Oswalt

1978 “Pomo: Introduction.” In *Handbook of North American Indians, California*, edited by Robert F. Heizer, 274–288, vol. 8, William G. Sturtevant, general editor. Washington D.C: Smithsonian Institution.

Mithun, Marianne

1999 *The Languages of Native North America*. Cambridge, MA: Cambridge University Press.

Moratto, Michael J., with David A. Fredrickson, Christopher Raven and Claude A. Warren

1984 *California Archaeology*. Orlando, FL: Academic Press.

Shumway, Burgess McK

1988 *California Ranchos*. Second Edition. The Borgo Press.

Sonoma County Permit and Resource Management Department

2008 Sonoma County General Plan 2020 Open Space and Resource Conservation Element. Online at: <http://sonomacounty.ca.gov/WorkArea/DownloadAsset.aspx?id=2147542566>, accessed April 29, 2019.

Water Education Foundation

n.d. Russian River. Online at <https://www.watereducation.org/topic-russian-river>, accessed April 29, 2019.

White, Phillip

2019 “California Indians and Their Reservations: An Online Dictionary.” *San Diego State University American Indian Studies* website. Accessed April 25, 2019. <https://libguides.sdsu.edu/c.php?g=494769&p=3385637>.

**Appendix A:
Records Search Summary**

CALIFORNIA
HISTORICAL
RESOURCES
INFORMATION
SYSTEM



ALAMEDA
COLUSA
CONTRA COSTA
DEL NORTE

HUMBOLDT
LAKE
MARIN
MENDOCINO
MONTEREY
NAPA
SAN BENITO

SAN FRANCISCO
SAN MATEO
SANTA CLATA
SANTA CRUZ
SOLANO
SONOMA
YOLO

Northwest Information Center
Sonoma State University
150 Professional Center Drive, Suite E
Rohnert Park, California 94928-3609
Tel: 707.588.8455
nwic@sonoma.edu
http://www.sonoma.edu/nwic

4/22/2019

NWIC File No.: 18-1988

Kevin Hunt
Anza Resource Consultants
603 Seagaze Drive #1018
Oceanside, CA 92054

re: NCPA Healdsburg Water Reclamation Solar PV Project

The Northwest Information Center received your record search request for the project area referenced above, located on the Healdsburg & Guerneville USGS 7.5' quads. The following reflects the results of the records search for the project area and a 0.5 mile radius:

Resources within project area:	None
Resources within 0.5 mile radius:	P-49-000598
Reports within project area:	S-16018 & 7109.
Reports within 0.5 mile radius:	S-37605, 26998, 38938, 13728, 15260, 21706, 27189, & 21438,

- Resource Database Printout (list):** enclosed not requested nothing listed
- Resource Database Printout (details):** enclosed not requested nothing listed
- Resource Digital Database Records:** enclosed not requested nothing listed
- Report Database Printout (list):** enclosed not requested nothing listed
- Report Database Printout (details):** enclosed not requested nothing listed
- Report Digital Database Records:** enclosed not requested nothing listed
- Resource Record Copies:** enclosed not requested nothing listed
- Report Copies:** enclosed not requested nothing listed
- OHP Historic Properties Directory:** enclosed not requested nothing listed
- Archaeological Determinations of Eligibility:** enclosed not requested nothing listed
- CA Inventory of Historic Resources (1976):** enclosed not requested nothing listed
- Caltrans Bridge Survey:** enclosed not requested nothing listed
- Ethnographic Information:** enclosed not requested nothing listed
- Historical Literature:** enclosed not requested nothing listed
- Historical Maps:** enclosed not requested nothing listed
- Local Inventories:** enclosed not requested nothing listed
- GLO and/or Rancho Plat Maps:** enclosed not requested nothing listed

Shipwreck Inventory:

enclosed not requested nothing listed

*Notes:

** Current versions of these resources are available on-line:

Caltrans Bridge Survey: <http://www.dot.ca.gov/hq/structur/strmaint/historic.htm>

Soil Survey: <http://www.nrcs.usda.gov/wps/portal/nrcs/surveylist/soils/survey/state/?stateid=CA>

Shipwreck Inventory: <http://www.slc.ca.gov/Info/Shipwrecks.html>

Please forward a copy of any resulting reports from this project to the office as soon as possible. Due to the sensitive nature of archaeological site location data, we ask that you do not include resource location maps and resource location descriptions in your report if the report is for public distribution. If you have any questions regarding the results presented herein, please contact the office at the phone number listed above.

The provision of CHRIS Data via this records search response does not in any way constitute public disclosure of records otherwise exempt from disclosure under the California Public Records Act or any other law, including, but not limited to, records related to archeological site information maintained by or on behalf of, or in the possession of, the State of California, Department of Parks and Recreation, State Historic Preservation Officer, Office of Historic Preservation, or the State Historical Resources Commission.

Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area. Additionally, Native American tribes have historical resource information not in the CHRIS Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

Should you require any additional information for the above referenced project, reference the record search number listed above when making inquiries. Requests made after initial invoicing will result in the preparation of a separate invoice.

Thank you for using the California Historical Resources Information System (CHRIS).

Sincerely,

Lisa C. Hagel
Researcher

**Appendix B:
Native American Scoping**



K.S. Dunbar & Associates, Inc.
Environmental Engineering
45375 Vista Del Mar
Temecula, CA 92590-4314
(951) 699-2082
Cell: (949) 412-2634
ksdpe67@gmail.com

Erica D. Dunbar, President
Keith S. Dunbar, P.E., BCEE, Hon.D.WRE., F. ASCE
Chief Executive Officer

March 26, 2019

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

Request for a Sacred Lands File Search
NCPA Solar Project 1 – Healdsburg Wastewater Reclamation Facility
Northern California Power Agency

Dear Christina:

The Northern California Power Agency (NCPA) intends to implement its NCPA Solar Project 1 – Healdsburg Wastewater Reclamation Facility Project. The project is described in the attachments to this letter.

We respectfully request that you complete a search of your Sacred Lands files for this Project. A completed request form as well as maps showing the project elements are attached for your use in the search.

We also respectfully request that you provide us with a list of tribes and individuals that you believe might have cultural resources information regarding the project area.

It would be greatly appreciated if you could email your response to ksdpe67@gmail.com.

If you have any questions concerning this request, please contact me.

Sincerely,

Keith S. Dunbar, P.E., BCEE, Hon.D.WRE., F. ASCE

Attachments

pc: Ron Yuen
Director of Engineering, Generation Services
Northern California Power Agency
651 Commerce Drive,
Roseville California 95678

Sacred Lands File & Native American Contacts List Request

Native American Heritage Commission

1550 Harbor Blvd, Suite 100

West Sacramento, CA 95691

916-373-3710

FAX: 916-373-5471

nahc@nahc.ca.gov

Information Below is Required for a Sacred Lands File Search

Project: NCPA Solar Project 1 – Healdsburg Wastewater Reclamation Facility

County: Sonoma

USGS Quadrangle Name: Healdsburg, California

See attachment for detailed project location.

Company/Firm/Agency: K.S. Dunbar & Associates, Inc.

Street Address: 45375 Vista Del Mar

City: Temecula

Zip: 92590-4314

Phone: 951-699-2082

Email: ksdpe67@gmail.com

Project Description: The objective of the NCPA Solar Project 1 is to develop a fleet of Photovoltaic (PV) Solar Power Plants throughout participating member service territories to be completed and placed in service by the end of 2019. The plants will be managed by the Northern California Power Agency (NCPA) as a single project to be owned and operated by a third-party provider through a power purchase agreement (PPA). After the initial 5 – 7 years of operation, NCPA plans to purchase the plants.

The project will be executed in three phases:

- ❖ Phase 1 – Determine member interest and requirements and identify potential sites.
- ❖ Phase 2 – Site selection and screening, plan development and selection of a third-party provider to fulfill design, construction and operation through a PPA.
- ❖ Phase 3 – Construction and operation per the PPA.

NCPA has now completed Phase 1 and the site selection and screening portion of Phase 2. Burns & McDonnell was retained by NCPA to complete Phase 2 Site Screening, Plan Development, and Procurement services for each site selected by the member agencies. The City of Healdsburg selected a site at its Wastewater Reclamation Facility (Figure 1). That site is the subject of this Notification.

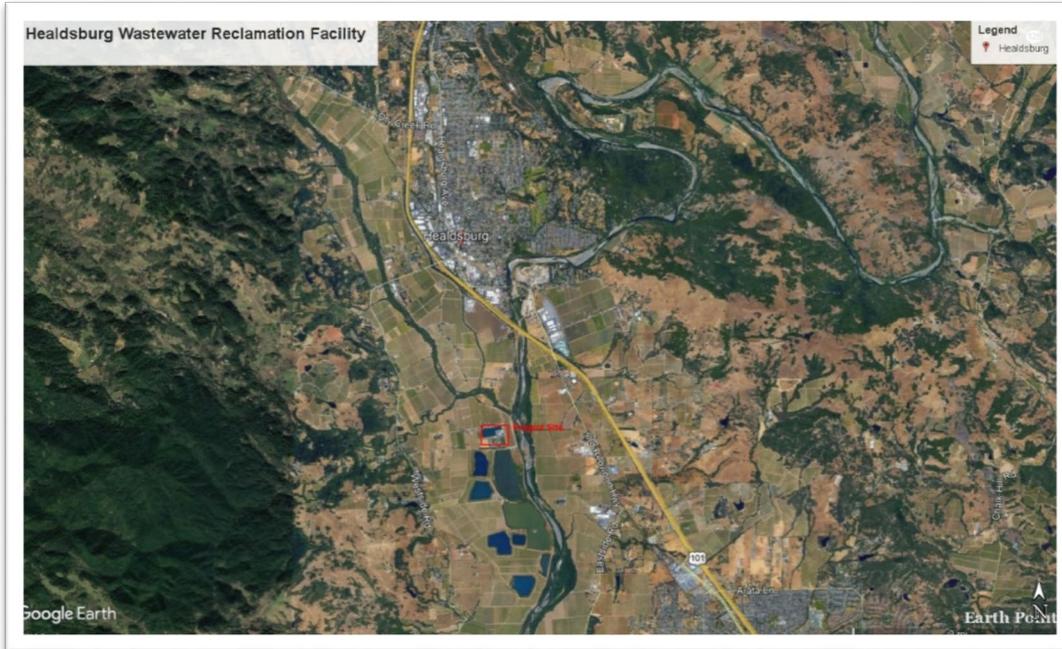


Figure 1 Healdsburg Wastewater Reclamation Plant Project Location

The Project site is located within a 36-acre wastewater reclamation facility site that is situated between Foreman Lane to the north and Cohn Road to the south. The proposed technology type for the solar project is floating arrays, whereby the panels would be mounted to pontoons that are anchored to ballasts located outside the ponds. As shown on Figure 2, the site would accommodate three arrays totaling 8.13 acres. The total installed capacity would be approximately 3.62 MW_{dc}.

