

North Highlands Recreation and Park District

Mitigated Negative Declaration

Pursuant to Title 14, Division 6, Chapter 3, Article 6, Sections 15070 and 15071 of the California Code of Regulations, the North Highlands Recreation and Park District, does prepare, make, declare, publish, and cause to be filed with the County Clerk of Sacramento County, State of California, this Mitigated Negative Declaration re: The project described as follows:

- 1. Control Number:** PLER2019-00138
- 2. Title and Short Description of Project:** Sierra Creek Park
The project would include improvements to allow the functional use of, and access to Sierra Creek Park. Proposed project features would include a pedestrian pathway system, a children's play area, a picnic area, a community garden, a dedicated parking area providing approximately 20-25 parking spaces, new signage, lighting, and fencing. The remaining undeveloped areas would include either turf or non-irrigated hydroseed.
- 3. Assessor's Parcel Number:** 203-0310-045
- 4. Location of Project:** The project site is on an approximately 7.19-acre parcel located south of Watt Avenue and west of Scotland Drive in unincorporated Sacramento County
- 5. Project Applicant:** North Highlands Recreation and Park District
- 6.** Said project will not have a significant effect on the environment for the following reasons:
 - a. It will not have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory.
 - b. It will not have the potential to achieve short-term, to the disadvantage of long-term, environmental goals.
 - c. It will not have impacts, which are individually limited, but cumulatively considerable.
 - d. It will not have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly.
- 7.** As a result thereof, the preparation of an environmental impact report pursuant to the Environmental Quality Act (Division 13 of the Public Resources Code of the State of California) is not required.
- 8.** The attached Initial Study has been prepared by AECOM for the North Highlands Recreation and Park District in support of this Mitigated Negative Declaration. Further information may be obtained by contacting the North Highlands Recreation and Park District at 6040 Watt Avenue, North Highlands, CA 95660 or by phone at (916) 332-7440.

[Original Signature on File] Larry Mazzuca

District Administrator

North Highlands Recreation and Park District

Table of Contents

INITIAL STUDY.....	1
PROJECT INFORMATION	1
PROJECT DESCRIPTION	1
Project Location and Setting	1
Park Facilities.....	1
Construction	2
Utilities	4
Operations and Maintenance	4
ENVIRONMENTAL EFFECTS	5
Aesthetics	5
Air Quality	9
Noise	15
Hydrology and Water Quality	22
Biological Resources.....	25
Geology and Soils	51
Cultural Resources.....	52
Tribal Cultural Resources.....	54
Greenhouse Gas Emissions	55
ENVIRONMENTAL MITIGATION MEASURES	61
Mitigation Measure A: SMAQMD Basic Construction Emission Control Practices.....	61
Mitigation Measure B: Implement Measures to Reduce Short-Term, Construction-Related Noise.....	61
Mitigation Measure C: Conduct botanical surveys for Sanford's arrowhead; avoid placing pedestrian bridges over Sanford's arrowhead populations	62
Mitigation Measure D: Avoid impacts on western pond turtle during construction	63
Mitigation Measure E: Conduct a preconstruction survey for nesting birds and raptors, and implement avoidance measures, as needed	63
Mitigation Measure F: Comply with the Section 1600 Streambed Alteration Agreement.....	64
Mitigation Measure G: Submit a Tree Permit Application with the County of Sacramento Department of Public Works.....	64

Mitigation Measure H: Paleontological Resources Unanticipated Discovery	64
Mitigation Measure I: Cultural Resources Unanticipated Discovery	65
Mitigation Measure J: Implement the SMAQMD GHG Tier 1 BMPs.....	66
Mitigation Measure Compliance	66
INITIAL STUDY CHECKLIST	67
SUPPLEMENTAL INFORMATION	86
REFERENCES.....	87
<i>Aesthetics</i>	<i>87</i>
<i>Agricultural Resources</i>	<i>87</i>
<i>Air Quality</i>	<i>87</i>
<i>Airports</i>	<i>88</i>
<i>Biological Resources.....</i>	<i>88</i>
<i>Cultural Resources.....</i>	<i>91</i>
<i>Energy</i>	<i>91</i>
<i>Geology and Soils.....</i>	<i>91</i>
<i>Greenhouse Gas Emissions</i>	<i>92</i>
<i>Hazards and Hazardous Materials.....</i>	<i>92</i>
<i>Hydrology and Water Quality</i>	<i>93</i>
<i>Land Use and Planning.....</i>	<i>94</i>
<i>Noise</i>	<i>94</i>
<i>Population and Housing.....</i>	<i>95</i>
<i>Public Services.....</i>	<i>95</i>
<i>Transportation.....</i>	<i>96</i>
<i>Tribal Cultural Resources.....</i>	<i>96</i>
<i>Wildfire</i>	<i>96</i>
INITIAL STUDY PREPARERS.....	97
<i>Sacramento County</i>	<i>97</i>
<i>North Highlands Recreation and Park District.....</i>	<i>97</i>
<i>AECOM</i>	<i>97</i>

List of Tables

Table IS-1	Summary of Construction-Related Emissions of Criteria Air Pollutants and Precursors	11
Table IS-2	Summary of Operational Emissions of Criteria Air Pollutants and Precursors.....	12
Table IS-3	Summary of Ambient Noise Level Survey Results in the Vicinity of the Project Site.....	17
Table IS-4	Non-Transportation Noise Standards, Sacramento County Noise Element.....	18
Table IS-5	Ambient and Project Construction Noise Levels at Closest Sensitive Receptors	20
Table IS-6	Project Construction Vibration Levels at Closest Sensitive Receptors.....	21
Table IS-7a	Potential for Special Status Species–Plants	30
Table IS-7b	Potential for Special Status Species–Invertebrates.....	32
Table IS-7c	Potential for Special Status Species–Fish.....	33
Table IS-7d	Potential for Special Status Species–Amphibians and Reptiles	34
Table IS-7e	Potential for Special Status Species–Birds	36
Table IS-7f	Potential for Special Status Species–Mammals	41
Table IS-8	SMAQMD Thresholds of Significance for Greenhouse Gas Emissions.....	58
Table IS-9	GHG Emissions Associated with Construction and Operation of the Project–Construction GHG Emission	59
Table IS-9.1	Initial Study Checklist – Land Use.....	68
Table IS-9.2	Initial Study Checklist – Population/Housing	68
Table IS-9.3	Initial Study Checklist – Agricultural Resources	69
Table IS-9.4	Initial Study Checklist – Aesthetics.....	69
Table IS-9.5	Initial Study Checklist – Airports.....	70
Table IS-9.6	Initial Study Checklist – Public Services.....	70
Table IS-9.7	Initial Study Checklist – Transportation	74
Table IS-9.8	Initial Study Checklist – Air Quality.....	75
Table IS-9.9	Initial Study Checklist – Noise	76
Table IS-9.10	Initial Study Checklist – Hydrology and Water Quality	77
Table IS-9.11	Initial Study Checklist – Geology and Soils	78
Table IS-9.12	Initial Study Checklist – Biological Resources.....	80
Table IS-9.13	Initial Study Checklist – Cultural Resources.....	82

Table IS-9.14	Initial Study Checklist – Hazards and Hazardous Materials	82
Table IS-9.15	Initial Study Checklist – Wildfire	84
Table IS-9.16	Initial Study Checklist – Energy.....	85
Table IS-9.17	Initial Study Checklist – Greenhouse Gas Emissions.....	85
Table IS-10.	Supplemental Information	86

List of Plates

Plate IS-1	Proposed Concept Plan	3
Plate IS-2	View of Landscaped Area and Hackberry Trees along Watt Avenue, looking east from project site.	6
Plate IS-3	View of Landscaped Areas and Undeveloped Areas, looking west from southeast corner of the project site.	6
Plate IS-4	View of Undeveloped Areas, looking east from west side of the project site.....	7
Plate IS-6	Site Vicinity.....	26
Plate IS-7	Habitat Map.....	29

Acronyms

AB	Assembly Bill
amsl	above mean sea level
ANSI S1.4	American National Standards Institute for Class 1 sound-level meters
APN	Assessor's Parcel Number
BACT	Best Available Control Technology
BMPs	Best Management Practices
C&D	Construction and demolition
CAA	federal Clean Air Act
CAAQA	California ambient air quality standards
CAL FIRE	California Department of Forestry and Fire Protection
Cal/OSHA	California Division of Occupational Safety and Health
CalEEMod	California Emissions Estimator Model
CARB	California Air Resources Board
CBC	California Building Code
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFD	Community Facilities District
CH ₄	Methane
CHP	California Highway Patrol
CO ₂	Carbon dioxide
CO ₂ e	carbon dioxide equivalent
CRPR	California Rare Plant Rank
CRR	Cultural Resource Report
dB	decibels
dBA	A-weighted decibel
DOC	California Department of Conservation
DPM	diesel-fueled engines
DTSC	California Department of Toxic Substances Control
EIR	Environmental Impact Report
EPA	U.S. Environmental Protection Agency

FEMA	Federal Emergency Management Agency
FTA	Federal Transit Administration
GHGs	greenhouse gases
GWP	Global warming potential
HCP	Habitat Conservation Plan
in/sec	inches per second
lbs./day	pounds per day
LDL	Larson Davis Laboratories
L _{dn}	day-night average noise level
L _{eq}	equivalent noise level
L _{max}	maximum instantaneous sound level
MBTA	Migratory Bird Treaty Act
Metro Fire	Sacramento Metropolitan Fire District
MGD	million gallons per day
MLD	most likely descendent
mph	miles per hour
MT	metric tons
N ₂ O	Nitrous oxide
NAAQS	national ambient air quality standards
NAHC	Native American Heritage Commission
NARS	North Area Recovery Station
NCIC	North Central Information Center
NHRPD	North Highlands Recreation and Park District
NO _x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRCS	U.S. Natural Resources Conservation Service
NWI	National Wetlands Inventory
PM	particulate matter
PM ₁₀	PM equal to or less than 10 micrometers in diameter
PM _{2.5}	PM equal to or less than 2.5 micrometers in diameter
PPV	peak particle velocity
PRC	California Public Resources Code

RMS	root mean square
ROG	reactive organic gases
SASD	Sacramento Area Sewer District
SEL	sound exposure level
SMAQMD	Sacramento Metropolitan Air Quality Management District
ST	short-term measurement
SVAB	Sacramento Valley Air Basin
SVP	Society of Vertebrate Paleontology
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TACs	toxic air contaminants
ULOP	urban levels of flood protection
USFWS	U.S. Fish and Wildlife Service
µin/sec	microinch per second

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North Highlands Recreation and Park District INITIAL STUDY

PROJECT INFORMATION

CONTROL NUMBER: PLER2019-00138

NAME: Sierra Creek Park

LOCATION: The project site is on an approximately 7.19-acre parcel located south of Watt Avenue and west of Scotland Drive in unincorporated Sacramento County.

ASSESSOR'S PARCEL NUMBER: 203-0310-045

APPLICANT/LEAD AGENCY: North Highlands Recreation and Park District

6040 Watt Avenue

North Highlands, CA 9566

ATTN: Larry Mazzuca

PROJECT DESCRIPTION

PROJECT LOCATION AND SETTING

The project site is located in the community of Antelope in northern Sacramento County, California, near the intersection of Watt Avenue and Davidson Drive. Antelope is located approximately 14 miles from downtown Sacramento and three miles northwest of Interstate 80.

The project site is approximately 7.19 acres in total land area and identified by the Sacramento County Assessor to include Assessor's Parcel Number (APN) 203-0310-045. The parcel is zoned for Recreation and designated as Recreation in the Sacramento County General Plan. The Spinelli Child Development Center and Cyril Spinelli Elementary School are located to the south and west of the project site. Vacant, undeveloped areas are located across Watt Avenue to the north and single-family residential areas are located to the north and east of the project site near the intersection of Watt Avenue and Davidson Drive.

The project site currently serves as the existing site for Sierra Creek Park. The northeast corner of the project site area includes ornamental trees, irrigation, and a large grass area, with undeveloped areas occupying the remainder of the site.

PARK FACILITIES

The project site is unimproved, and this project would include improvements to allow the functional use of, and access to Sierra Creek Park (Plate IS-1). The project design is currently at a conceptual stage and the exact location of specific project elements may vary.

The project would include a new pedestrian pathway system that would provide access throughout the Park. The new pathways would be made of poured in place concrete. The project would also include new pedestrian/bicycle access over Sierra Creek.

A children's play area would be developed and would include one play structure for younger children and another play structure for older children, including swings and a shade structure located in the same general footprint. A picnic area would be developed on the east side of the project site and would include a shade structure, picnic tables and benches, and trash receptacles. A community garden of approximately 0.25 acres would also be established on the northwest side of the project site to serve the surrounding community. The remaining undeveloped areas would include either turf or non-irrigated hydroseed.

Dedicated parking is not currently provided at Sierra Creek Park. A new public parking area would be developed on the northwest side of the project site along Watt Avenue and would provide approximately 20–25 parking spaces. The new pedestrian pathways would connect to the public parking area. In addition, a new restroom building would be added near the new parking area and creek bridge.

New interpretive signage would be incorporated along the new pathway and creek area, including public art featured throughout the grounds. New park fencing/walls would be constructed along the project site perimeter adjacent to Watt Avenue. The fencing/walls would be subject to and would adhere to County standards. The project would also include security lighting along the pedestrian pathways to provide for adequate illumination for safe access and basic security. Proposed lighting fixtures would be subject to and would adhere to County standards, including shielded lighting to prevent light spillage onto adjacent properties and maximum height standards.

CONSTRUCTION

Project construction duration is dependent upon the Parks and Water Bond Act of 2018 (Proposition 68) grant. The District is seeking sufficient grant funding to construct the entire park in one phase; however, in the event other funding sources are required, such as developer impact fees, it is possible that the park may need to be constructed in more than one phase. Construction activities would incorporate site preparation activities, necessary grading, trenching for utilities, pavement for parking area, pavement and concrete walkways, installing signage and security lighting, and building construction activities such as constructing the bridge pathway over Sierra Creek, new restroom building, children's play structure, and fencing along the project site perimeter adjacent to Watt Avenue.

Construction vehicles would access the site via Watt Avenue. Because most construction activities would be internal to the project site, street closures are not anticipated.

Plate IS-1 Proposed Concept Plan



UTILITIES

The majority of the project site is not currently developed and does not include existing utilities and service connections. The northeast corner of the project site includes water meters and an irrigation system. The project would require connection to electrical services to accommodate new security lighting and connection to sewer and water lines to serve the new restroom building. Utilities and service systems are anticipated to be provided by California American Water, Sacramento Area Sewer District, and Sacramento Metropolitan Utility District.

OPERATIONS AND MAINTENANCE

Sierra Creek Park would continue to be open to the public daily from dawn until dusk. The District does not anticipate activities at the park outside normal operating hours. The District has developed a Community Facilities District (CFD) from which revenue would be generated from the property owners of the future Lakes at Antelope Project, located at the southeast corner of Watt Avenue and Navaho Drive. The Lakes at Antelope Project proposes to develop approximately 304 single-family residential lots and three open space lots. Funds collected from the CFD would allow the District to hire additional maintenance staff to accommodate Sierra Creek Park maintenance.

ENVIRONMENTAL EFFECTS

Appendix G of the California Environmental Quality Act (CEQA) Guidelines provides recommendations for assessing the significance of potential environmental impacts. Based on this guidance, Sacramento County has developed an Initial Study Checklist (located at the end of this report). The Checklist identifies a range of potential significant effects by topical area. The topical discussions that follow are provided only when additional analysis beyond the Checklist is warranted.

AESTHETICS

This section supplements the Initial Study Checklist by analyzing if the project would:

- If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality
- Create a new source of substantial light, glare, or shadow that would result in safety hazards or adversely affect day or nighttime views in the area

PROJECT SITE VISUAL CHARACTER

The 7.19-acre project site would be situated at an existing District property located in the urbanized Antelope area of unincorporated Sacramento County. The majority of the site is currently undeveloped and consists mostly of open space land traversed from east to west by the Sierra Creek channel. The southeast corner of the site includes a small irrigated turf landscape area, consisting of several mature landscape trees and a row of planted Hackberry trees along Watt Avenue (Plate IS-2). The irrigated landscape in the southeast corner is regularly mowed and maintained. Small, dark colored posts border the landscaped area adjacent to Watt Avenue.

The entire site is highly disturbed and most of Sierra Creek Park consists of dry annual grassland that is regularly disked for fire abatement (Plate IS-3 and Plate IS-4). The Sierra Creek channel is regularly disturbed by public trespass and transient disturbance, with large homeless encampments along creek banks and inside the creek channel present at various times of the year (Scott Graham, pers. comm., 2020). A small portion of chain-link fence exists on the north side of the project site adjacent to Watt Avenue where Sierra Creek enters the project site via a large concrete multiple-box culvert from beneath Watt Avenue.

Plate IS-2 View of Landscaped Area and Hackberry Trees along Watt Avenue, looking east from project site.



Plate IS-3 View of Landscaped Areas and Undeveloped Areas, looking west from southeast corner of the project site.



Plate IS-4 View of Undeveloped Areas, looking east from west side of the project site.



The existing viewshed surrounding the project site consists of Watt Avenue (4-lane local roadway) and associated signage; street overhead lighting adjacent to Watt Avenue; residential areas with associated landscaping; undeveloped areas across Watt Avenue to the north; and Cyril Spinelli Elementary School to the south.

DISCUSSION OF PROJECT IMPACTS

As discussed above, the project site is in an urbanized area of Antelope. The project would include improvements to allow the functional use of, and access to Sierra Creek Park. The proposed park improvements and development on the project site generally would be consistent with the existing visual character of the surrounding area. The remaining undeveloped areas would include either turf or non-irrigated hydroseed, similar in visual character to the existing setting of the project site. Additionally, the existing and proposed landscaping would contribute to the visual character of the site's appearance.

The project site is zoned O – Recreation, which includes public park facilities, and is intended to preserve the open space and other areas of unusual scenic beauty and recreational potential that are unique to Sacramento County and California and to protect the County's physical, social, recreational, aesthetic, and economic resources (Sacramento County 2020). The project would be consistent with the Sacramento County Countywide Design Guidelines and would be evaluated through the County's Design Review program to ensure that the proposed design is compatible within the

context of the project's surroundings and that the project would be a positive addition to the community, both functionally and aesthetically (Sacramento County 2018a).

In summary, the project would alter the visual character of the project site by developing several park improvements. However, the project would not conflict with applicable zoning and other regulations governing scenic quality and would be of similar visual character to the existing and surrounding area. Therefore, impacts would be less than significant.

The project would include a variety of outdoor lighting, which would be typical for a park. Lighting would be provided for safe access and basic security, including nighttime lighting, associated with the pathways, parking lot, and entryways. Proposed lighting fixtures would be subject to and would adhere to County Improvement Standards (Sacramento County 2018b), including shielded lighting to prevent light spillage onto adjacent properties and maximum height standards. Therefore, even though the project would introduce new sources of nighttime lighting and glare in the project area, it would not adversely affect day or nighttime views. Impacts would be ***less than significant***.

AIR QUALITY

This section supplements the Initial Study Checklist by analyzing if the project would:

- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard?
- Expose sensitive receptors to pollutant concentrations in excess of standards?

EXISTING SETTING

The project site is located in the Sacramento Valley Air Basin (SVAB). The Sacramento Valley Air Basin climate is characterized by hot, dry summers and cool, rainy winters. Typically, winds transport air pollutants northward out of the SVAB; however, during approximately half of the time from July to September, the wind pattern shifts southward, blowing air pollutants back into the SVAB and exacerbating the concentration of air pollutant emissions in the air basin. In addition, between winter storms, high pressure and light winds contribute to low-level temperature inversions and stable atmospheric conditions, resulting in the concentration of air pollutants.

Individual air pollutants at certain concentrations may adversely affect human or animal health, reduce visibility, damage property, and reduce the productivity or vigor of crops and natural vegetation. Six air pollutants have been identified by the U.S. Environmental Protection Agency (EPA) and the California Air Resources Board (ARB) as being of concern both on a nationwide and statewide level: ozone; carbon monoxide; nitrogen dioxide; sulfur dioxide; lead; and particulate matter (PM), which is subdivided into two classes based on particle size – PM equal to or less than 10 micrometers in diameter (PM₁₀) and PM equal to or less than 2.5 micrometers in diameter (PM_{2.5}).

Health-based air quality standards have been established for these pollutants by EPA at the national level and by ARB at the state level. These standards are referred to as the national ambient air quality standards (NAAQS) and the California ambient air quality standards (CAAQS), respectively. The NAAQS and CAAQS were established to protect the public with a margin of safety from adverse health impacts caused by exposure to air pollution. Both EPA and ARB designate areas of California as “attainment,” “nonattainment,” “maintenance,” or “unclassified” for the various pollutant standards according to the federal Clean Air Act (CAA) and the California Clean Air Act, respectively. Because the air quality standards for these air pollutants are regulated using human and environment health-based criteria, they are commonly referred to as “criteria air pollutants.”

Within the Sacramento Valley Air Basin, the Sacramento Metropolitan Air Quality Management District (SMAQMD) is responsible for ensuring that emission standards are not violated. With respect to regional air quality, the SMAQMD region, including Sacramento County, is currently designated as nonattainment for the NAAQS and CAAQS for ozone, and nonattainment for the NAAQS for 24-hour PM_{2.5}, and the CAAQS for PM₁₀.

THRESHOLDS OF SIGNIFICANCE

As stated in Appendix G of the CEQA Guidelines, the significance criteria established by the applicable air quality management district may be relied on to support determinations of significance. The project site is located within unincorporated Sacramento County in an area regulated by the SMAQMD. Thus, pursuant to the SMAQMD-recommended thresholds (SMAQMD 2020a) for evaluating project-related air quality impacts, the project's impacts would be considered significant if the project would:

- generate construction-related criteria air pollutant or precursor emissions that exceed the SMAQMD-recommended daily thresholds of 85 pounds per day (lbs./day) for nitrogen oxides (NO_x), 80 lbs./day or 14.6 tons per year (tons/yr) of PM₁₀, 82 lbs./day or 15 tons/yr of PM_{2.5}, or result in or substantially contribute (at a level equal to or greater than 5 percent of a CAAQS) to a violation of a CAAQS;
- generate long-term operational criteria air pollutant or precursor emissions that exceed the SMAQMD-recommended daily thresholds of 65 lbs./day of reactive organic gases (ROG) or NO_x, 80 lbs./day and 14.6 tons/yr of PM_{2.5}, 82 lbs./day and 15 tons/yr of PM_{2.5}, or result in a violation of the CAAQS or result in or substantially contribute (at a level equal to or greater than 5 percent of a CAAQS) to a violation of a CAAQS;
- contribute to localized concentrations of air pollutants at nearby receptors that would exceed applicable ambient air quality standards; or
- expose sensitive receptors to excessive nuisance odors, as defined under SMAQMD Rule 402.

CONSTRUCTION EMISSIONS / SHORT-TERM IMPACTS

Construction emissions are described as “short-term” or temporary in duration but have the potential to adversely affect air quality. Construction would result in temporary emissions of ROG, NO_x, PM₁₀, and PM_{2.5}. These activities would include site preparation (e.g., excavation, grading, and clearing); exhaust emissions from use of off-road equipment, material delivery, and construction worker commutes; asphalt paving; and application of architectural coatings. Ozone precursor emissions of ROG and NO_x are associated primarily with construction equipment exhaust and the application of architectural coatings. Dust (particulate matter) generation is dependent on soil type and soil moisture, as well as the amount of total acreage actually involved in clearing, grubbing and grading activities. Clearing and earthmoving activities comprise the major source of construction dust generation, but re-entrained road dust from traffic and general disturbance of the soil also contribute to the problem. Sand, lime, or other fine particulate materials may be used during construction, and stored on-site. If not stored properly, such materials could become airborne during periods of high winds. PM emissions are also generated by equipment exhaust. The effects of construction activities include increased dust fall and locally elevated levels of suspended particulates. PM₁₀ and PM_{2.5} are considered unhealthy because the particles are small enough to inhale and damage lung tissue, which can lead to respiratory problems.

The California Emissions Estimator Model (CalEEMod), Version 2016.3.2, was used to model project emissions. Table IS-1 summarizes the emissions of ROG, NO_x, PM₁₀ and PM_{2.5} associated with construction of the project. Model reports showing emissions inputs and outputs, including the daily and annual emissions estimates are included in the *Air Quality and Greenhouse Gas Emissions Modeling Report* prepared by AECOM (2020). As there can be differences in the emissions between winter and summer the, tables for construction and operations show the maximum level of emissions for pounds per day per season.

Table IS-1 Summary of Construction-Related Emissions of Criteria Air Pollutants and Precursors

Construction Year	Maximum Daily Emissions ROG (pounds per day)	Maximum Daily Emissions NO _x (pounds per day)	Maximum Daily Emissions PM ₁₀ (pounds per day)	Maximum Daily Emissions PM _{2.5} (pounds per day)	Maximum Annual Emissions PM ₁₀ (tons per year)	Maximum Annual Emissions PM _{2.5} (tons per year)
2021	3.95	40.54	20.25	11.85	0.44	0.25
2022	1.18	11.16	0.68	0.55	0.009	0.007
SMAQMD Significance Threshold ¹	-	85	80	82	14.6	15
Do Project Emissions Exceed SMAQMD Threshold?	-	No	No	No	No	No

Notes: ROG = reactive organic gases; NO_x = oxides of nitrogen; PM₁₀ = respirable particulate matter with an aerodynamic diameter of 10 micrometers or less; PM_{2.5} = respirable particulate matter with an aerodynamic diameter of 2.5 micrometers or less;

SMAQMD = Sacramento Metropolitan Air Quality Management District

¹ Represents SMAQMD Threshold of Significance with the application of Best Management Practices (BMPs) and Best Available Control Technology (BACT).

Data compiled by AECOM in 2020. AECOM 2020.