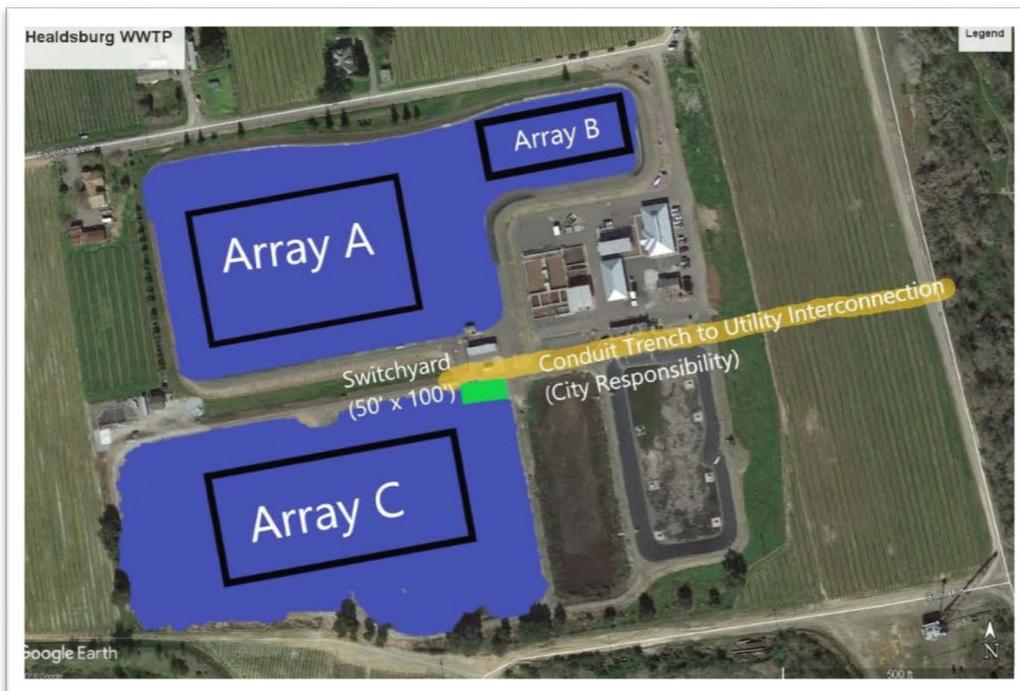
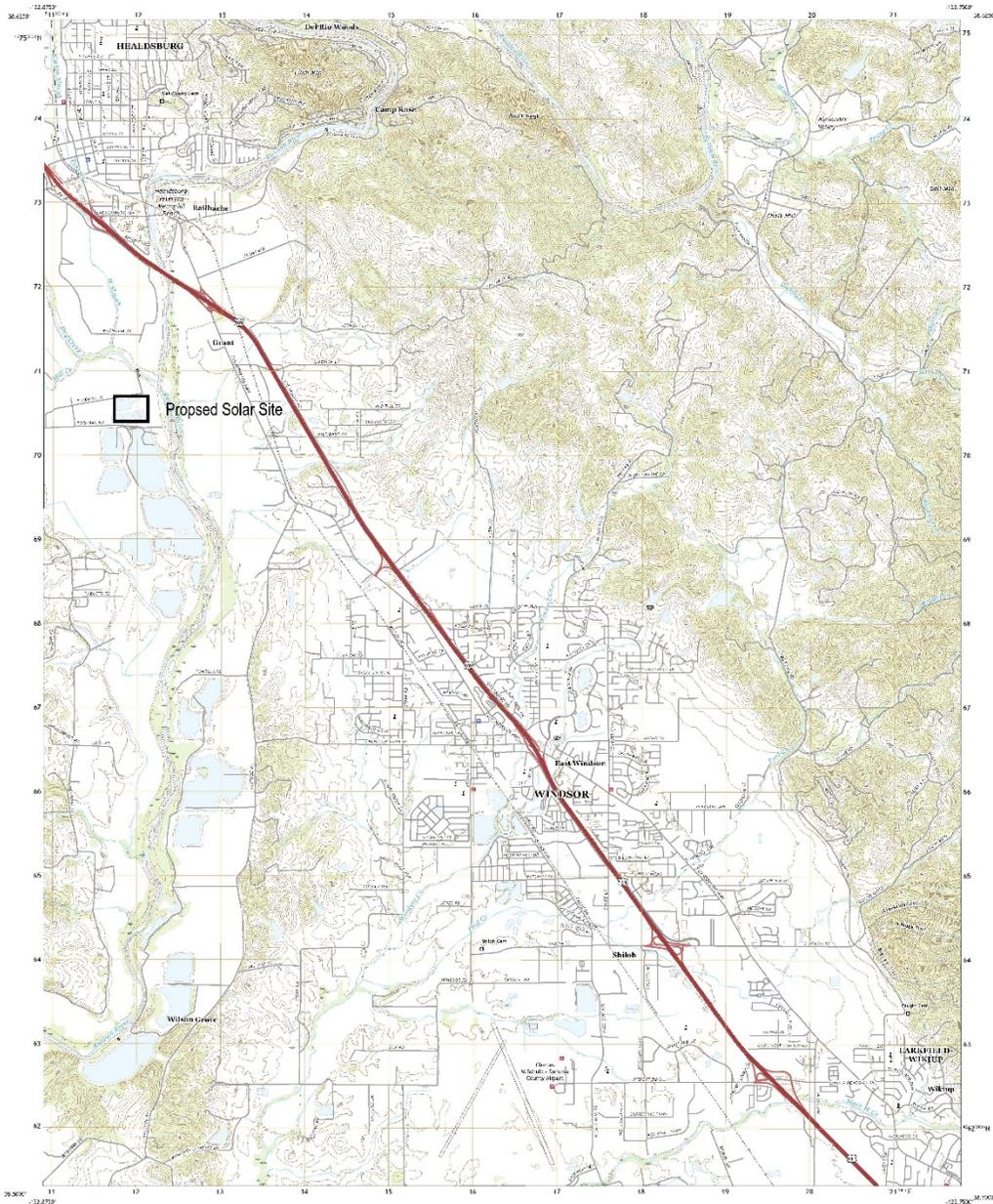
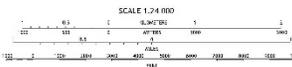


Figure 2 Proposed Solar Array Locations



Produced by the United States Geological Survey

Scale: Graphic Scale
 0 1000 2000 3000 4000 5000 Feet
 0 1000 2000 3000 4000 5000 Meters



BCSG CLASSIFICATION

Community	Local Connector
Geographic Name	Local Road
Survey	Met
Waterway State	US Road
	Survey Route

1	2	3
4	5	6
7	8	9

DATE: 03/20/2018

HEALDSBURG, CA
2018



Figure 3 Proposed Solar Site shown on Healdsburg Quadrangle.

NATIVE AMERICAN HERITAGE COMMISSION
Cultural and Environmental Department
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
Phone: (916) 373-3710
Email: nahc@nahc.ca.gov
Website: <http://www.nahc.ca.gov>
Twitter: @CA_NAHC



April 15, 2019

Keith S. Dunbar
K.S. Dunbar & Associates, Inc.

VIA Email to: ksdpe67@gmail.com

RE: NCPA Solar Project I-Healdsburg Wastewater Reclamation Facility, Sonoma County.

Dear Mr. Dunbar :

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 positive. Please contact the Mishewal Wappo Tribe of Alexander Valley on the attached list for more information. 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.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance, we can assure that our lists contain current information. If you have any questions or need additional information, please contact me at my email address: katy.sanchez@nahc.ca.gov.

Sincerely,

A handwritten signature in blue ink that reads "Katy Sanchez".

KATY SANCHEZ
Associate Environmental Planner

Native American Heritage Commission
Native American Contacts List
4/11/2019

Cloverdale Rancheria of Pomo Indians
Patricia Hermosillo, Chairperson
555 S. Cloverdale Blvd., Suite A Pomo
Cloverdale CA 95425
info@cloverdalerancheria.com
(707) 894-5775
(707) 894-5727

Mishewal-Wappo Tribe of Alexander Valley
Scott Gabaldon, Chairperson
2275 Silk Road Wappo
Windsor CA 95492
scottg@mishewalwappotribe.com
(707) 494-9159

Dry Creek Rancheria Band of Pomo Indians
Chris Wright, Chairperson
P.O. Box 607 Pomo
Geyserville CA 95441
lynnl@drycreekrancheria.com
(707) 522-4233
(707) 522-4286

Federated Indians of Graton Rancheria
Gene Buvelot
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Rohnert Park CA 94928 Southern Pomo
gbuvelot@gratonrancheria.com
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(707) 566-2288 ext 103

Lytton Rancheria
Marjorie Mejia, Chairperson
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Santa Rosa CA 95403
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(707) 575-6974 - Fax

Federated Indians of Graton Rancheria
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Rohnert Park CA 94928 Southern Pomo
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(707) 566-2291 Fax

Middletown Rancheria
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Middletown CA 95461 Lake Miwok
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Kashia Band of Pomo Indians of the Stewarts Point Rancheria
Dino Franklin Jr., Chairperson
1420 Guerneville Rd. Ste 1 Pomo
Santa Rosa CA 95403
dino@stewartspoint.org
(707) 591-0580 Office
(707) 591-0583 Fax

This list is current as of the date of this document and is based on the information available to the Commission on the date it was produced.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code, or Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native American Tribes for the proposed: NCPA Solar Project 1-Healdsburg Wastewater Reclamation Facility, Sonoma County.



K.S. Dunbar & Associates, Inc.
Environmental Engineering
45375 Vista Del Mar
Temecula, CA 92590-4314
(951) 699-2082
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ksdpe67@gmail.com

Erica D. Dunbar, President
Keith S. Dunbar, P.E., BCEE, Hon.D.WRE., F. ASCE
Chief Executive Officer

March 26, 2019

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

Request for a Sacred Lands File Search
NCPA Solar Project 1 – Healdsburg Wastewater Reclamation Facility
Northern California Power Agency

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pc: Ron Yuen
Director of Engineering, Generation Services
Northern California Power Agency
651 Commerce Drive,
Roseville California 95678

Sacred Lands File & Native American Contacts List Request

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County: Sonoma

USGS Quadrangle Name: Healdsburg, California

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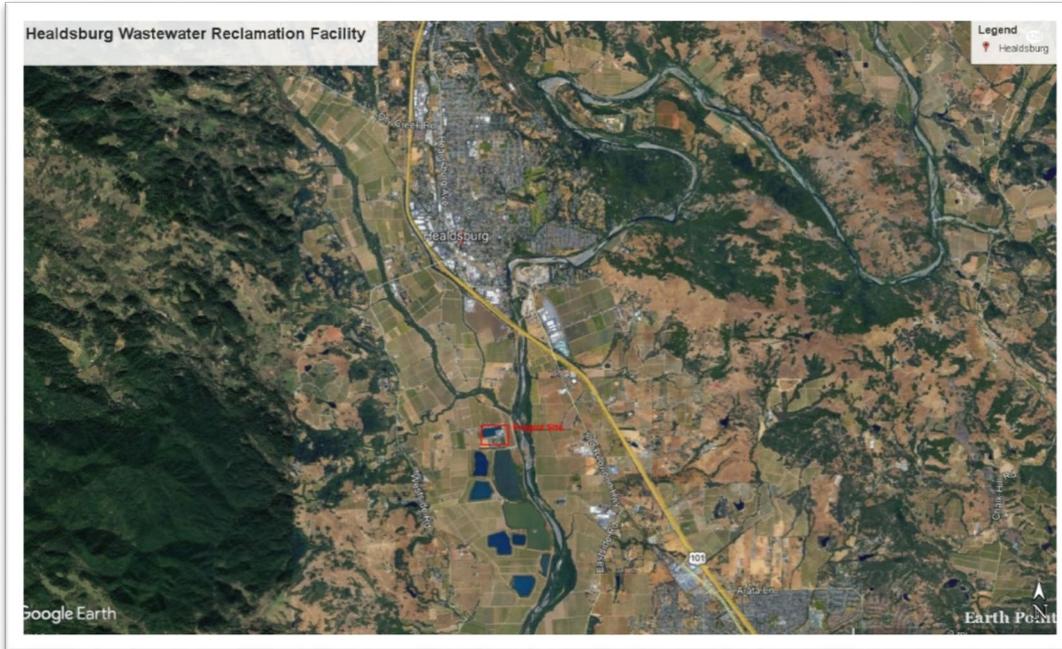


Figure 1 Healdsburg Wastewater Reclamation Plant Project Location

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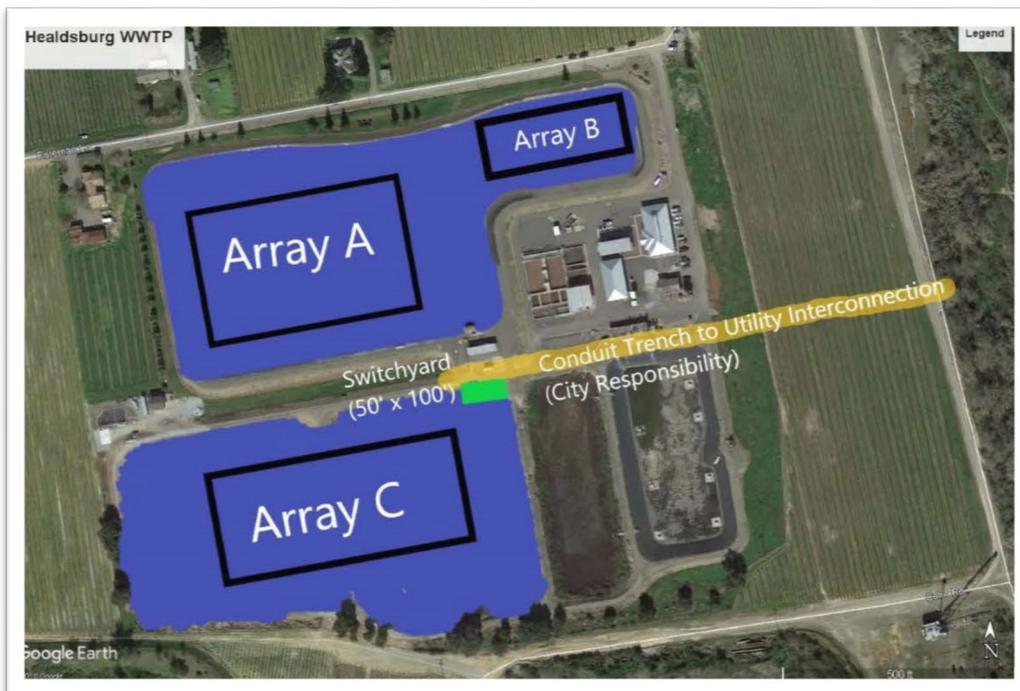
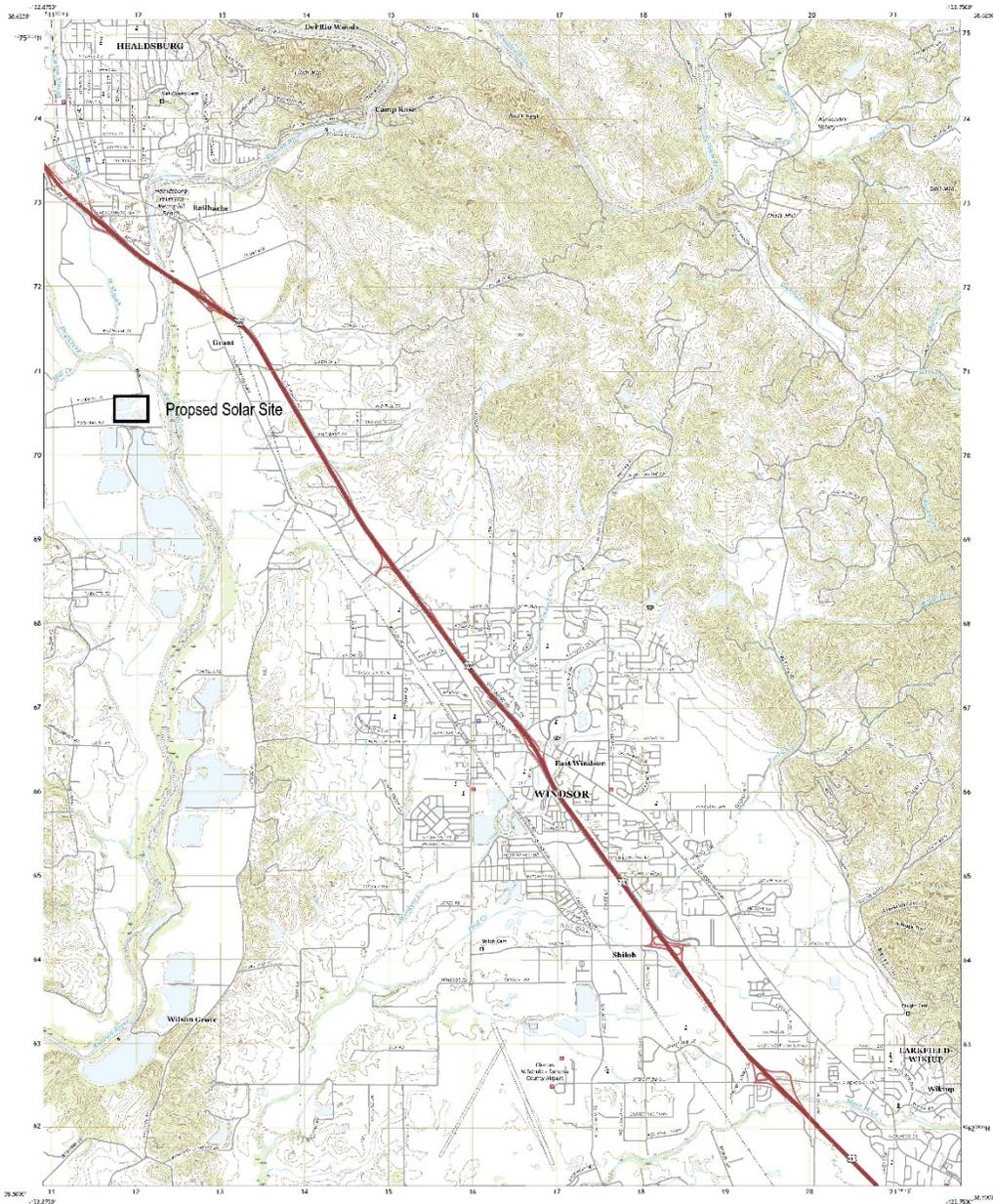
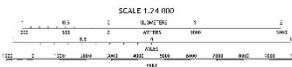


Figure 2 Proposed Solar Array Locations



Produced by the United States Geological Survey

Scale: 1:24,000
This map is a reproduction of a map published by the U.S. Geological Survey in 1988. The map is not a final product. It is a reproduction of a map published by the U.S. Geological Survey in 1988. The map is not a final product. It is a reproduction of a map published by the U.S. Geological Survey in 1988.