Due to the nonattainment status of the SVAB with respect to ozone, PM₁₀, and PM_{2.5}, SMAQMD recommends that all construction projects implement the SMAQMD Basic Construction Emission Control Practices (SMAQMD 2020b). SMAQMD's Basic Construction Emission Control Practices include such measures as watering the construction site twice daily, limiting vehicle speeds on unpaved roadways to 15 miles per hour, minimizing vehicle idling, covering haul trucks transporting soil, and cleaning paved roads. As shown in the above table, the project would not exceed the significance thresholds established by SMAQMD. However, without incorporation of SMAQMD's Basic Construction Emission Control Practices, the project's construction activities could potentially conflict with or obstruct implementation of the SMAQMD's air quality plans for PM. Mitigation has been incorporated (Mitigation Measure A) to ensure that the project would implement the SMAQMD-required emission control practices, allowing the use of the non-zero particulate matter significance thresholds. Therefore, with implementation of Mitigation Measure A, the construction emissions impacts are ***less than significant***.

OPERATIONAL EMISSIONS/ LONG-TERM IMPACTS

Once a project is completed, additional pollutants are emitted through the use, or operation, of the site. Land use development projects typically involve the following sources of emissions: motor vehicle trips generated by the land use; fuel combustion from landscape maintenance equipment; natural gas combustion emissions used for space and water heating; evaporative emissions of ROG associated with the use of consumer products; and, evaporative emissions of ROG resulting from the application of architectural coatings. In the case of the project, park operations would include electricity to accommodate new security lighting but is not anticipated to have need for natural gas service.

While construction emissions are considered short-term and temporary, operational emissions are considered long-term and occur for the lifetime of the project. Long-term operational emissions were modeled using CalEEMod, Version 2016.3.2 (AECOM 2020). The resultant long-term operational emissions estimates are shown in Table IS-2.

Table IS-2 Summary of Operational Emissions of Criteria Air Pollutants and Precursors

Construction Year	Maximum Daily Emissions ROG (pounds per day)	Maximum Daily Emissions NO_x (pounds per day)	Maximum Daily Emissions PM₁₀ (pounds per day)	Maximum Daily Emissions PM_{2.5} (pounds per day)	Maximum Annual Emissions PM₁₀ (tons per year)	Maximum Annual Emissions PM_{2.5} (tons per year)
Operational Emissions	0.24	0.96	0.63	0.17	0.03	0.01
SMAQMD Significance Threshold ¹	65	65	80	82	14.6	15
Do Project Emissions Exceed SMAQMD Threshold?	No	No	No	No	No	No

Notes: ROG = reactive organic gases; NO_x = oxides of nitrogen; PM₁₀ = respirable particulate matter with an aerodynamic diameter of 10 micrometers or less; PM_{2.5} = respirable particulate matter with an aerodynamic diameter of 2.5 micrometers or less; SMAQMD = Sacramento Metropolitan Air Quality Management District

¹ Represents SMAQMD Threshold of Significance with the application of Best Management Practices (BMPs) and Best Available Control Technology (BACT).

Data compiled by AECOM in 2020. AECOM 2020.

As shown in Table IS-2, total operational emissions would not exceed any SMAQMD threshold. This comparison to the SMAQMD thresholds shows that operations would not contribute substantially to any existing or projected air quality violation and would not conflict with efforts to reach attainment of any air quality standards. Therefore, impacts to air quality from long-term operations of the park would be ***less than significant***.

SENSITIVE RECEPTORS

Some land uses are considered more sensitive to air pollution than others, due to the types of population groups or activities involved. Children, pregnant women, the elderly, those with existing health conditions, and athletes or others who engage in frequent exercise are especially vulnerable to the effects of air pollution. Accordingly, land uses

that are typically considered sensitive receptors include schools, daycare centers, parks and playgrounds, and medical facilities.

Residential areas are considered sensitive to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to pollutants present. Recreational land uses are considered moderately sensitive to air pollution. Exercise places a high demand on respiratory functions, which can be impaired by air pollution, even though exposure periods during exercise are generally short. In addition, noticeable air pollution can detract from the enjoyment of recreation. Industrial and commercial areas are considered the least sensitive to air pollution. Exposure periods are relatively short and intermittent as the majority of the workers tend to stay indoors most of the time.

Sensitive receptors nearest to the project are users of the park itself, as well as residences to the north and east of the park and students at schools to the south and west of the park.

Users of the park would be on-site for intermittent and short durations. Existing land uses surrounding the project site are primarily residential, with an elementary school to the southwest and Watt Avenue bordering the northern and western perimeters of the project site. Residential and school land uses are not typically considered substantial sources of toxic air contaminants (TACs). While roadways can be a source of air pollutant emissions, primarily particulate matter exhaust from diesel-fueled engines (DPM), the traffic count at Watt Avenue in the vicinity of the project site (at the intersection of Blackfoot Way) was approximately 25,000 vehicles per day (Sacramento County 2019), which is one-fourth of the level used by the SMAQMD Mobile Sources Air Toxics Protocol mapping tool for high-volume roadways and related health risks (SMAQMD 2020c). Therefore, because of the intermittent nature of park use and overall traffic volume along the portion of Watt Avenue near the project site, existing roadway traffic is not considered a substantial source of TAC emissions exposure for future users of the project site.

Operations of the project would not include substantial sources of TACs. Construction would generate DPM emissions from the use of off-road diesel-powered equipment required for site grading and excavation, paving, and other construction activities. These activities may expose nearby receptors to TACs, including surrounding residents and students. For this analysis, DPM is assumed to be equivalent to exhaust-generated PM_{2.5}, a subset of the total PM presented in Table IS-1.

Health risk is a function of the concentration of contaminants in the environment and the duration of exposure to those contaminants. Concentrations of mobile-source DPM emissions are typically reduced by approximately 60 percent at a distance of around 300 feet (100 meters) (Zhu and Hinds 2002). While there are residences across the street from the project site, construction activities would be dispersed throughout the entire approximately 7-acre project site, so the majority of construction activities would take place farther than 300 feet from the nearest sensitive receptors. In addition, as described above, PM₁₀ emissions during construction would not exceed the SMAQMD's threshold of significance of 80 lbs./day (Table IS-1); the maximum daily on-site exhaust PM_{2.5} emissions are estimated to be less than 2 lb./day (AECOM 2020). The risks

estimated for an exposed individual are higher if a fixed exposure occurs over a longer period of time. Health effects from TACs are often described in terms of individual cancer risk, which is based on a 30-year lifetime exposure to TACs (OEHHA 2015). Construction activities for the project would be temporary, would vary in activity and equipment intensity over that time, and would take place throughout the entirety of the project site, thereby limiting the amount of time that emitting equipment would be within a distance that would expose sensitive receptors to substantial concentrations. If the duration of construction activities near a sensitive receptor was for the entirety of one year, which is not anticipated, then the exposure would be 3.3 percent of the total exposure period used for typical health risk calculations (i.e., 30 years). In addition, the prevailing wind conditions in the region are wind blowing from the south, in which case pollutants would be dispersed toward the north; the project site is bordered along the north by Watt Avenue. Opposite Watt Avenue at the eastern side of the project site are residences that are buffered by additional vegetation within their properties. The remainder and majority of the area north of the project site is open space that provides a 300-foot and greater buffer between the project site and a residential neighborhood. The roadway, vegetation and open space would help to disperse potential DPM in the direction of the prevailing winds. In addition, the project would implement Mitigation Measure A to comply with the SMAQMD-required emission reduction measures, which would also help reduce construction-related TAC emissions. Due to the intermittent and temporary nature of construction activities, and the dispersive properties of TACs, as well as the fact that PM emissions would be far less than the SMAQMD emission threshold, short-term construction would not expose sensitive receptors to DPM emission levels that would result in a health hazard. As a result, this impact would be ***less than significant***.

NOISE

This section supplements the Initial Study Checklist by analyzing if the project would:

- Result in generation of a temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established by the local general plan, noise ordinance or applicable standards of other agencies?
- Result in a substantial temporary increase in ambient noise levels in the project vicinity?
- Generate excessive groundborne vibration or groundborne noise levels

EXISTING NOISE ENVIRONMENT

The existing noise environment within the project area is primarily influenced by surface-transportation noise emanating from vehicular traffic on Watt Avenue. Existing school activities (public announcement and school playgrounds) and people walking and talking contribute to the noise environment in the area. Intermittent noise from outdoor activities at the surrounding residences (e.g., people talking, operation of landscaping equipment, car doors slamming, and dogs barking), also influence the existing noise environment.

An ambient noise survey was conducted in the vicinity of the project site on September 16, 2020 through September 17, 2020. The purpose of the survey was to establish existing noise conditions. Ambient noise measurements were conducted near existing noise-sensitive uses at various locations in the vicinity of the project site. The results of the noise survey are shown in Table IS-3. Exhibit 1 shows the locations of the ambient noise measurement sites. Two short-term measurements (ST-1 and ST-2) of ambient noise levels were conducted during daytime hours. One long-term (24-hour) measurement was conducted on the school field along the boundary of the school and the project boundary. Long-term measurement site LT-1 measured ambient noise levels of 51 A-weighted decibel (dBA) and 55 dBA day-night average noise level (L_{dn}), respectively, which is relatively low considering that the sound level meter at ST-2 was exposed to Watt Avenue traffic noise. As shown in Table IS-3, measured ambient noise levels at the noise-sensitive land uses closest to the project site range from 50 to 70 dBA equivalent noise level (L_{eq}).

Plate IS-5 Ambient Noise Survey



Table IS-3 Summary of Ambient Noise Level Survey Results in the Vicinity of the Project Site

Site	Location	Date	Time	Duration	Measured Sound Level, dB Daytime (7 a.m.–7 p.m.)
LT-01	Spinelli Elementary School, Northern Boundary	09-16/17-2020	14:00	24 Hour	51.1 dB L_{eq} 86.3 dB L_{max} 48.9 dB L_{50} 45.1 dB L_{90} 55.2 dB L_{dn}
ST-01	Spinelli Elementary School, Outside Seating Area	09-16-2020	13:27	15 Minutes	50.0 dB L_{eq} 60.2 dB L_{max} NA dB L_{50} NA dB L_{90} NA dB L_{dn}
ST-02	Sierra Creek Park, along Watt Avenue	09-16-2020	14:07	25 Minutes	70.3 dB L_{eq} 84.8 dB L_{max} NA dB L_{50} NA dB L_{90} NA dB L_{dn}

Notes: dB = decibels; L_{eq} = equivalent sound level (the sound energy averaged over a continuous period of time); L_{max} = maximum instantaneous sound level; ST = short-term measurement

¹ Noise-level measurements were completed using a Larson Davis Laboratories (LDL) Model 820 and 831 precision integrating sound-level meter. The meter was calibrated before the measurements using an LDL Model CAL200 acoustical calibrator. The meter was programmed to record A-weighted sound levels using a “slow” response. The equipment used complies with all pertinent requirements of the American National Standards Institute for Class 1 sound-level meters (ANSI S1.4).

Source: Data compiled by AECOM in 2020

SHORT-TERM PROJECT-GENERATED CONSTRUCTION SOURCE NOISE

The Sacramento County Code Noise Control Ordinance contains performance standards to prevent unnecessary, excessive, and offensive noise levels within the county. Section 6.68.090 of the Sacramento County Code establishes that noise associated with construction, repair, remodeling, demolition, paving, or grading is exempt from the Noise Ordinance, provided said activities do not take place between the hours of 8:00 p.m. and 6:00 a.m. on weekdays and Friday commencing at 8:00 p.m. through and including 7:00 a.m. on Saturday; Saturdays commencing at 8:00 p.m. through and including 7:00 a.m. on the next following Sunday, and on each Sunday after the hour of 8:00 p.m.

Noise from permitted construction activities that do not occur during the more noise-sensitive hours (e.g., evening, nighttime, and early morning) would be exempt from daytime noise standards, given that construction equipment is fitted with feasible noise control devices. Therefore, this impact would be *less than significant*.

LONG-TERM PROJECT-GENERATED STATIONARY SOURCE NOISE

The project would introduce a new source of noise associated with park activities such as incorporation of a new playground structure.

The County of Sacramento General Plan Noise Element (Sacramento County 2017) provides several policies related to land use and noise compatibility. For non-

transportation noise sources, the County has established interior and exterior noise standards for daytime and nighttime hours (Table IS-4).

For transportation noise sources, the County of Sacramento has established interior and exterior noise standards of 40 dB L_{dn} and 65 dB L_{dn}, respectively, for school uses.

Policy NO-6 Where a project would consist of or include non-transportation noise sources, the noise generation of those sources will be mitigated so as not to exceed the interior and exterior noise level standards of Table IS-4 at existing noise-sensitive areas in the project vicinity.

In order for the project to meet General Plan policies, the noise level at the nearest sensitive receptor (the property line) must not exceed 50 dB L₅₀ (55 dB minus 5 dB for the noise source consisting primarily of speech). As noted, in the footnote of Table 3, the standards will be reduced by 5 dB for sounds consisting primarily of speech or music, and for recurring impulsive sounds. If the existing ambient noise level exceeds the standards, then the noise level standards will be increased at 5 dB increments to encompass the ambient.

Table IS-4 Non-Transportation Noise Standards, Sacramento County Noise Element

Receiving Land Use	Outdoor Area ^{1, 2} Daytime Median	Outdoor Area ^{1, 2} Daytime Maximum	Outdoor Area ^{1, 2} Nighttime Median	Outdoor Area ^{1, 2} Nighttime Maximum	Interior ³ Day & Night Median	Interior ³ Day & Night Maximum
All Residential	55 dB L ₅₀ ⁶	75 dB L _{max}	50 dB L ₅₀	70 dB L _{max}	35 dB L ₅₀	55 dB L _{max}
Churches, Meeting Halls, Schools, Libraries, etc.	55 dB L ₅₀ ⁶	75 dB L _{max}	NA dB L ₅₀ ⁵	NA dB L _{max} ⁵	35 dB L ₅₀	60 dB L _{max}
Office Buildings	60 dB L ₅₀ ⁶	75 dB L _{max}	NA dB L ₅₀ ⁵	NA dB L _{max} ⁵	45 dB L ₅₀	65 dB L _{max}
Commercial Buildings	NA dB L ₅₀ ⁶	NA dB L _{max}	NA dB L ₅₀ ⁵	NA dB L _{max} ⁵	45 dB L ₅₀	65 dB L _{max}
Playgrounds, Parks, etc.	65 dB L ₅₀ ⁶	75 dB L _{max}	NA dB L ₅₀ ⁵	NA dB L _{max} ⁵	NA dB L ₅₀	NA dB L _{max}
Industry	60 dB L ₅₀ ⁶	80 dB L _{max}	NA dB L ₅₀ ⁵	NA dB L _{max} ⁵	50 dB L ₅₀	70 dB L _{max}

Notes:

L_{max} = maximum instantaneous sound level;

- 1 The standards will be reduced by 5 dB for sounds consisting primarily of speech or music, and for recurring impulsive sounds. If the existing ambient noise level exceeds the standards, then the noise level standards will be increased at 5 dB increments to encompass the ambient.
- 2 Sensitive areas are defined acoustic terminology section.
- 3 Interior noise level standards are applied within noise-sensitive areas of the various land uses, with windows and doors in the closed positions.
- 5 The outdoor activity areas of these uses (if any), are not typically utilized during nighttime hours.
- 6 Where median (L₅₀) noise level data is not available for a particular noise source, average (Leq) values may be substituted for the standards of this table provided the noise source in question operates for at least 30 minutes of an hour. If the source in question operates less than 30 minutes per hour, then the maximum noise level standards shown would apply.

Source: Sacramento County 2017

PLAYGROUND ACTIVITIES

As measured at the closest point, the project site would be exposed to existing traffic noise levels of approximately 51 dBA L_{eq} (49 dB L_{50}), as represented by ambient noise measurement LT-1. Based on the proposed site design, the proposed park activities (playgrounds) would be located at a distance of approximately 100 feet from the school boundary or from the nearest residences to the project site.

Children at play generate a substantial amount of noise. Generally, case studies have found that children are the loudest when first entering the playground and reduce volume as they separate and engage in play. There is a broad range of noise measurements of school playgrounds presented in published studies. The loudest reading is 71 dB at 10 feet and an average reading is 64 dB at 25 feet. The resulting noise level is predicted to be 42 dBA L_{eq} at 100 feet from the center of the nearest playground. Existing ambient noise levels at the residential uses to the west of the project site range between 51 and 70 dBA L_{eq} . Therefore, noise levels associated with parking would not be distinguishable from the existing ambient noise levels. As a result, this impact would be ***less than significant***.

PARKING LOT ACTIVITIES

The project would introduce 20-25 new parking stalls along Watt Avenue, approximately 100 feet from adjacent noise-sensitive residential uses to the west. Based upon previous noise measurements, the sound exposure level (SEL) associated with a parking event is approximately 71 dB SEL at 50 feet. Assuming that each parking stall adjacent to residential uses were to fill and empty (25 parking events total) during the peak hour, the noise level is predicted to be 43 dBA L_{eq} at 100 feet from the center of the parking stalls. Existing ambient noise levels at the residential uses to the west of the project site range between 51 and 70 dBA L_{eq} . The lower ambient noise level of 51 dB would be at the farthest residences by the school and the higher existing noise level of 70 dB would be at the residences along and closer to Watt Avenue because of the existing road noise in this location. Therefore, noise levels associated with parking would not be distinguishable from the existing ambient noise levels. As a result, this impact would be ***less than significant***.

INCREASE IN PROJECT AREA TRAFFIC

Typically, traffic volumes have to double before the associated increase in noise levels is noticeable (3 dBA L_{dn}) along roadways (Caltrans 2013a). The dominant traffic noise source in the project area is Watt Avenue. Considering the size of the park, the fact that it is planned and oriented to serve the neighborhood, and that it includes 25 parking spaces, the incremental addition of project traffic would not cause a doubling of the volumes along Watt Avenue. Consequently, the construction of the project would not result in a noticeable change in the traffic noise contours of area roadways. Long-term, off-site operational traffic source noise would not result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project. As a result, this impact would be ***less than significant***.

AMBIENT NOISE LEVELS

Construction of proposed structures would include site preparation activities (e.g., excavation, and construction); material transport; construction of the new facilities, and related-support structures; and other miscellaneous activities (e.g., paving).

Site preparation activities generates the highest anticipated noise levels due to construction activities as the equipment mix would include earth-moving equipment such as scrapers, dozers, loaders, and a motor grader. The simultaneous operation of on-site construction equipment associated with the project, as identified above, could result in combined noise levels up to approximately 87 dB L_{eq} at 50 feet from the center of construction activity. Table IS-3 summarizes modeled construction noise levels compared to existing noise levels at noise-sensitive locations measured during the ambient noise survey. Noise Monitoring locations are shown in Plate IS-5.

As shown in Table IS-5, daytime project construction noise levels at the closest noise-sensitive backyard area, located approximately 50 feet from the acoustical center of proposed construction activities, could reach as high as 87 dB L_{eq} .

Table IS-5 Ambient and Project Construction Noise Levels at Closest Sensitive Receptors

Receiver	Distance (ft) From Acoustical Center Between Noise-Sensitive Receiver locations and Proposed Construction Areas	Exterior Noise Level, dBA L_{eq} Ambient Noise	Exterior Noise Level, dBA L_{eq} Project Noise	Interior Noise Level, dBA L_{eq} Project Noise, Doors/Windows Open	Interior Noise Level, dBA L_{eq} Project Noise, Doors/Windows Closed (EPA)
LT-01 – School Field	50	51	87	72	62
ST-01 – School Site and Nearby Residences	50	50	87	72	62

Refer to AECOM 2020 for modeling input parameters and output results.

dBA = A-weighted decibels

EPA = U.S. Environmental Protection Agency

ft = foot/feet

L_{eq} = Equivalent Noise Level

LT = Long-Term (24 hour) Measurement

ST = Short-Term (15-30 minutes) Measurement

Sources: EPA 1974, FHWA 2006, Modeled by AECOM 2020

Noise from permitted construction activities that do not occur during the more noise-sensitive hours (e.g., evening, nighttime, and early morning) is exempt from daytime noise standards, given that construction equipment is fitted with feasible noise control devices.

Nevertheless, if construction activities were to occur during the more noise-sensitive hours (e.g., evening, nighttime, and early morning) or construction equipment was not properly equipped with noise control devices, construction-generated source noise could result in annoyance and/or sleep disruption of occupants of the nearby existing noise-sensitive land uses (e.g., single-family) and create a substantial temporary increase in ambient noise levels in the direct vicinity of the project site. Potential construction-related project impacts on existing noise-sensitive land uses are therefore considered potentially significant.

Implementation of Mitigation Measure B would reduce the potentially significant impact resulting from construction activities to a ***less-than-significant level*** because it would ensure that construction activities would avoid noise-sensitive hours, and would reduce equipment noise levels.

GROUNDBORNE VIBRATION

Construction activities have the potential to result in varying degrees of temporary groundborne vibration, depending on the specific construction equipment used and operations involved. Vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance.

As discussed above, on-site construction equipment could include scrapers, dozers, loaders, and motor grader. According to Federal Transit Administration (FTA 2018), vibration levels associated with the use of a large dozer is 0.089 inches per second (in/sec) peak particle velocity (PPV) and 87 vibration decibels [VdB referenced to 1 microinch per second (μ in/sec) and based on the root mean square (RMS) velocity amplitude] at 25 feet. Table IS-6 summarizes modeled construction vibration levels at noise-sensitive locations.

Table IS-6 Project Construction Vibration Levels at Closest Sensitive Receptors

Receiver	Location	Shortest Distance (ft) Between Noise-Sensitive Uses and Proposed Construction Areas	Vibration Levels PPV	Vibration Levels VdB
Nearest Residences	To the west and southeast	50	0.031	78
School Building	To the south	50	0.031	78

Source: FTA, Transit Noise and Vibration Impact Assessment, September 2018.

Modeled by AECOM 2020.

Using FTA's recommended procedure for applying a propagation adjustment to these reference levels, predicted worst-case vibration levels of approximately 0.031 in/sec PPV and 78 VdB at the closest existing sensitive receptor could occur. These vibration levels would not exceed Caltrans's recommended standard of 0.2 in/sec PPV (Caltrans 2013b) with respect to the prevention of structural damage for normal buildings or the FTA's maximum-acceptable vibration standard of 80 VdB (Federal Transit Administration 2018) with respect to human annoyance for residential uses. The long-term operation of the project would not include any vibration sources, and short-term construction would not result in the exposure of persons or structures to or generation of excessive groundborne vibration or groundborne noise levels. As a result, this impact would be ***less than significant***.

HYDROLOGY AND WATER QUALITY

This section supplements the Initial Study Checklist by analyzing if the project would:

- Develop within a 100-year floodplain as mapped on a federal Flood Insurance Rate Map or within a local flood hazard area?
- Expose people or structures to a substantial risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?
- Create substantial sources of polluted runoff or otherwise substantially degrade ground or surface water quality?

SURFACE WATER HYDROLOGY

The project area is within the boundary of the Gibson Lake-Dry Creek watershed. Hydrology in the project area is a combination of natural direct seasonal precipitation and intermittent urban runoff from adjacent areas. The project area receives an average of approximately 18.5 inches of rainfall each year, with most low- to moderate-intensity rainstorms occurring during the winter months (WRCC 2020).

The Sierra Creek channel drains into the project area via concrete box culverts from beneath Watt Avenue and flows generally in a westerly and southerly direction across the project area and westward through a residential neighborhood and open space land toward Dry Creek. Dry Creek then flows southwest to Steelhead Creek (a.k.a. the Natomas East Main Drainage Canal), which drains south and west to the American River.

The project site is within the Sacramento Valley North- American mapped groundwater basin (DWR 2020).

FLOODING

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps, the project site is not within a 1 percent annual chance of flood zone (also referred to as the 100-year flood zone). The project site is in Zone X, identified as “areas of minimal flood hazard” (FEMA 2020). However, the project site is located within a local flood hazard area.

The project site is not within an area protected by levees, however the project site is located within the Folsom Dam failure flood area (Sacramento County 2017).

DISCUSSION OF PROJECT IMPACTS

As noted above, the project site is not within a 100-year flood zone. However, the project site is located within a local flood hazard area and it located within the Folsom Dam failure flood area. Commensurate with the risk associated with Zone X as defined by FEMA, flood insurance is not required and there are no federal or local regulations that would preclude development within the zone. However, consistent with Sacramento County’s Floodplain Management Ordinance, which meets or exceeds the minimum standards of FEMA, the project would be required to obtain a Floodplain Management

Permit before construction. Additionally, the project must be reviewed and permitted by the County's Floodplain Administrator prior to construction. Therefore, with implementation of existing regulations, along with compliance County's Floodplain Management Ordinance, the project would reduce risks associated with flood hazards and would not expose people or structure to a substantial risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam. Impacts would be ***less than significant***.

WATER QUALITY

Construction activities including necessary earthmoving activities, such as grading, at the project site would have the potential to affect surface water quality. Disturbed soils that temporarily are exposed to the erosive forces of wind, rain, and stormwater runoff could be released to nearby drainages and storm drains. In addition, stormwater runoff could be contaminated with chemicals that are used during construction (such as fuels, oils, and solvents) because of the daily use, transportation, and storage of these materials; or from contaminants remobilized from areas of existing soil contamination at the project site. Disposal of construction dewatering also could degrade surface water quality, if dewatering of groundwater during excavations is not appropriately treated and/or disposed.

Sacramento County has a National Pollutant Discharge Elimination System (NPDES) Municipal Stormwater Permit issued by the Central Valley Regional Water Quality Board (Order No. R5-2016-0040-010) (CVRWQCB 2016). The Municipal Stormwater Permit requires the County to reduce pollutants in stormwater discharges to the maximum extent practicable and to effectively prohibit non-stormwater discharges. If the project would disturb more than 1 acre of land, the North Highlands Recreation and Park District (NHRPD) would be required under the statewide NPDES General Permit for Discharges of Storm Water Associated with Construction Activity (General Permit) through the State Water Resources Control Board (SWRCB) to develop and implement a Storm Water Pollution Prevention Plan (SWPPP) with appropriate best management practices (BMPs) to minimize discharges and to prevent accidental spills of hazardous materials during the construction phase to the maximum extent practicable, including procedures for immediate cleanup should any releases occur.