RS&G CLASSIFICATION

Contour	Local Contour
Section Line	Local Road
Survey	RR
Water State	US Road
	Survey Route

1	2	3
4	5	6
7	8	9

HEALDSBURG, CA
2018



Figure 3 Proposed Solar Site shown on Healdsburg Quadrangle.

Native American Heritage Commission
Native American Contacts List
4/11/2019

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Patricia Hermosillo, Chairperson
555 S. Cloverdale Blvd., Suite A Pomo
Cloverdale CA 95425
info@cloverdalerancheria.com
(707) 894-5775
(707) 894-5727

Mishewal-Wappo Tribe of Alexander Valley
Scott Gabaldon, Chairperson
2275 Silk Road Wappo
Windsor CA 95492
scottg@mishewalwappotribe.com
(707) 494-9159

Dry Creek Rancheria Band of Pomo Indians
Chris Wright, Chairperson
P.O. Box 607 Pomo
Geyserville CA 95441
lynnl@drycreekrancheria.com
(707) 522-4233
(707) 522-4286

Federated Indians of Graton Rancheria
Gene Buvelot
6400 Redwood Drive, Ste 300 Coast Miwok
Rohnert Park CA 94928 Southern Pomo
gbuvelot@gratonrancheria.com
(415) 279-4844 Cell
(707) 566-2288 ext 103

Lytton Rancheria
Marjorie Mejia, Chairperson
437 Aviation Blvd. Pomo
Santa Rosa CA 95403
margiemejia@aol.com
(707) 575-5917
(707) 575-6974 - Fax

Federated Indians of Graton Rancheria
Greg Sarris, Chairperson
6400 Redwood Drive, Ste 300 Coast Miwok
Rohnert Park CA 94928 Southern Pomo
gbuvelot@gratonrancheria.com
(707) 566-2288 Office
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Middletown Rancheria
Jose Simon III, Chairperson
P.O. Box 1035 Pomo
Middletown CA 95461 Lake Miwok
sshope@middletownrancheria.com
(707) 987-3670 Office
(707) 987-9091 Fax

Kashia Band of Pomo Indians of the Stewarts Point Rancheria
Dino Franklin Jr., Chairperson
1420 Guerneville Rd. Ste 1 Pomo
Santa Rosa CA 95403
dino@stewartspoint.org
(707) 591-0580 Office
(707) 591-0583 Fax

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This list is only applicable for contacting local Native American Tribes for the proposed: NCPA Solar Project 1-Healdsburg Wastewater Reclamation Facility, Sonoma County.

NATIVE AMERICAN HERITAGE COMMISSION
Cultural and Environmental Department
1550 Harbor Blvd., Suite 100
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Phone: (916) 373-3710
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Website: <http://www.nahc.ca.gov>
Twitter: @CA_NAHC



April 15, 2019

Keith S. Dunbar
K.S. Dunbar & Associates, Inc.

VIA Email to: ksdpe67@gmail.com

RE: NCPA Solar Project I-Healdsburg Wastewater Reclamation Facility, Sonoma County.

Dear Mr. Dunbar :

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 positive. Please contact the Mishewal Wappo Tribe of Alexander Valley on the attached list for more information. 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.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance, we can assure that our lists contain current information. If you have any questions or need additional information, please contact me at my email address: katy.sanchez@nahc.ca.gov.

Sincerely,

A handwritten signature in blue ink that reads "Katy Sanchez".

KATY SANCHEZ
Associate Environmental Planner

Native American Heritage Commission
Native American Contacts List
4/11/2019

Cloverdale Rancheria of Pomo Indians
Patricia Hermosillo, Chairperson
555 S. Cloverdale Blvd., Suite A Pomo
Cloverdale CA 95425
info@cloverdalerancheria.com
(707) 894-5775
(707) 894-5727

Mishewal-Wappo Tribe of Alexander Valley
Scott Gabaldon, Chairperson
2275 Silk Road Wappo
Windsor CA 95492
scottg@mishewalwappotribe.com
(707) 494-9159

Dry Creek Rancheria Band of Pomo Indians
Chris Wright, Chairperson
P.O. Box 607 Pomo
Geyserville CA 95441
lynnl@drycreekrancheria.com
(707) 522-4233
(707) 522-4286

Federated Indians of Graton Rancheria
Gene Buvelot
6400 Redwood Drive, Ste 300 Coast Miwok
Rohnert Park CA 94928 Southern Pomo
gbuvelot@gratonrancheria.com
(415) 279-4844 Cell
(707) 566-2288 ext 103

Lytton Rancheria
Marjorie Mejia, Chairperson
437 Aviation Blvd. Pomo
Santa Rosa CA 95403
margiemejia@aol.com
(707) 575-5917
(707) 575-6974 - Fax

Federated Indians of Graton Rancheria
Greg Sarris, Chairperson
6400 Redwood Drive, Ste 300 Coast Miwok
Rohnert Park CA 94928 Southern Pomo
gbuvelot@gratonrancheria.com
(707) 566-2288 Office
(707) 566-2291 Fax

Middletown Rancheria
Jose Simon III, Chairperson
P.O. Box 1035 Pomo
Middletown CA 95461 Lake Miwok
sshope@middletownrancheria.com
(707) 987-3670 Office
(707) 987-9091 Fax

Kashia Band of Pomo Indians of the Stewarts Point Rancheria
Dino Franklin Jr., Chairperson
1420 Guerneville Rd. Ste 1 Pomo
Santa Rosa CA 95403
dino@stewartspoint.org
(707) 591-0580 Office
(707) 591-0583 Fax

This list is current as of the date of this document and is based on the information available to the Commission on the date it was produced.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code, or Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native American Tribes for the proposed: NCPA Solar Project 1-Healdsburg Wastewater Reclamation Facility, Sonoma County.

Appendix E
AB 52 Consultation

Northern California Power Agency

651 Commerce Drive
Roseville, California 95678



AB 52 Tribal Consultation Notification

Date: March 27, 2019
To: Chris Wright, Chairperson
Tribes: Dry Creek Rancheria of Pomo Indians
Subject: Notification for Tribal Consultation
Project Name: NCPA Solar Project 1 – Healdsburg Wastewater Reclamation Facility
Lead Agency: Northern California Power Agency

Introduction:

The Northern California Power Agency (NCPA) is proposing the NCPA Solar Project 1 – Healdsburg Wastewater Reclamation Facility Project which may be located in a geographical area that is traditionally and culturally affiliated with the Dry Creek Rancheria of Pomo Indians.

Request for Consultation:

California law under Assembly Bill 52 (Public Resources Code §21080.3.1) now allows California Native American tribes 30 days to request consultation regarding possible significant effects that implementation of the proposed project may have on tribal cultural resources. This request must be in writing to NCPA and identify a lead contact person. NCPA will begin the consultation process within 30 days of receiving the tribes request for consultation. The consultation may include discussion concerning the type of environmental review necessary for the project, the significance of tribal cultural resources discovered, the significance of the project's impacts on tribal cultural resources, and, if necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend.

The consultation does not limit the ability of the tribe to submit information to NCPA regarding the significance of the tribal resources, the significance of the project's impact on tribal cultural resources, or any measures the tribe feels are appropriate to mitigate the potential impacts. If you wish to informally submit information, written comments may be sent to:

Keith S. Dunbar, P.E., BCEE, Hon.D.WRE., F. ASCE
K.S. Dunbar & Associates, Inc.
Environmental Engineering
45375 Vista Del Mar
Temecula, California 92590-4314
(951) 699-2082
E-Mail: ksddpe67@gmail.com

Confidential information transmitted electronically cannot be ensured. NCPA recommends that transmittal of confidential information, such as the specific location of a cultural resource, is done by formal letter, in person, or over the telephone, the tribes request to consult on the above-named project must be received no later than 30 days from the date of this notification.

Overview of the Proposed Project

The objective of the NCPA Solar Project 1 is to develop a fleet of Photovoltaic (PV) Solar Power Plants throughout participating member service territories to be completed and placed in service by the end of 2019. The plants will be managed by the Northern California Power Agency (NCPA) as a single project to be owned and operated by a third-party provider through a power purchase agreement (PPA). After the initial 5 – 7 years of operation, NCPA plans to purchase the plants.

The project will be executed in three phases:

- ❖ Phase 1 – Determine member interest and requirements and identify potential sites.
- ❖ Phase 2 – Site selection and screening, plan development and selection of a third-party provider to fulfill design, construction and operation through a PPA.
- ❖ Phase 3 – Construction and operation per the PPA.