The Sacramento County's Land Grading and Erosion Control Ordinance (Chapter 16.44 of the Sacramento County Code) requires private construction sites grading, filling, excavating, storing or disposing 350 cubic yards or more of earthen material, or disturbing more than 1 acre, to obtain a grading permit. To obtain a grading permit, the project applicant must prepare erosion and sediment control plans that include a list of all BMPs that would be used to reduce erosion and control stormwater runoff. In addition, the Sacramento County Stormwater Ordinance (Chapter 15.12 of the Sacramento County Code) prohibits the discharge of unauthorized non-stormwater to the County's stormwater conveyance system and local creeks, including Sierra Creek. Implementation of measures (as applicable) would protect Sierra Creek water quality.

Sacramento County also requires compliance with the *Stormwater Quality Design Manual for the Sacramento Region* in selecting and designing post-construction facilities to reduce runoff pollution from new development projects (Sacramento County

2018). The project is required to implement minimum source control measures as provided in Chapter 4 of the design manual. Low impact development measures and hydromodification control measures may be required based on the project's proposed impervious areas.

As noted above, the project site is within the Sacramento Valley North- American groundwater basin. Based on the extent and nature of proposed construction, dewatering is not anticipated. If dewatering occurs, dewatering operations, including those associated with groundwater drawdown or stormwater collected in excavations, could have potentially significant effects, if contaminated dewatering effluent is not handled properly. During construction, groundwater would be removed from active work areas, treated where necessary (sediments would be allowed to settle), and disposed in accordance with SWPPP permit requirements (if applicable).

In summary, implementation of existing regulations, along with compliance with the NPDES (as applicable), the project impact Sierra Creek or its course or create substantial sources of polluted runoff and would reduce adverse impacts to water quality. Impacts would be ***less than significant***.

BIOLOGICAL RESOURCES

This section supplements the Initial Study Checklist by analyzing if the project would:

- Have a substantial adverse effect on any special status species, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, or threaten to eliminate a plant or animal community?
- Have a substantial adverse effect on streams, wetlands, or other surface waters that are protected by federal, state, or local regulations and policies?
- Adversely affect or result in the removal of native or landmark trees?
- Conflict with any local policies or ordinances protecting biological resources?

BIOLOGICAL RESOURCE ASSESSMENT AND INVENTORY

AECOM biologists carried out a wetland delineation and arborist survey of the 7.19-acre project site (the study area) on August 13, 2020 (AECOM 2020a and AECOM 2020b). During this time, vegetation communities were mapped and characterized, and the study area was assessed for suitability for special-status species and presence of sensitive natural communities.

Prior to conducting field surveys, AECOM biologists searched the California Native Plant Society Rare Plant Inventory (CNPS 2020a) and California Natural Diversity Database (CDFW 2020a) for records of special-status species occurring within a nine-quadrangle area containing and surrounding the study area (USGS 2018a-i). In addition, the biologists reviewed the California Department of Fish and Wildlife (CDFW) Special Animals List (CDFW 2020b), the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Conservation project planning tool (USFWS 2020a), and the USFWS National Wetlands Inventory (NWI) (USFWS 2020b). Table IS-7 describes the species having potential to occur in the study area and their probability to occur on the project site.

PROJECT LOCATION AND SETTING

The project site is in the community of Antelope in northern Sacramento County, California, near the intersection of Watt Avenue and Davidson Drive (Plate IS-6). Sierra Creek traverses the site from east to west. The northeast corner of the project site includes ornamental trees, irrigation system, and an approximately 1-acre turfgrass area, with undeveloped areas occupying the remainder of the site. Elevations range from approximately 98 feet above mean sea level (amsl) in the southwest corner of the project site to 74 amsl in the center channel of Sierra Creek.

The entire site is highly disturbed. Most of Sierra Creek Park consists of dry annual grassland that is regularly disked for fire abatement, and the irrigated landscape in the southeast corner is regularly mowed and maintained. The creek channel is repeatedly disturbed by public trespass and transient disturbance, with large homeless

Plate IS-6 Site Vicinity



encampments along creek banks and inside the creek channel present at various times of the year (Scott Graham, pers. comm., 2020). These encampments have resulted in deep holes excavated into creek banks and discharge of trash and other debris into the creek channel (Scott Graham, pers. comm., 2020). The North Highlands Recreation and Park District works with the Sacramento County Sheriff's Department to clean up the creek and remove encampments on a regular basis, but due to limited resources and open access to the creek, transient activity in Sierra Creek Park and disturbance to the creek is an ongoing problem (Scott Graham, pers. comm., 2020).

LAND COVER TYPES

The following three vegetation communities were identified in the 7.19-acre study area at the time of the August 2020 survey: nonnative annual grasslands (5.24 acres), ornamental landscape (1.25 acres), and freshwater stream (0.70 acre). None of these vegetation communities meet the definition of a sensitive natural community (CDFW 2020c).

Most of the site consists of disked nonnative annual grassland. Large trees, representing both native and nonnative species, are scattered along fence lines and occur as planted stands in ornamental landscaped areas. The banks of Sierra Creek are generally unvegetated except for small patches of upland grasses and few, isolated sapling Oregon ash (*Fraxinus latifolia*), Chinese tallow (*Triadaca sebifera*), and valley oak (*Quercus lobata*) trees. These trees are small, limited in number, and widely scattered and thus do not form a riparian habitat vegetation layer. At the time of the survey, the Sierra Creek channel was inundated and densely vegetated with floating and emergent wetland plants. Plate IS-7 depicts the locations and extent of the three vegetation communities present in the study area.

NONNATIVE ANNUAL GRASSLAND

Most of the study area (± 5.24 acres) consists of nonnative annual grassland that conforms to the Wild Oats and Annual Brome Grasslands vegetation alliance as described by the *Manual of California Vegetation* (CNPS 2020c). Dominant species include wild oats (*Avena* spp.), ripgut brome (*Bromus diandrus*), soft chess (*B. hordeaceus*), and Bermuda grass (*Cynodon dactylon*). Scattered native and nonnative forbs grow among these grasses. Common forbs include prickly lettuce (*Lactuca serriola*), Spanish clover (*Acmispon americanus*), field hedge parsley (*Torilis arvensis*), Indian milkweed (*Asclepias eriocarpa*), and wild mustard (*Hirschfeldia incana*). Annual grasslands had recently been disked prior to the site survey.

ORNAMENTAL LANDSCAPE

The southeast and northwestern corners of the study area are planted with landscape trees, comprising about 1.24 acres of the site. The southeastern landscape is about 0.9 acre in size and consists of mowed and irrigated turf grass planted with rows of Chinese hackberry (*Celtis occidentalis*) trees. Other planted trees in this area include several London plane (*Platanus x acerifolia*) and Italian pine (*Pinus pinea*), intermixed with individual valley oak, Oregon ash, black willow (*Salix goodingii*), firethorn (*Pyracantha angustifolia*), and cork oak (*Quercus suber*). The landscape in the northwestern corner

of the study area (0.34 acre) consists of a compacted, barren dirt maintenance vehicle access road planted on either side with large red ironbark eucalyptus (*Eucalyptus sideroxylon*) trees, intermixed with individual volunteer Fremont cottonwood (*Populus fremontii*) and Japanese privet (*Ligustrum japonicum*) along the adjacent fenceline. Ornamental vegetation in the study area generally does not conform to any specific vegetation alliances.

FRESHWATER STREAM

The Sierra Creek channel in the study area is a freshwater stream that is characterized by nearly year-round hydrology, although it may occasionally dry up in summer or fall. In the study area, the channel bottom and banks consist of unconsolidated fines, with blocks of concrete riprap intermixed with fines at various locations. A total of 0.70 acre of freshwater stream habitat, consisting of both wetted channel (0.33 acre) and adjacent upland terrace/banks (0.37 acre), is mapped in the study area.

The vegetation alliance associated with the inundated portion (wetted channel) of Sierra Creek in the study area conforms to the Water Primrose (*Ludwigia peploides*) Permanently Flooded Herbaceous Alliance as described by the *Manual of California Vegetation* (CNPS 2020c). This vegetation alliance is characterized by an open to continuous cover of emergent or floating plants on the water surface. In the study area, the inundated stream channel is vegetated by a nearly continuous cover of floating water primrose (*Ludwigia peploides*) and mosquito fern (*Azolla filiculoides*), with patches of emergent Sanford's arrowhead (*Sagittaria sanfordii*), a California Rare Plant Rank 1B.2 plant (CNPS 2020a).

Channel banks are steep, incised, and vegetated by patches of nonnative annual grasses and scattered sapling Oregon ash, Chinese tallow, and valley oak trees that are rooted at the top of channel banks.

SOILS

According to the NRCS *Soil Survey of Sacramento County, California* as accessed through the online Web Soil Survey (NRCS 2020), two soil map units occur in the study area: Fiddymment fine sandy loam, 1 to 8 percent slopes; and Urban land-Xerarents-Fiddymment complex, 0 to 8 percent slopes. These soils consist of moderately deep, well drained fine sandy loam and sandy clay loam soils underlain by an indurated and strongly cemented silica hardpan (duripan) at depths ranging from 20 to 40 inches below the soil surface, with a paralithic siltstone bedrock layer immediately below the duripan (NCSS 2003). The urban land-Xerarents-Fiddymment complex consists of 40 percent urban (developed) land, 30 percent Xerarents soils, 15 percent Fiddymment soils, and 15 percent minor components (NRCS 2020).

Plate IS-7 Habitat Map



Table IS-7a Potential for Special Status Species—Plants

Species Scientific Name	Species Common Name	Status ¹ Federal	Status ¹ State	Status ¹ CDFW ³ or CRPR ⁴	Habitat & Distribution	Potential for Occurrence ²
<i>Astragalus tener</i> var. <i>ferrisiae</i>	Ferris' milk-vetch	-	-	1B.1	Subalkaline flats on overflow land in the Central Valley; usually seen in dry, adobe soil. Elevation: 10-265 feet. Blooms: April-May	No potential to occur; no suitable habitat (alkaline flats) present in the study area.
<i>Balsamorhiza</i> <i>macrolepis</i>	big-scale balsamroot	-	-	1B.2	Chaparral, valley and foothill grassland, cismontane woodland. Sometimes on serpentine. Elevation: 110-4,800 feet. Blooms: March-June	Not likely to occur; the study area is below the species' elevation range, and marginally suitable habitat (grassland) on the site is highly disturbed. There are no records of this species within 3 miles of the study area (CDFW 2020a). The nearest record of this species is from Roseville at an elevation of 125 feet amsl, recorded in 1957 as part of a collection along Highway 99E (CDFW 2020a).
<i>Chloropyron molle</i> ssp. <i>hispidum</i>	hispid bird's-beak	-	-	1B.1	In damp alkaline soils, especially in alkaline meadows and alkali sinks. Elevation: 15-510 feet. Blooms: June-September	No potential to occur; no suitable habitat (alkaline soils) present in the study area.
<i>Downingia pusilla</i>	dwarf downingia	-	-	2B.2	Vernal lake and pool margins with a variety of associates. In several types of vernal pools. Elevation: 3-1,610 feet. Blooms: March-May	No potential to occur; no suitable habitat (vernal lake or vernal pool) present in the study area.
<i>Gratiola heterosepala</i>	Boggs Lake hedge-hyssop	-	SE	1B.2	Clay soils; usually in vernal pools, sometimes on lake margins. Elevation: 10-8,000 feet. Blooms: April-August	No potential to occur; no suitable habitat (vernal lake or vernal pool) present in the study area.
<i>Hibiscus lasiocarpus</i> var. <i>occidentalis</i>	woolly rose-mallow	-	-	1B.2	Moist, freshwater-soaked riverbanks & low peat islands in sloughs; can also occur on riprap and levees. In California, known from the Delta	No potential to occur; the study area is outside of this species' range (the Delta) and no suitable habitat (riverbanks, sloughs) present.

Species Scientific Name	Species Common Name	Status ¹ Federal	Status ¹ State	Status ¹ CDFW ³ or CRPR ⁴	Habitat & Distribution	Potential for Occurrence ²
					watershed. Elevation Range: 0-510 feet. Blooms: June-September	
<i>Juncus leiospermus</i> var. <i>ahartii</i>	Ahart's dwarf rush	-	-	1B.2	Restricted to the edges of vernal pools in grassland. Elevation Range: 98-330 feet. Blooms: March-May	No potential to occur; no suitable habitat (vernal pool) present in the study area.
<i>Juncus leiospermus</i> var. <i>leiospermus</i>	Red Bluff dwarf rush	-	-	1B.1	Vernally mesic sites. Sometimes on edges of vernal pools. Elevation Range: 98-4,020 feet. Blooms: March-June	No potential to occur; no suitable habitat (vernally mesic sites) present in the study area.
<i>Legenere limosa</i>	legenere	-	-	1B.1	In beds of vernal pools and other seasonal wetlands. Elevation Range: 3-3,300 feet. Blooms: April-June	No potential to occur; no suitable habitat (vernal pool) present in the study area.
<i>Orcuttia viscida</i>	Sacramento Orcutt grass	FE	SE	1B.1	Vernal pools. Elevation Range: 50-280 feet. Blooms: April-June (September)	No potential to occur; no suitable habitat (vernal pool) present in the study area
<i>Sagittaria sanfordii</i>	Sanford's arrowhead	-	-	1B.2	In standing or slow-moving freshwater ponds, marshes, and ditches. Elevation Range: 0-1,985 feet. Blooms: May-October (November)	Known to occur; species observed growing and in full bloom in Sierra Creek during surveys conducted on August 13, 2020. There is one record within 3 miles of the study area, from the Sierra Creek channel approximately 0.25 mile downstream of the project site, in similar slow-moving stream habitat (CDFW 2020a).
<i>Symphotrichum lentum</i>	Suisun Marsh aster	-	-	1B.2	Marshes and swamps; most often seen along sloughs with <i>Phragmites</i> , <i>Scirpus</i> , blackberry, <i>Typha</i> , etc. Elevation Range: 0-49 feet. Blooms: (April)May-November	No potential to occur; the study area is above this species' elevation range and no suitable habitat (riverbanks, sloughs) present.

Table IS-7b Potential for Special Status Species–Invertebrates

Species Scientific Name	Species Common Name	Status ¹ Federal	Status ¹ State	Status ¹ CDFW ³ or CRPR ⁴	Habitat & Distribution	Potential for Occurrence ²
<i>Brachinecta lynchi</i>	vernal pool fairy shrimp	FT	-	-	Vernal pools and other seasonal wetlands, typically small but including a wide range of sizes. Found as far north as Jackson County in Oregon and as far south as the Los Padres National Forest in Ventura County.	No potential to occur; There are three records of the species within 3 miles west of the study area on private properties in vernal pool habitats (CDFW 2020a). However, no suitable habitat (vernal pools or seasonal wetlands) is present in the study area.
<i>Desmocerus californicus dimorphus</i>	valley elderberry longhorn beetle	FT	-	-	Elderberry shrubs, typically in riparian habitats below 3,000 feet in elevation. Found throughout the Central Valley from Shasta County to Fresno County including the valley floor and lower foothills.	No potential to occur; no suitable habitat (elderberry shrubs) present in the study area.
<i>Lepidurus packardii</i>	vernal pool tadpole shrimp	FE	-	-	Vernal pools and other seasonal wetlands with relatively long inundation period. Endemic to the grasslands of the Central Valley, Central Coast mountains, and South coast mountains.	No potential to occur; no suitable habitat (vernal pools or seasonal wetlands) present in the study area.
<i>Linderiella occidentalis</i>	California fairy shrimp	-	-	-	Found in vernal pools and other seasonal wetlands throughout the Central Valley. It is the longest lived of the Central Valley fairy shrimp species.	No potential to occur; There are two records to the north and northwest of the study area within a 3-mile radius (CDFW 2020a). However, no suitable habitat (vernal pools or seasonal wetlands) is present in the study area.

Table IS-7c Potential for Special Status Species–Fish

Species Scientific Name	Species Common Name	Status ¹ Federal	Status ¹ State	Status ¹ CDFW ³ or CRPR ⁴	Habitat & Distribution	Potential for Occurrence ²
<i>Archoplites interruptus</i>	Sacramento perch	-	-	SSC	Historic habitats include sloughs, slow-moving rivers, and large lakes. Today, only found in reservoirs and small lakes presumably as the result of introduction. Found in the Clear Lake Reservoir; Cedar Creek; Walker River; upper Owens River; Mono Lake, and Abbots Lagoon watersheds.	No potential to occur; the study area is outside the species' known range and there is no suitable aquatic habitat (reservoirs or small lakes) present in the study area.
<i>Hypomesus transpacificus</i>	Delta smelt	FT	SE	-	Euryhaline species that primarily lives in brackish water, and spawns in shallow, fresh or slightly brackish water upstream of the mixing zone. Found only from the Suisun Bay upstream through the Sacramento-San Joaquin River Delta.	No potential to occur; the study area is outside the species' range and there is no suitable aquatic habitat (brackish water) present in the study area.
<i>Oncorhynchus mykiss irideus</i> pop. 11	steelhead - Central Valley Distinct Population Segment (DPS)	FT	-	-	Cool, clear streams with abundant cover and well-vegetated banks, with relatively stable flows. Pool and riffle complexes and cold gravelly streambeds for spawning. Populations in the Sacramento and San Joaquin Rivers and their tributaries.	No potential to occur; The species has been documented in Dry Creek approximately 0.87 miles west of the study area (CDFW 2020a). However, there is no suitable aquatic habitat (cool, clear stream with stable flows) present in the study area.
<i>Oncorhynchus tshawytscha</i> pop. 6	chinook salmon – Central Valley spring-run Evolutionary Significant Unit (ESU)	FT	ST	-	Water temperatures greater than 27 degrees Celsius (80.6 degrees Fahrenheit) are lethal to adults. Spring-run Chinook Salmon enter the Sacramento River from late March through September. Adults hold in cool water habitats through the summer, then spawn in the fall from mid-August through early October. The Sacramento River and its	No potential to occur; no suitable aquatic habitat (cool, clear stream with stable flows) present in the study area.

Species Scientific Name	Species Common Name	Status ¹ Federal	Status ¹ State	Status ¹ CDFW ³ or CRPR ⁴	Habitat & Distribution	Potential for Occurrence ²
					tributaries, including Butte, Mill, Deer, Antelope, and Beegum Creeks.	
<i>Oncorhynchus tshawytscha</i> pop. 7	chinook salmon - Sacramento River winter-run ESU	FE	SE	-	Spawn during summer months. Adult winter-run Chinook salmon immigration and holding through the Delta and into the lower Sacramento River occurs from December through July. Spawning occurs between late-April and mid-August. Primarily spawn in the mainstem Sacramento River between Keswick Dam and the Red Bluff Diversion Dam.	No potential to occur; no suitable aquatic habitat (cool, clear stream with stable flows) present in the study area. The study area is outside of the ESU's range.
<i>Pogonichthys macrolepidotus</i>	Sacramento splittail	-	-	SSC	Slow moving river sections, and dead-end sloughs. Requires flooded vegetation for spawning and foraging for young. Confined to the Delta, Suisun Bay and associated marshes.	No potential to occur; no suitable aquatic habitat (rivers or sloughs) present in the study area. The study area is outside of the species' range.

Table IS-7d Potential for Special Status Species—Amphibians and Reptiles

Species Scientific Name	Species Common Name	Status ¹ Federal	Status ¹ State	Status ¹ CDFW ³ or CRPR ⁴	Habitat & Distribution	Potential for Occurrence ²
<i>Ambystoma californiense</i>	California tiger salamander	FT	ST	WL	Vernal pools and other seasonal wetlands with adequate inundation period and adjacent uplands, primarily grasslands, with burrows and other belowground refugia. Occurs from near Petaluma and Sonoma Counties, east through the Central Valley to Yolo and Sacramento Counties and south to Tulare County; and from the vicinity of San Francisco Bay south to Santa Barbara County.	No potential to occur; no suitable aquatic habitat (vernal pools or seasonal wetlands) present in the study area. The nearest occurrence is over 14 miles south of the study area in vernal pool habitat (CDFW 2020a).

Species Scientific Name	Species Common Name	Status ¹ Federal	Status ¹ State	Status ¹ CDFW ³ or CRPR ⁴	Habitat & Distribution	Potential for Occurrence ²
<i>Emys marmorata</i>	western pond turtle	-	-	SSC	Closely associated with permanent or nearly permanent water in a variety of aquatic habitats. For foraging, ponds, marshes, slow-moving streams, sloughs, and irrigation/drainage ditches; for nesting, soils in nearby uplands with low, sparse vegetation. Basking sites are required for thermoregulation, such as partially submerged logs, rocks, mats of floating vegetation, or open mud banks. Hibernation may occur in aquatic habitats or in burrows of adjacent uplands, often with duff. Throughout California west of the Sierra-Cascade crest and absent from desert regions, except in the Mojave Desert along the Mojave River and its tributaries. Elevation range extends from near sea level to 4,690 ft.	Could occur; There is one occurrence within 3 miles of the study area from 1995 stating that 2 turtles were observed in Don Julio Creek on McClellan Air Force Base (CDFW 2020a). There are also two species occurrences from iNaturalist that place the species within 2 miles, north and east of the study area (iNaturalist 2020a and 2020b). The eastern portion of Sierra Creek could potentially provide suitable habitat for the species and the species could potentially migrate west towards the study area. However, the suitable aquatic habitat (nearly permanent water with mats of floating vegetation) present in the study area is highly degraded by human activities and the species is not expected to thrive within the study area.
<i>Rana draytonii</i>	California red-legged frog	FT	-	-	Requires aquatic and terrestrial habitat components. Terrestrial habitat is nearly any area within 1-2 miles of an aquatic breeding site that stays cool and moist through the summer. Breeding sites are generally deep, still-moving water with a wide range of emergent cover amounts. Ranges from Mendocino County to Riverside County along the Coast Range and from Calaveras County to Butte County in the Sierra Nevada.	No potential to occur; the study area is outside the species' range and there is no suitable aquatic habitat (cool, deep water) present.

Species Scientific Name	Species Common Name	Status ¹ Federal	Status ¹ State	Status ¹ CDFW ³ or CRPR ⁴	Habitat & Distribution	Potential for Occurrence ²
<i>Spea hammondi</i>	western spadefoot toad	-	-	SSC	Occurs primarily in grassland habitats but can be found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying. Found throughout the Central Valley, adjacent foothills, and in the Coast Ranges.	No potential to occur; no suitable aquatic breeding habitat (vernal pools) present in the study area.
<i>Thamnophis gigas</i>	giant garter snake	FT	ST	-	Open water associated with slow-moving streams, sloughs, ponds, marshes, inundated floodplains, rice fields, and irrigation/drainage ditches within the Central Valley; also requires emergent herbaceous wetland vegetation for escape and foraging habitat, grassy banks and openings in waterside vegetation for basking, and higher elevation upland habitat for cover and refuge from flooding during the snake's inactive season. Ranges from Glenn County, to the southern edge of the San Francisco Bay Delta, and from Merced County to Fresno County.	Not likely to occur; the nearest record is 6 miles east of the study area in the agricultural lands to the west of Elverta (CDFW 2020a). There are no records of this species in Sierra Creek (CDFW 2020a). This species prefers habitats with emergent herbaceous wetland vegetation and is often found in canals, drainages and ditches used in agricultural farming. The upstream and downstream portions of Sierra Creek are concrete-lined with no bank vegetation and are therefore not suitable for the species, which would preclude its migration into the site from other areas.

Table IS-7e Potential for Special Status Species—Birds

Species Scientific Name	Species Common Name	Status ¹ Federal	Status ¹ State	Status ¹ CDFW ³ or CRPR ⁴	Habitat & Distribution	Potential for Occurrence ²
<i>Accipiter cooperii</i> (nesting)	Cooper's hawk	-	-	WL	Wooded areas, including dense stands of live oak, riparian deciduous, and other forest habitats, typically	Could occur; the nearest record is found in Gibson Ranch County Park (eBird 2020b) approximately one mile west of

Species Scientific Name	Species Common Name	Status ¹ Federal	Status ¹ State	Status ¹ CDFW ³ or CRPR ⁴	Habitat & Distribution	Potential for Occurrence ²
					near water. Widely distributed in California.	the study area. The species may nest in the large oak trees found throughout the study area; however, the species does prefer to nest near larger streams.
<i>Agelaius tricolor</i> (nesting colony)	tricolored blackbird	-	ST	SSC	Individuals forage in agricultural lands and grasslands, and nest in marshes, riparian scrub, and other areas that support cattails or dense thickets of shrubs or herbs. Breeding range includes the Central Valley and other lowland areas of California west of the Cascade–Sierra Nevada axis.	Not likely to occur; there is one CNDDB occurrence south of the study area within 5 miles, west of McClellan Air Force Base from 2014 (CDFW 2020a). There is also an eBird occurrence from 2019 in the Gibson Ranch County Park (eBird 2020b) which is approximately 1 mile west of the study area. However, there is no suitable nesting habitat (e.g., emergent marsh, riparian, or blackberry/thistle thickets) present in or within 500 feet of the study area.
<i>Ammodramus</i> <i>savannarum</i> (nesting)	grasshopper sparrow	-	-	SSC	Forages and nests in dense grasslands; favors a mix of native grasses, forbs, and scattered shrubs. Nests in depressions on the ground at the bases of grass clumps. Primarily occurs in California as a summer resident from March to September.	Not likely to occur; the grassland habitat in project site is regularly mowed and disked, so it is not suitably dense for the species to nest. The nearest record of the species is 12 miles north of the study area (CDFW 2020a).
<i>Aquila chrysaetos</i> (nesting)	golden eagle	-	-	FP, WL	Nests in rugged, open habitats with canyons and escarpments, typically on cliffs and rock outcroppings; however, will also nest in large trees in open areas, including oaks, sycamores, redwoods, pines, and	No potential to occur; no suitable nesting habitat (steep slopes, cliffs, or large trees overlooking hunting areas) present in the study area. The nearest record is 12.74 miles