NCPA has now completed Phase 1 and the site selection and screening portion of Phase 2. Burns & McDonnell was retained by NCPA to complete Phase 2 Site Screening, Plan Development, and Procurement services for each site selected by the member agencies. The City of Healdsburg selected a site at its Wastewater Reclamation Facility (Figure 1). That site is the subject of this Notification.

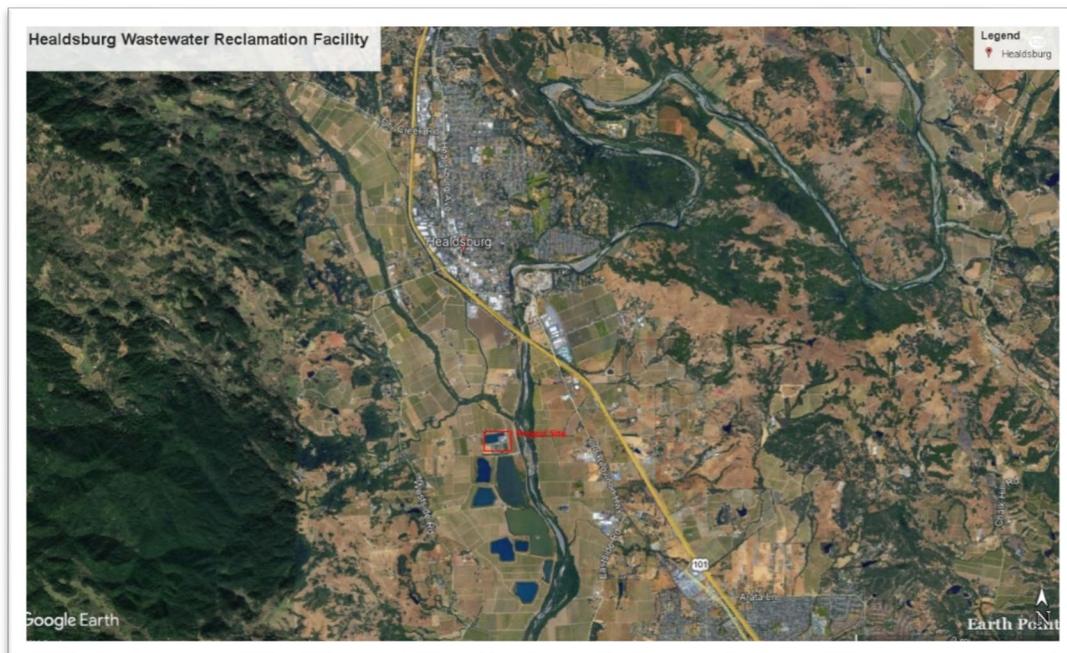


Figure 1 Healdsburg Wastewater Reclamation Plant Project Location

The Project site is located within a 36-acre wastewater reclamation facility site that is situated between Foreman Lane to the north and Cohn Road to the south. The proposed technology type for the solar project is floating arrays, whereby the panels would be mounted to pontoons that are anchored to ballasts located outside the ponds. As shown on Figure 2, the site would accommodate three arrays totaling 8.13 acres. The total installed capacity would be approximately 3.62 MW_{dc}.

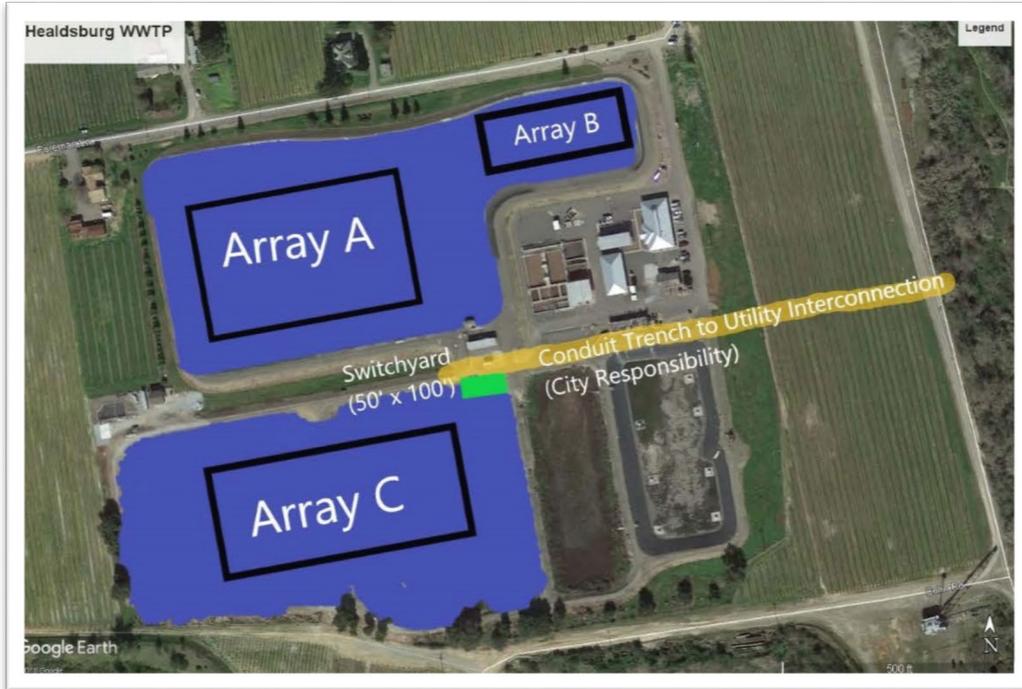


Figure 2 Proposed Solar Array Locations

Northern California Power Agency

651 Commerce Drive
Roseville, California 95678



AB 52 Tribal Consultation Notification

Date: March 27, 2019
To: Loren Smith, Tribal Historic Preservation Officer
Tribe: Kashia Band of Pomo Indians of the Stewarts Point
Subject: Notification for Tribal Consultation
Project Name: NCPA Solar Project 1 – Healdsburg Wastewater Reclamation Facility
Lead Agency: Northern California Power Agency

Introduction:

The Northern California Power Agency (NCPA) is proposing the NCPA Solar Project 1 – Healdsburg Wastewater Reclamation Facility Project which may be located in a geographical area that is traditionally and culturally affiliated with the Kashia Band of Pomo Indians of the Stewarts Point.

Request for Consultation:

California law under Assembly Bill 52 (Public Resources Code §21080.3.1) now allows California Native American tribes 30 days to request consultation regarding possible significant effects that implementation of the proposed project may have on tribal cultural resources. This request must be in writing to NCPA and identify a lead contact person. NCPA will begin the consultation process within 30 days of receiving the tribes request for consultation. The consultation may include discussion concerning the type of environmental review necessary for the project, the significance of tribal cultural resources discovered, the significance of the project's impacts on tribal cultural resources, and, if necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend.

The consultation does not limit the ability of the tribe to submit information to NCPA regarding the significance of the tribal resources, the significance of the project's impact on tribal cultural resources, or any measures the tribe feels are appropriate to mitigate the potential impacts. If you wish to informally submit information, written comments may be sent to:

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Overview of the Proposed Project

The objective of the NCPA Solar Project 1 is to develop a fleet of Photovoltaic (PV) Solar Power Plants throughout participating member service territories to be completed and placed in service by the end of 2019. The plants will be managed by the Northern California Power Agency (NCPA) as a single project to be owned and operated by a third-party provider through a power purchase agreement (PPA). After the initial 5 – 7 years of operation, NCPA plans to purchase the plants.

The project will be executed in three phases:

- ❖ Phase 1 – Determine member interest and requirements and identify potential sites.
- ❖ Phase 2 – Site selection and screening, plan development and selection of a third-party provider to fulfill design, construction and operation through a PPA.
- ❖ Phase 3 – Construction and operation per the PPA.

NCPA has now completed Phase 1 and the site selection and screening portion of Phase 2. Burns & McDonnell was retained by NCPA to complete Phase 2 Site Screening, Plan Development, and Procurement services for each site selected by the member agencies. The City of Healdsburg selected a site at its Wastewater Reclamation Facility (Figure 1). That site is the subject of this Notification.

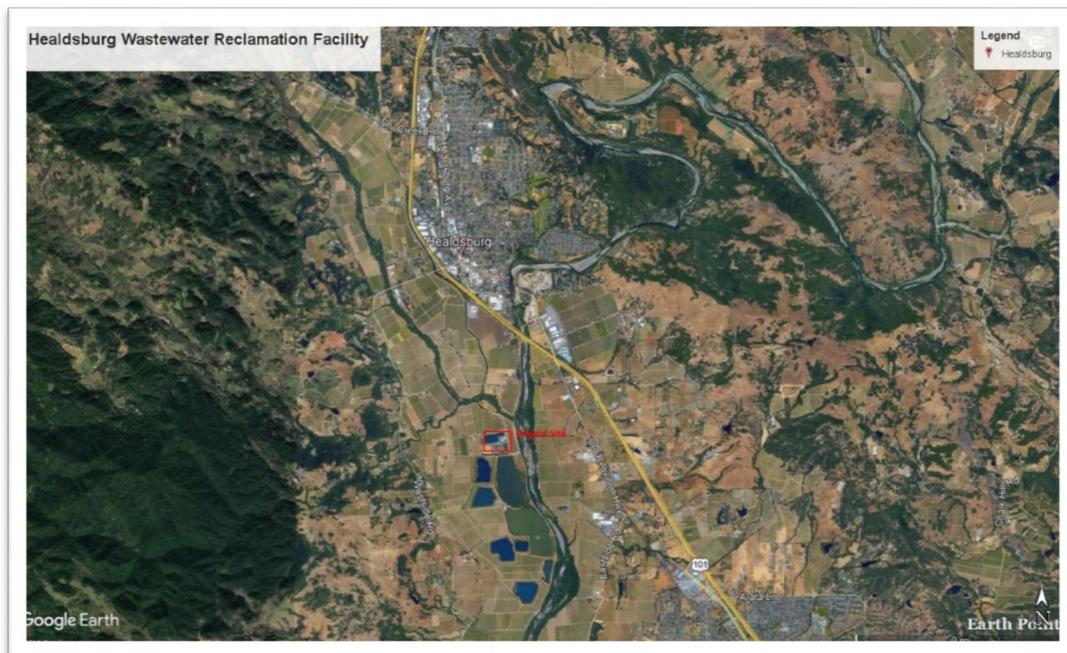


Figure 1 Healdsburg Wastewater Reclamation Plant Project Location

The Project site is located within a 36-acre wastewater reclamation facility site that is situated between Foreman Lane to the north and Cohn Road to the south. The proposed technology type for the solar project is floating arrays, whereby the panels would be mounted to pontoons that are anchored to ballasts located outside the ponds. As shown on Figure 2, the site would accommodate three arrays totaling 8.13 acres. The total installed capacity would be approximately 3.62 MW_{dc}.

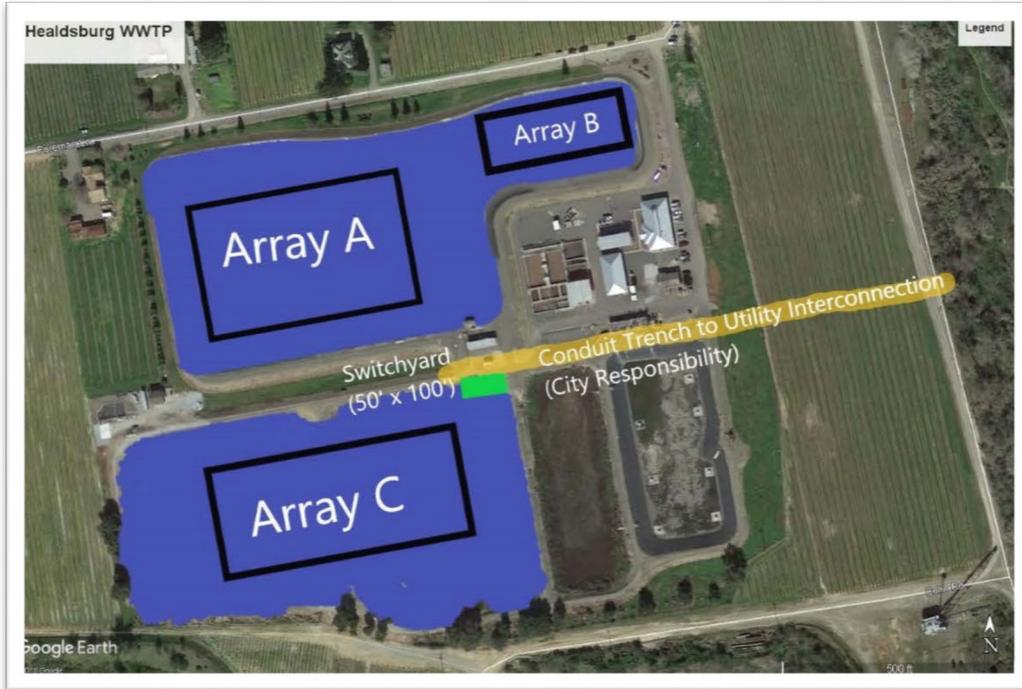


Figure 2 Proposed Solar Array Locations

Northern California Power Agency

651 Commerce Drive
Roseville, California 95678



AB 52 Tribal Consultation Notification

Date: March 27, 2019
To: Marjorie Mejia, Chairperson
Tribe: Lytton Rancheria of California
Subject: Notification for Tribal Consultation
Project Name: NCPA Solar Project 1 – Healdsburg Wastewater Reclamation Facility
Lead Agency: Northern California Power Agency

Introduction:

The Northern California Power Agency (NCPA) is proposing the NCPA Solar Project 1 – Healdsburg Wastewater Reclamation Facility Project which may be located in a geographical area that is traditionally and culturally affiliated with the Lytton Rancheria of California.

Request for Consultation:

California law under Assembly Bill 52 (Public Resources Code §21080.3.1) now allows California Native American tribes 30 days to request consultation regarding possible significant effects that implementation of the proposed project may have on tribal cultural resources. This request must be in writing to NCPA and identify a lead contact person. NCPA will begin the consultation process within 30 days of receiving the tribes request for consultation. The consultation may include discussion concerning the type of environmental review necessary for the project, the significance of tribal cultural resources discovered, the significance of the project's impacts on tribal cultural resources, and, if necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend.

The consultation does not limit the ability of the tribe to submit information to NCPA regarding the significance of the tribal resources, the significance of the project's impact on tribal cultural resources, or any measures the tribe feels are appropriate to mitigate the potential impacts. If you wish to informally submit information, written comments may be sent to:

Keith S. Dunbar, P.E., BCEE, Hon.D.WRE., F. ASCE
K.S. Dunbar & Associates, Inc.
Environmental Engineering
45375 Vista Del Mar
Temecula, California 92590-4314
(951) 699-2082
E-Mail: ksddpe67@gmail.com

Confidential information transmitted electronically cannot be ensured. NCPA recommends that transmittal of confidential information, such as the specific location of a cultural resource, is done by formal letter, in person, or over the telephone, the tribes request to consult on the above-named project must be received no later than 30 days from the date of this notification.

Overview of the Proposed Project

The objective of the NCPA Solar Project 1 is to develop a fleet of Photovoltaic (PV) Solar Power Plants throughout participating member service territories to be completed and placed in service by the end of 2019. The plants will be managed by the Northern California Power Agency (NCPA) as a single project to be owned and operated by a third-party provider through a power purchase agreement (PPA). After the initial 5 – 7 years of operation, NCPA plans to purchase the plants.

The project will be executed in three phases:

- ❖ Phase 1 – Determine member interest and requirements and identify potential sites.
- ❖ Phase 2 – Site selection and screening, plan development and selection of a third-party provider to fulfill design, construction and operation through a PPA.
- ❖ Phase 3 – Construction and operation per the PPA.

NCPA has now completed Phase 1 and the site selection and screening portion of Phase 2. Burns & McDonnell was retained by NCPA to complete Phase 2 Site Screening, Plan Development, and Procurement services for each site selected by the member agencies. The City of Healdsburg selected a site at its Wastewater Reclamation Facility (Figure 1). That site is the subject of this Notification.

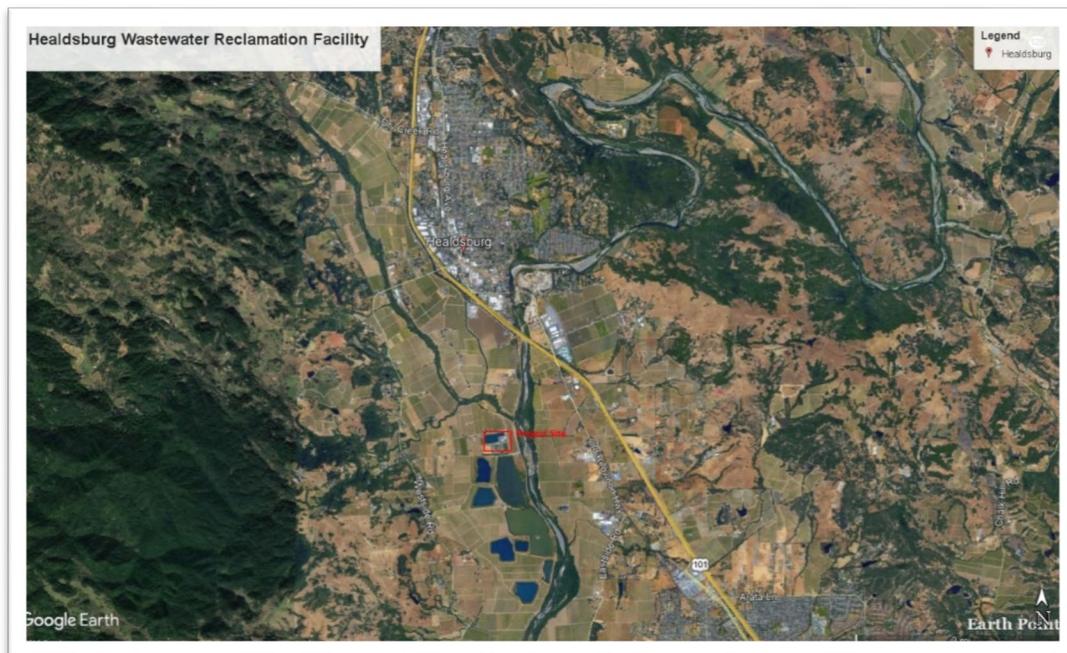


Figure 1 Healdsburg Wastewater Reclamation Plant Project Location

The Project site is located within a 36-acre wastewater reclamation facility site that is situated between Foreman Lane to the north and Cohn Road to the south. The proposed technology type for the solar project is floating arrays, whereby the panels would be mounted to pontoons that are anchored to ballasts located outside the ponds. As shown on Figure 2, the site would accommodate three arrays totaling 8.13 acres. The total installed capacity would be approximately 3.62 MW_{dc}.