Species Scientific Name	Species Common Name	Status ¹ Federal	Status ¹ State	Status ¹ CDFW ³ or CRPR ⁴	Habitat & Distribution	Potential for Occurrence ²
					eucalyptus, overlooking open hunting habitat. Uncommon permanent resident and migrant throughout California, except in the center of the Central Valley.	southeast of the study area (CDFW 2020a).
<i>Athene cunicularia</i> (burrow sites and some wintering sites)	burrowing owl	-	-	SSC	For nesting and foraging requires grasslands, agricultural fields, and low scrub habitats, especially where ground squirrel burrows are present; occasionally inhabit artificial structures and small patches of disturbed habitat. Broadly distributed in western North America; year-round resident throughout much of California.	Not likely to occur; marginally suitable habitat (grassland) is present but is highly disturbed in suburban setting surrounded by neighborhoods and a very busy street (Watt Avenue). No burrow sites or burrowing mammal activity was observed in the study area during the site survey. Nearest record is 5 miles west of the study area from 2003 (CDFW 2020a).
<i>Buteo regalis</i> (wintering)	ferruginous hawk	-	-	WL	Open grasslands, sagebrush flats, desert scrub, low foothills surrounding valleys, and fringes of pinyon-juniper habitat. Uncommon winter resident and migrant in the Modoc Plateau, Central Valley, and Coast Ranges.	Not likely to occur; marginally suitable wintering habitat (grassland) is present but is highly disturbed in suburban setting surrounded by neighborhoods and a very busy street (Watt Avenue). The species is uncommon, and the nearest record is 12.5 miles southeast of the study area (CDFW 2020a).
<i>Buteo swainsoni</i> (nesting)	Swainson's hawk	-	ST	-	Typically nests in large, mature trees in open woodlands, woodland margins, in riparian strips along drainage canals, or in isolated trees; typically places nests high in trees; forages in native grasslands and agricultural fields (hay and grain crops, lightly grazed pastures, and	Not likely to occur; marginally suitable nesting habitat (large eucalyptus trees) and foraging habitat (grassland) present in the study area. However, the study area is situated in a highly disturbed suburban setting surrounded by neighborhoods

Species Scientific Name	Species Common Name	Status ¹ Federal	Status ¹ State	Status ¹ CDFW ³ or CRPR ⁴	Habitat & Distribution	Potential for Occurrence ²
					some row crops) up to 10 miles or more from nest sites, depending on habitat availability and cropping patterns. Breeds in California's Central Valley and in the Great Basin area of northeastern California, with a few territories located in Shasta Valley, the Owens Valley, and the Mohave Desert.	and a very busy street (Watt Avenue). The nearest CNDDDB record is 1.6 miles northwest of the study area, north of Dry Creek on either side of Dyer Lane (CDFW 2020).
<i>Coccyzus americanus occidentalis</i> (nesting)	western yellow-billed cuckoo	FT	SE	-	Nests in large blocks of deciduous riparian thickets or forests with dense, low-level or understory foliage adjacent to slow-moving watercourses, backwaters along broad, lower floodplains of larger river systems. Willow and cottonwood are almost always a component of the vegetation. In the Sacramento Valley, also utilizes adjacent walnut orchards. In California, the western yellow-billed cuckoo's breeding distribution is restricted to isolated sites in the Sacramento, Amargosa, Kern, Santa Ana, and Colorado River Valleys.	No potential to occur; there is no suitable riparian habitat in or near the study area.
<i>Elanus leucurus</i> (nesting)	white-tailed kite	-	-	FP	For nesting, isolated trees, open woodlands, and woodland margins; for foraging, grasslands, and agricultural fields. Yearlong resident in coastal and valley lowlands of California.	Not likely to occur; marginally suitable nesting habitat (isolated trees) and foraging habitat (grassland) present in the study area. However, the study area is situated in a highly disturbed suburban setting surrounded by neighborhoods and a very busy street (Watt Avenue). The nearest record is 3.5 southwest of the study area in Julio Creek on McClellan Air Force Base

Species Scientific Name	Species Common Name	Status ¹ Federal	Status ¹ State	Status ¹ CDFW ³ or CRPR ⁴	Habitat & Distribution	Potential for Occurrence ²
						(CDFW 2020a). There is also an eBird occurrence from April 2020 documenting the species in Gibson Ranch County Park (eBird 2020b).
<i>Laterallus jamaicensis coturniculus</i> (year-round)	California black rail	-	ST	FP	Freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat. Range includes the San Francisco Bay area, Sacramento-San Joaquin Delta, coastal southern California at Morro Bay and a few other locations, the Salton Sea, and lower Colorado River area.	No potential to occur; no suitable habitat (marsh) present in the study area.
<i>Melospiza melodia</i> (year-round)	song sparrow ("Modesto" population)	-	-	SSC	For nesting and foraging, primarily in emergent marsh, riparian scrub, and early successional riparian forest habitats; infrequently in mature riparian forest and sparsely vegetated ditches and levees. Range is in the north-central portion of the Central Valley.	Not likely to occur; marginally suitable habitat (sparsely vegetated creek banks) present in the study area. However, the nearest occurrence is 18 miles southwest of the study area in the Yolo Bypass Wildlife Area in 2011 (CDFW 2020a).
<i>Progne subis</i> (nesting)	purple martin	-	-	SSC	Nests in tree cavities, bridges, freeway overpasses, utility poles, lava tubes, and buildings. Forages in foothill and low montane oak and riparian woodlands; less frequently in coniferous forests and open or developed habitats. Uncommon to rare local summer resident throughout the state.	No potential to occur; in Sacramento County, species is limited to nesting in weep holes in bridge and freeway overpasses that preclude competing nonnative species (CDFW 2020a). No suitable habitat is present in the study area.

Species Scientific Name	Species Common Name	Status ¹ Federal	Status ¹ State	Status ¹ CDFW ³ or CRPR ⁴	Habitat & Distribution	Potential for Occurrence ²
<i>Riparia</i> (nesting)	bank swallow	-	ST	-	Nests in colonies in unvegetated vertical banks or cliffs with fine-textured, sandy soils, typically next to streams, rivers, or lakes, but also can be found in gravel pits and highway cuts. The state's largest remaining breeding populations are along the Sacramento River from Tehama County to Sacramento County, along the Feather and lower American rivers, and in the Owens Valley.	Not likely to occur; Several occurrences along the American River approximately 7-8 miles south of the study area (CDFW 2020a). No suitable habitat (vertical exposed banks over water) in the study area. The banks of Sierra Creek are vegetated with grasses and are highly disturbed by human activity.
<i>Vireo bellii pusillus</i> (nesting)	least Bell's vireo	FE	SE	-	Riparian habitat along rivers and streams; generally early-mid successional riparian scrub/forest that is structurally diverse (USFWS 1998). In willows and other low, dense valley foothill riparian habitat and lower portions of canyons. Rare, local, summer resident in California below about 2,000 ft.	No potential to occur; no suitable habitat (riparian) present in the study area. The nearest occurrence is 18 miles southwest of the study area from 2013 (CDFW 2020a).

Table IS-7f Potential for Special Status Species–Mammals

Species Scientific Name	Species Common Name	Status ¹ Federal	Status ¹ State	Status ¹ CDFW ³ or CRPR ⁴	Habitat & Distribution	Potential for Occurrence ²
<i>Lasiurus blossevillii</i>	western red bat	-	-	SSC, WBWG-H	Forests and woodlands from sea level up to mixed conifer forests. Feeds over a wide variety of habitats including grasslands, shrublands, open woodlands and forests, and croplands. Roosts in trees in edge habitats near fields or streams. Distributed from Shasta Co. to the Mexican border, west of the Sierra Nevada/Cascade crest and deserts.	Could occur; range and distribution of this species is not very well documented. The species is known to roost in the foliage of large trees and shrubs such as cottonwoods, sycamores and walnuts. Suitable habitat for the species was observed in the study area during the August 2020 survey.

Species Scientific Name	Species Common Name	Status ¹ Federal	Status ¹ State	Status ¹ CDFW ³ or CRPR ⁴	Habitat & Distribution	Potential for Occurrence ²
<i>Lasiurus cinereus</i>	hoary bat	-	-	WBWG-M	Resides in broadleaved upland forest, cismontane woodland, lower montane coniferous forest, and north coast coniferous forest. Prefers open habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding. Roosts in dense foliage of medium to large trees. Feeds primarily on moths. Requires water. Widespread throughout the United States.	Could occur; range and distribution of this species is not very well documented. The species is known to roost in the foliage and bark of large trees. Also found in the suburban/city areas with old, large trees. The nearest occurrence is 12 miles southwest of the study area from 1991 (CDFW 2020a). Suitable habitat for the species was observed in the study area during the August 2020 survey.
<i>Taxidea taxus</i>	American badger	-	-	SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs enough food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows. Uncommon, permanent resident found throughout most of the state.	No potential to occur; The nearest record is approximately 12 miles south of the study area from 2010 (CDFW 2020a) and no burrows/dens, signs, prey, or suitable habitat was observed in the study area.

Notes:

*Because the distribution and abundance of individual bird species varies seasonally, the season, or life phase, during which the species is of conservation concern in California is provided in parentheses beneath the bird species scientific name. There is potential for any of these bird species to fly over or pass through the project area, however, these species would not be at risk of adverse effects unless nesting on or otherwise residing in the project area during the season or life phase when the species is of conservation concern in California.

Quad Search: Rio Linda, Verona, Pleasant Grove, Roseville, Citrus Heights, Carmichael, Sacramento East, Sacramento West, and Taylor Monument (USGS 2018a-i).

**¹Listing Status (CDFW 2020b):
Federal Endangered Species Act:**

FE = endangered

FT = threatened

FC = candidate

FD = delisted

– = no status

State Endangered Species Act:

SE = endangered

SCE = candidate endangered

ST = threatened

SCT = candidate threatened

SD = delisted

SR = rare

– = no status

² California Department of Fish and Wildlife (CDFW):

SSC = species of special concern

FP = fully protected

WL = watch listed

– = no status

³ California Rare Plant Rank (CRPR) (CNPS 2020b):

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 common elsewhere.

2B: Plants rare, threatened, or endangered in California but more common elsewhere

In addition, ranks at each level also include a threat rank and are determined as follows:

0.1-Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)

0.2-Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)

0.3-Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

⁴ Potential for Occurrence:

No Potential to Occur: The study area is outside the species' range or suitable habitat for the species is absent from the study area and adjacent areas.

Not Likely to Occur: Habitat for the species is marginal, and no occurrences of the species have been recorded within three miles of the study area.

Could Occur: The study area is within the species' range, suitable habitat for the species is present, and recorded occurrences of the species are generally present in the vicinity.

Known to Occur: The study area is within the species' range, suitable habitat for the species is present, and the species has been recorded from within the project site.

⁵ Western Bat Working Group (WBWG): The WBWG is composed of agencies, organizations, and individuals interested in bat research, management, and conservation from 13 western states and provinces. Species are ranked as High, Medium, or Low Priority in each of 10 regions in western North America. The CNDDDB tracks bat species that are at least Low-Medium Priority in California (CDFW 2020b).

Sources: CNPS 2020a and 2020b; CDFW 2020a and 2020b; USFWS 2020a; iNaturalist 2020a and 2020b; and eBird 2020a and 2020b. Compiled by AECOM in September of 2020.

SPECIAL STATUS PLANTS AND WILDLIFE

Table IS-7 provides a list of the special-status species that have been documented in the database searches and describes their regulatory status, habitat, and potential for occurrence on the project site. Vegetation communities in the study area were characterized and evaluated for their potential to support the special-status species identified during the database research. Every plant that was encountered in the study area was identified to the taxonomic level necessary to determine whether it was a special-status species.

SPECIAL STATUS PLANTS

The project site contains suitable habitat for one species of special status plant, Sanford's arrowhead (*Sagittaria sanfordii*). This species is present in the project area; it was observed growing in Sierra Creek during the site survey conducted on August 13, 2020. All other special-status plant species listed in Table IS-7 were determined to have no potential to occur or are unlikely to occur because the study area is outside the species' range or suitable habitat for the species is absent from the study area and adjacent areas.

SANFORD'S ARROWHEAD

Sanford's arrowhead is designated as a California Rare Plant Rank (CRPR) 1B.2 species; however, it is not listed under the federal Endangered Species Act or the California Endangered Species Act. This species is a rhizomatous herbaceous perennial that occurs in shallow slow-moving water, usually in marshes and swamps. Sanford's arrowhead blooms from May through October and is known to occur at elevations ranging from sea level to 2,133 feet amsl. Sanford's arrowhead is endemic to California; the current range of this species includes Butte, Del Norte, El Dorado, Fresno, Merced, Mariposa, Marin, Napa, Orange, Placer, Sacramento, San Bernardino, Shasta, San Joaquin, Solano, Tehama, Tulare, Ventura, and Yuba counties.

There is one occurrence of this species within 3 miles of the study area, recorded in 2001 in a portion of Sierra Creek approximately 0.25 mile downstream of the project site (CDFW 2020). The 2001 CNDDDB record of Sanford's arrowhead in Sierra Creek noted that there were thousands of the plants in similar habitat to that of the project site (i.e., slow-moving water with a variety of aquatic vegetation).