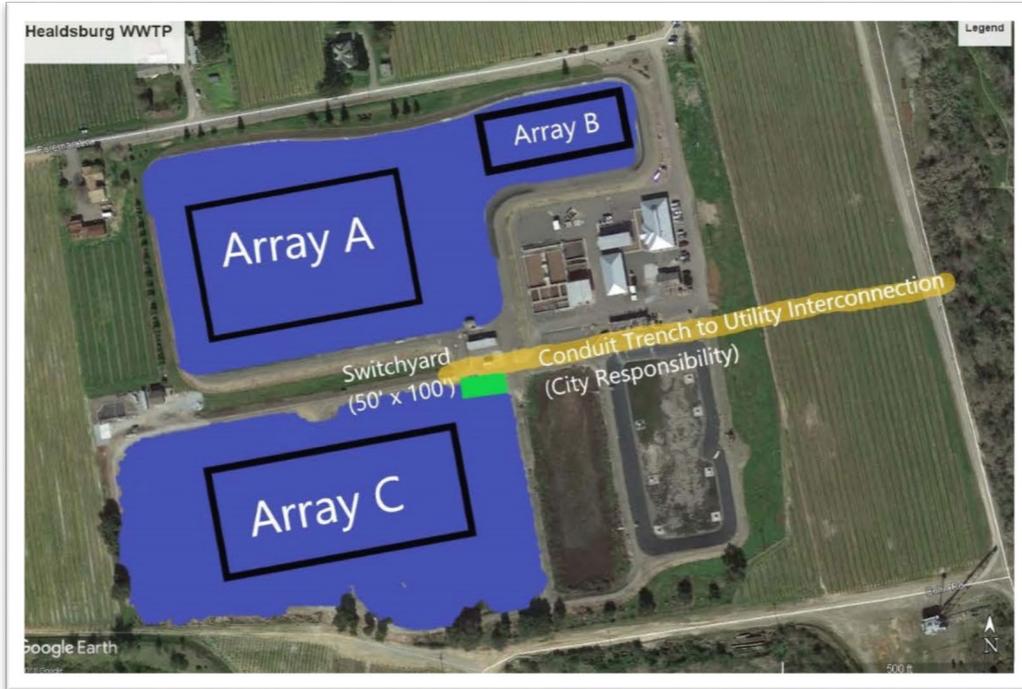


Figure 2 Proposed Solar Array Locations

Northern California Power Agency

651 Commerce Drive
Roseville, California 95678



AB 52 Tribal Consultation Notification

Date: March 27, 2019
To: Scott Gabaldon, Chairman
Tribes: Mishewal-Wappo Tribe of Alexander Valley
Subject: Notification for Tribal Consultation
Project Name: NCPA Solar Project 1 – Healdsburg Wastewater Reclamation Facility
Lead Agency: Northern California Power Agency

Introduction:

The Northern California Power Agency (NCPA) is proposing the NCPA Solar Project 1 – Healdsburg Wastewater Reclamation Facility Project which may be located in a geographical area that is traditionally and culturally affiliated with the Mishewal-Wappo Tribe of Alexander Valley.

Request for Consultation:

California law under Assembly Bill 52 (Public Resources Code §21080.3.1) now allows California Native American tribes 30 days to request consultation regarding possible significant effects that implementation of the proposed project may have on tribal cultural resources. This request must be in writing to NCPA and identify a lead contact person. NCPA will begin the consultation process within 30 days of receiving the tribes request for consultation. The consultation may include discussion concerning the type of environmental review necessary for the project, the significance of tribal cultural resources discovered, the significance of the project's impacts on tribal cultural resources, and, if necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend.

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K.S. Dunbar & Associates, Inc.
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- ❖ Phase 2 – Site selection and screening, plan development and selection of a third-party provider to fulfill design, construction and operation through a PPA.
- ❖ Phase 3 – Construction and operation per the PPA.

NCPA has now completed Phase 1 and the site selection and screening portion of Phase 2. Burns & McDonnell was retained by NCPA to complete Phase 2 Site Screening, Plan Development, and Procurement services for each site selected by the member agencies. The City of Healdsburg selected a site at its Wastewater Reclamation Facility (Figure 1). That site is the subject of this Notification.



Figure 1 Healdsburg Wastewater Reclamation Plant Project Location

The Project site is located within a 36-acre wastewater reclamation facility site that is situated between Foreman Lane to the north and Cohn Road to the south. The proposed technology type for the solar project is floating arrays, whereby the panels would be mounted to pontoons that are anchored to ballasts located outside the ponds. As shown on Figure 2, the site would accommodate three arrays totaling 8.13 acres. The total installed capacity would be approximately 3.62 MW_{dc}.

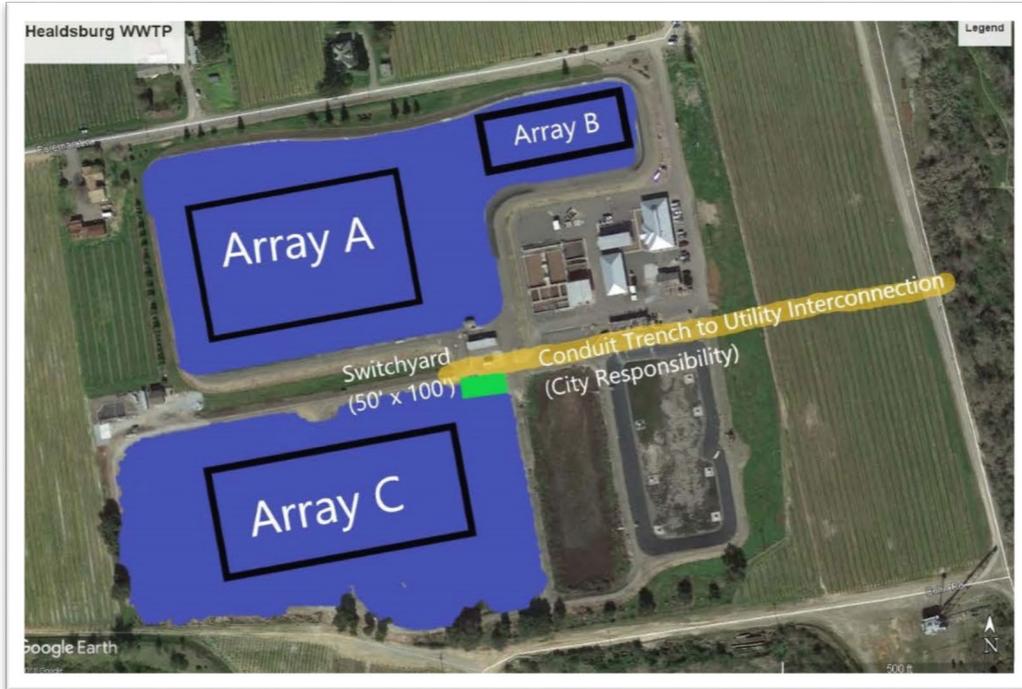


Figure 2 Proposed Solar Array Locations

Appendix F

MMRP



Northern California Power Agency
651 Commerce Drive
Roseville, California 95678-6420

Mitigation Monitoring & Reporting Program

NCPA Solar Project 1 – Healdsburg WRF Site



Photo Courtesy of SunPower Corporation

Prepared by:

K.S. Dunbar & Associates, Inc.
Environmental Engineering
45375 Vista Del Mar
Temecula, California 92590-4314
951-699-2082
Email: ksdpe67@gmail.com

April 2019



Mitigation Monitoring and Reporting Program

NCPA Solar Project 1 - Healdsburg Wastewater Reclamation Facility Site

The California Environmental Quality Act (CEQA) requires that when a public agency completes an environmental document which includes measures to mitigate or avoid significant environmental effects, the public agency must adopt a reporting or monitoring program. This requirement ensures that environmental impacts found to be significant will be mitigated. The reporting or monitoring program must be designed to ensure compliance during project implementation (Public Resources Code Section 21081.6).

In compliance with Public Resources Code Section 21081.6, the following MITIGATION MONITORING AND REPORTING CHECKLIST has been prepared for the NCPA Solar Project 1 – Healdsburg Wastewater Reclamation Facility Site. This Mitigation Monitoring and Reporting Checklist is intended to provide verification that all applicable Conditions of Approval relative to significant environmental impacts are monitored and reported. Monitoring will include: 1) verification that each mitigation measure has been implemented, 2) recordation of the actions taken to implement each mitigation, and 3) retention of records in the NCPA Solar Project 1 – Healdsburg Wastewater Reclamation Facility Site project file.

This Mitigation Monitoring and Reporting Program delineates responsibilities for monitoring the Project, but also allows the Northern California Power Agency (NCPA) flexibility and discretion in determining how best to monitor implementation. Monitoring procedures will vary according to the type of mitigation measure. Adequate monitoring consists of demonstrating that monitoring procedures took place and that mitigation measures were implemented.

Reporting consists of establishing a record that a mitigation measure is being implemented and generally involves the following steps:

- ❖ NCPA distributes reporting forms to the appropriate persons for verification of compliance.
- ❖ Departments/agencies with reporting responsibilities will review the Environmental Impact Report or Initial Study and Mitigated Negative Declaration, which provides general background information on the reasons for including specified mitigation measures.
- ❖ Problems or exceptions to compliance will be addressed to NCPA as appropriate.
- ❖ Periodic meetings may be held during project implementation to report on compliance of mitigation measures.
- ❖ Responsible parties provide NCPA with verification that monitoring has been conducted and ensure, as applicable, that mitigation measures have been implemented. Monitoring compliance may be documented through existing review and approval programs such as field inspection reports and plan review.
- ❖ NCPA or Applicant prepares a reporting form periodically during the construction phase and an annual reporting summarizing all project mitigation monitoring efforts.
- ❖ Appropriate mitigation measures will be included in construction documents and/or conditions of permits/approvals.

Minor changes to the Mitigation Monitoring and Reporting Program, if required, would be made in accordance with CEQA and would be permitted after further review and approval by NCPA. Such changes could include reassignment of monitoring and reporting responsibilities, program redesign to make any appropriate improvements, and/or modification, substitution or deletion of mitigation measures subject to conditions described in CEQA Guidelines Section 15162. No change will be permitted unless the Mitigation Monitoring and Reporting Program continues to satisfy the requirements of Public Resources Code Section 21081.6.

Mitigation Monitoring and Reporting Program Checklist

NCPA Solar Project 1 – Healdsburg Wastewater Reclamation Facility Site

Mitigation Measure	Monitoring Process	Monitoring Timing	Responsible Person(s)	Date Completed
Air Quality				
NCPA shall appoint a construction relations officer to act as a community liaison concerning on-site construction activities including resolution of issues related to PM ₁₀ generation. Additionally, best management practices shall be included in contract documents for this project.	Project Records.	Prior To Construction.	Project Manager.	By: Date:
Standard Construction Practices/Design Features				
<p>NCPA's contract documents for this project will include the following:</p> <p>The contractor shall:</p> <ul style="list-style-type: none"> ❖ Utilize electricity from power poles instead of from temporary diesel or gasoline power generators, when feasible. ❖ Require the use of 2010 and newer diesel haul trucks (e.g., material delivery trucks and soil import/export) and if the lead agency determines that 2010 model year or newer diesel trucks cannot be obtained the contractor shall use trucks that meet EPA 2007 model year NO_x emissions requirements. ❖ Require that all on-site construction equipment meet EPA Tier 3 or higher emissions standards according to the following: <ul style="list-style-type: none"> ➤ All off-road diesel-powered construction equipment greater than 50 hp shall meet the Tier 4 emission standards, where available. In addition, all construction equipment shall be outfitted with BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations. ➤ A copy of each unit's certified tier specification, BACT documentation, and CARB or Northern Sonoma County APCD operating permit shall be provided at the time of mobilization of each applicable unit of equipment. ❖ Maintain construction equipment engines by keeping them properly tuned and maintained according to manufacturer's specifications. ❖ Use alternative fuels or clean and low-sulfur fuel for equipment. ❖ Idle trucks in accordance with the Airborne Toxic Control Measure (ACTM) to Limit Diesel 	Project Records.	Prior To Construction.	Project Manager.	By: Date:

Mitigation Monitoring and Reporting Program Checklist

Mitigation Measure	Monitoring Process	Monitoring Timing	Responsible Person(s)	Date Completed
<p>Fueled Commercial Motor Vehicle Idling and other applicable laws.</p> <ul style="list-style-type: none"> ❖ Spread soil binders on site, where appropriate, unpaved roads and staging areas. ❖ Water active construction sites at least twice daily. ❖ Sweep all streets at the end of the day if visible soil materials are carried onto adjacent public paved roads (recommend water sweeper with reclaimed water). ❖ If necessary, wash off trucks leaving the site. ❖ Cover all trucks hauling dirt, sand, soil, or other loose materials, or maintain at least two feet of freeboard in accordance with the requirements of California Vehicle Code (CVC) Section 23114. 				
Biological Resources				
<p>Standard Construction Practices/Design Features</p> <p>NCPA's contract documents for this project will include the following:</p> <ul style="list-style-type: none"> ❖ 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 shall stay outside of a no-disturbance buffer. The size of the no-disturbance buffer (generally 300 feet for migratory and non-migratory song birds and 500 feet for raptors and special-status species) will be determined by the wildlife biologist, in coordination with the CDFW, and will depend on the level of noise and/or surrounding disturbances, line of sight between the nest and the construction activity, ambient noise, 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. 	Project Records.	Prior To Construction.	Project Manager.	By: Date:

Mitigation Monitoring and Reporting Program Checklist

Mitigation Measure	Monitoring Process	Monitoring Timing	Responsible Person(s)	Date Completed
Cultural Resources				
<p>Prior to the start of construction, NCPA shall hold a pre-grading meeting. The Project Archaeologist shall attend the pre-grading meeting with NCPA's Project Administrator, Field Engineering Inspector and any contractors to conduct a Cultural Resources Worker Sensitivity Training for all construction personnel working on the proposed Project. The training shall include an overview of potential cultural resources that could be encountered during ground disturbing activities; the requirements of the monitoring program; the protocols that apply in the event inadvertent discoveries of cultural resources are identified, including who to contact and appropriate avoidance measures until the find(s) can be properly evaluated, and any other appropriate protocols.</p>	Project Records.	Prior To Construction.	Project Manager.	By: Date:
Standard Construction Practices/Design Features				
<p>NCPA's contract documents for this project will include the following:</p> <ul style="list-style-type: none"> ❖ In the unlikely event that potentially significant archaeological materials are encountered during construction activities, all work shall be halted in the vicinity of the archaeological discovery until a qualified archaeologist can visit the site of discovery, assess the significance of the archaeological resource, and provide proper management recommendations. If the discovery proves to be significant, additional work, such as data recovery excavation, may be warranted. The treatment and disposition of cultural material that might be discovered during excavation shall be in accordance with applicable laws and regulations. 	Project Records.	Prior To Construction.	Project Manager.	By: Date:
<ul style="list-style-type: none"> ❖ All sacred items, should they be encountered within the Project sites, shall be avoided and preserved as the preferred mitigation, if feasible. All cultural materials that are collected during excavation and other earth disturbing activities on the Project sites, with the exception of sacred items, burial goods and human remains which will be addressed in any required Treatment Agreement, shall be tribally curated according to the current repository standards. The collections and associated records shall be transferred, including title, to the closest tribe to the Project site. 				
<ul style="list-style-type: none"> ❖ In the event of an accidental discovery or recognition of any human remains, the County Coroner shall be notified and construction activities at the affected work site shall be halted. If the coroner determines the remains to be Native American: (1) the coroner shall contact the Native American Heritage Commission (NAHC) within 24-hours, and (2) the NAHC shall identify the person or persons it believes to be the most likely descended from the deceased Native American. The treatment and disposition of human remains that might be discovered during excavation shall be in accordance with applicable laws and regulations. 				

Mitigation Monitoring and Reporting Program Checklist

Mitigation Measure	Monitoring Process	Monitoring Timing	Responsible Person(s)	Date Completed
Geology and Soils				
Standard Construction Practices/Design Features				
<p>NCPA's contract documents for this project will include the following:</p> <ul style="list-style-type: none"> ❖ In the unlikely event that potentially significant paleontological materials (e.g., fossils) are encountered during construction of the project, all work shall be halted 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. If the discovery proves to be significant, additional work, such as data recovery excavation, may be warranted. The treatment and disposition of paleontological material that might be discovered during excavation shall be in accordance with applicable laws and regulations. 	Project Records	Prior to Construction	Project Manager	By: Date:
Hazards and Hazardous Materials				
Standard Construction Practices/Design Features				
<p>NCPA's contract documents for this project will include the following:</p> <ul style="list-style-type: none"> ❖ During project construction, the construction contractor shall implement the following measures to address the potential environmental constraints associated with the presence of hazardous materials at the project sites to the satisfaction of NCPA: <ul style="list-style-type: none"> ✓ The contractor shall prepare a Health and Safety Plan in compliance with the requirements of Chapter 6.95, Division 20 of the Health and Safety Code (§25500 – 25532). The plan shall include measures to be taken in the event of an accidental spill. ✓ The contractor shall enforce strict on-site handling rules to keep construction and maintenance materials out of receiving waters and storm drains. In addition, the contractor shall store all reserve fuel supplies only within the confines of designated construction staging areas; refuel equipment only with the designated construction staging areas; and regularly inspect all construction equipment for leaks. ✓ The construction staging area shall be designed to contain contaminants such as oil, grease, and fuel products to ensure that they do not drain towards receiving waters or storm drain inlets. 	Project Records.	Prior To Construction.	Project Manager.	By: Date:
Hydrology and Water Quality				
Standard Construction Practices/Design Features				
<p>All 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</p>	Project Records.	Prior To Construction.	Project Manager.	By: Date:

Mitigation Monitoring and Reporting Program Checklist

<p>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 NCPA to obtain coverage before the onset of construction activities. Construction activities would comply with the conditions of these permits that include preparation of storm water pollution prevention plans (SWPPP), implementation of BMP's, and monitoring to insure impacts to water quality are minimized. As part of this process, multiple BMP's should be implemented to provide effective erosion and sediment control. These BMP's should be selected to achieve maximum sediment removal and represent the best available technology that is economically achievable. BMP's to be implemented may include, but not be limited to, the following:</p> <ul style="list-style-type: none"> ✓ Temporary erosion control measures such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary revegetation or other groundcover shall be employed for disturbed areas. ✓ Storm drain inlets on the site and in downstream offsite areas shall be protected from sediment with the use of BMP's acceptable to NCPA, local jurisdictions and the California Regional Water Quality Control Board, Central Valley Region. ✓ Dirt and debris shall be swept from paved streets in the construction zone on a regular basis, particularly before predicted rainfall events. ✓ No disturbed surfaces shall be left without erosion control measures in place. NCPA, or its Construction Contractor, shall file a Notice of Intent with the Regional Board and require the preparation of a pollution prevention plan prior to commencement of construction. NCPA shall routinely inspect the construction site to verify that the BMP's specified in the pollution prevention plan are properly installed and maintained. NCPA shall immediately notify the contractor if there were a noncompliance issue and require immediate compliance. <p>The SWPPP will also identify 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 will be granted by the California Regional Water Quality Control Board, North Coast Region once it is satisfied that no impacts to water quality will occur.</p>				
Noise				
<p>NCPA shall appoint a construction relations officer to act as a community liaison concerning on-site construction activities. Prior to ground disturbing activities NCPA shall notify adjoining property owners of the potential for ground vibration impacts.</p>	<p>Project Records.</p>	<p>Prior to Construction.</p>	<p>Project Manager.</p>	<p>By: Date</p>