DISCUSSION OF PROJECT IMPACTS

Most of the project components would be constructed in the existing disturbed and developed portions of Sierra Creek Park where there is no potential to support special-status plant species. Where pedestrian bridges are proposed to cross Sierra Creek, indirect impacts on Sanford's arrowhead could occur. Since no in-water work is proposed, the project would not result in direct impacts (i.e., removal, crushing or trampling) on Sanford's arrowhead. Indirect impacts related to project construction could include reduced plant vigor from potential construction-generated dust (e.g., site preparation, grading) or shading of Sanford's arrowhead if bridges are placed directly above existing populations. Other potential indirect impacts include habitat degradation

associated with runoff of sediment and contaminants (e.g., oil, grease, concrete) or accidental spills from equipment into Sierra Creek that could support special-status plant species.

Implementation of Mitigation Measure C would avoid and minimize potential project impacts on Sanford's arrowhead by requiring surveys to map the extent of Sanford's arrowhead in Sierra Creek to inform the final location of pedestrian bridge crossings to avoid shading populations of Sanford's arrowhead. Other indirect impacts to Sanford's arrowhead would be mitigated through implementation of measures to protect Sierra Creek water quality as described in the *Hydrology and Water Quality* section. Furthermore, the District would require contractors to implement BMPs to minimize short term air quality impacts associated with construction, as described in the *Air Quality* section. Therefore, indirect impacts related to construction of pedestrian bridges, erosion, and fugitive dust on special-status plants would be ***less than significant***.

SPECIAL STATUS WILDLIFE

The project site contains suitable habitat for four species of special status wildlife, including one reptile (western pond turtle [*Emys marmorata*]), one bird (Cooper's hawk [*Accipiter cooperii*]) and two bats (western red bat [*Lasiurus blossevillii*] and hoary bat [*L. cinereus*]). In addition, the project site provides suitable habitat for nesting migratory birds protected by the Federal Migratory Bird Treaty Act.

WESTERN POND TURTLE

Western pond turtle is a CDFW species of special concern. The range of western pond turtle includes north of the San Francisco Bay Area plus populations from the Central Valley north into Oregon and Washington, and an apparently introduced population in Nevada. They are found in rivers, streams, creeks, ponds, marshes, irrigation ditches, damp woodland and forest, and grassland. The turtles require logs, rocks, vegetation mats, or exposed banks to bask in the sun. Mating occurs in April and May and females lay their eggs between April and August in upland habitat within 1,300 feet of aquatic habitat. Their diet consists of aquatic plants, invertebrates, worms, frog and salamander eggs and larvae, crayfish, carrion, and occasionally frogs and fish (CalHerps 2020). There is one record of the species within 3 miles of the study area from 1995 documenting 2 western pond turtles in the Don Julio Creek on McClellan Air Force Base (CDFW 2020). There are also two records from iNaturalist placing the species within 2 miles, north and east of the study area (iNaturalist 2020a and 2020b). The eastern portion of Sierra Creek, outside of the project area, could potentially provide suitable habitat for the species and the species could potentially move west toward the project area. To the west of the project, Sierra Creek is a concrete-lined feature with no aquatic vegetation and is therefore not suitable for western pond turtle.

DISCUSSION OF PROJECT IMPACTS

Potential direct impacts include crushing or trampling of western pond turtle individuals or nests in upland areas within 1,300 feet of Sierra Creek. Indirect impacts on western pond turtle are like those described above for Sanford's arrowhead, including aquatic habitat degradation associated with runoff of sediment and contaminants.

Implementation of Mitigation Measure D would avoid and minimize potential project impacts on western pond turtle by avoiding the western pond turtle nesting period, and by implementing avoidance measures based on information from pre-construction surveys. Indirect impacts on western pond turtle would be mitigated through implementation of measures to protect Sierra Creek water quality, as described in the *Hydrology and Water Quality* section. Furthermore, the District would require contractors to implement BMPs to minimize short term air quality impacts associated with construction, as described in the *Air Quality* section. Therefore, indirect impacts on western pond turtle related to construction of pedestrian bridges, erosion, and fugitive dust would be ***less than significant***.

SPECIAL STATUS BATS

No roosting bats were observed during the site survey in August 2020; however suitable roosting habitats (e.g., large mature trees, nearby man-made structures, and large culverts) and foraging habitat (Sierra Creek) exists in the project area. The two special-status bat species discussed below could potentially move through the project site and use roosting habitat.

WESTERN RED BAT

Western red bat is a CDFW species of special conservation concern (CDFW 2020b) and is also designated as medium priority by the Western Bat Working Group. It is locally common in California, ranging from Shasta County to the Mexican border. The western red bat typically feeds over a wide variety of habitats including grasslands, shrublands, open woodlands and forests, and croplands. This species prefers to roost in trees in edge habitats near fields or streams. The species is known to roost in the foliage of large trees and shrubs such as cottonwoods, sycamores, and walnuts. In general, bat species are not well researched, and this particularly applies to the elusive solitary western red bat. Suitable habitat for western red bat was observed in the project area in the form of stands of large mature eucalyptus trees and London plane trees.

HOARY BAT

The hoary bat is the most widespread bat in the United States and is listed by the Western Bat Working Group as a medium-priority species. The hoary bat typically resides in broadleaved upland forest, cismontane woodland, lower montane coniferous forest, and north coast coniferous forest. The species prefers open habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding. The hoary bat is also found in cities with old, large trees and is known to roost in dense foliage of medium to large trees. Hoary bats feed primarily on moths and require having nearby water. As with most bat species, this species is not very well documented. Although mostly solitary, females would roost together during the maternity season. Suitable habitat for the species was observed in the project area in the form of stands of large mature eucalyptus trees and London plane trees.

DISCUSSION OF PROJECT IMPACTS

The project would not remove the mature, tall trees (i.e., eucalyptus and London plane) identified by the biological survey as potentially suitable bat roost habitat. However, if some of these trees must be trimmed or removed then the District should conduct trimming and/or remove the trees in the fall when the bats are volant and there is less likelihood of active maternity roosts. The permanent loss of some day or night bat roosts due to tree removal or trimming would not be expected to cause indirect mortality to large numbers of bats, reduce their number, or restrict their range. This impact would be ***less than significant***. No mitigation measures are required.

COOPER'S HAWK AND OTHER NESTING BIRDS

Cooper's hawk is a CDFW watch-list species. This species is a breeding resident throughout most of the wooded portion of the state. Cooper's hawk usually nests in deciduous riparian areas near streams or in second-growth conifer stands. It hunts in broken woodland and habitat edges where it feeds on small birds and mammals, as well as reptiles and amphibians (CDFW 2020). Cooper's hawk is known to occur in nearby Gibson Ranch County Park, approximately one mile west of the study area (eBird 2020).

The numerous shrubs, trees, open grassland, and structures in and adjacent to the study area could provide suitable nesting substrate for migratory birds, including raptors, covered by the Migratory Bird Treaty Act (MBTA). The MBTA prohibits the killing, possessing, or trading of migratory birds, and essentially all native bird species in California are covered by the MBTA. Migratory bird and raptor nests are protected further by Sections 3503 and 3503.5, respectively, of the California Fish and Game Code.

DISCUSSION OF PROJECT IMPACTS

There is a potential for nesting birds to be directly impacted through removal of vegetation containing nests, and indirectly impacted through noise and other disturbance during construction of the project. If project implementation occurs during the bird breeding season (generally February 1 through August 31), active nests may be present in vegetation slated for removal. In addition, increased disturbance may occur from noise, human presence, and grading/construction activities. Construction noise would have the potential to cause bird nest abandonment in locations adjacent to work areas. However, indirect impacts from these activities would be temporary and such impacts would end with project completion.

If construction activities would occur between February 1 and August 31, Mitigation Measure E would require preconstruction surveys for nesting birds. The purpose of the survey requirement is to ensure that construction activities do not agitate or harm nesting Cooper's hawk and other migratory birds, potentially resulting in nest abandonment or other harm to nesting success.

To avoid take of nesting Cooper's hawk and other migratory birds, mitigation has been included to require that activities either occur outside of the nesting season, or to

require that nests be buffered from construction activities until the nesting season is concluded. Impacts to migratory birds are ***less than significant***.

STREAMS, WETLANDS, AND OTHER WATERS

The wetland delineation conducted on August 13, 2020 resulted in one aquatic resource mapped within the project site, consisting of 0.33 acre of low gradient tributary freshwater stream (other waters of the United States) (AECOM 2020a). This stream is a named feature (Sierra Creek). In the project site, streambanks are steep and incised and highly disturbed by human activity. The active stream channel is about 1 foot deep, remains inundated for most of the year and is densely vegetated with aquatic floating and emergent plants. The channel terrace and banks are vegetated with upland grasses and herbs. No riparian habitat is present along channel banks.

DISCUSSION OF PROJECT IMPACTS

No in-water work is proposed, so the project would not result in direct fill of waters. No infrastructure would be placed into the creek channel and no equipment would be required to work inside the channel. However, activities along the banks of Sierra Creek to construct new raised pedestrian bridge crossings could result in indirect impacts, including transport of sediment (erosion) and runoff of contaminants (e.g., fuel, lubricants) into waters. Other indirect impacts on waters include impacts on wetland vegetation, degradation of water quality, and/or loss of wetland functions and services. Furthermore, proposed pedestrian crossings over Sierra Creek could permanently alter the shape of creek banks.

The pedestrian bridge crossings over Sierra Creek would be designed to minimize impacts and would span the entire water channel without altering the bed of the channel (Mazucca pers. comm., 2020). The bridge design may utilize a “perched” bridge design with low approaches with wing walls installed to direct the water flow into the bridge opening to eliminate potential erosion. Because bridge construction may alter the banks of Sierra Creek consultation with CDFW under Fish and Game Code Section 1600 would be required.

Impacts to waters would be mitigated through implementation of measures to protect Sierra Creek water quality, as described above. Implementation of Mitigation Measure F would reduce impacts on Sierra Creek banks caused by installation of pedestrian bridge crossings by requiring the District to obtain a Lake and Streambed Alteration Agreement. Therefore, impacts to waters related to erosion, fugitive dust, and construction of pedestrian bridges would be ***less than significant***.

MOVEMENTS OF NATIVE RESIDENT OF MIGRATORY FISH OR WILDLIFE SPECIES

The project area is surrounded by developed urban land, resulting in limited terrestrial landscape linkages for wildlife. The primary existing barriers to overland wildlife movement into the project area are the multi-lane Watt Avenue to the east and dense residential developments to the north, west, and south. Given the high degree of development and disturbance surrounding the study area, Sierra Creek likely provides the best option for continuous habitat linkage for aquatic species and reptiles,

including special-status species like the western pond turtle, through the study area. An existing multi-box concrete culvert bridge (Watt Avenue) completely spans Sierra Creek along the eastern boundary of the study area allowing for aquatic wildlife movement beneath the bridge into the study area from the east. Outside of the project area, the Dry Creek riparian corridor serves as an important migration and dispersal corridor for anadromous fish and other aquatic species. Birds and mammals also use this large riparian corridor as an avenue for movement, migration, and dispersal.

DISCUSSION OF PROJECT IMPACTS

The District proposes to construct two pedestrian bridge crossings over Sierra Creek. Although specific designs for these structures have not yet been developed, the District intends to design bridges that would not impede wildlife movement (Mazucca pers. comm., 2020). No in-water work is proposed, and construction BMPs would include prevention of erosion or sedimentation of aquatic habitat and restoration of the bank of Sierra Creek where any new crossing is installed.

The project would be designed to use existing roadways and disturbed areas for equipment staging and laydown areas, thereby reducing the potential impacts of project construction and operation on resident wildlife. In addition, the project does not propose any new barriers to riparian corridors or drainages.

With the limited extent of new infrastructure, a lack of new barriers to wildlife movement corridors, and the availability of large expanses of suitable habitat in the Dry Creek riparian corridor outside of the project area, project impacts on wildlife movement and migration corridors would be ***less than significant***. No mitigation measures are required.

TREES PROTECTED BY LOCAL ORDINANCE

Chapter 19.12 of the Sacramento County Code, *Tree Preservation and Protection* (Tree Protection Ordinance) states that no person shall trench, grade or fill within the dripline of any protected native oak tree, or destroy, kill or remove any protected tree in the designated urban area of the unincorporated area of Sacramento County, on any property, public or private, without a tree permit or unless authorized as a condition of a discretionary project approval by the Board of Supervisors, County Planning Commission, Zoning Board of Appeals, the Zoning Administrator or the Subdivision Review Committee (Sacramento County 2020). Furthermore, the approving body has the authority to adopt mitigation measures as conditions of approval for discretionary projects in order to protect other species of trees, in addition to the native oaks.

In addition, the Sacramento County Zoning Code, Chapter 5: Development Standards, Section 5.2.4.H *Removal and Replacement of Landscaping* states that replacement trees shall be required for trees removed with or without a Tree Removal Permit. Furthermore, the Conservation Element of the Sacramento County General Plan specifies mitigation for non-native tree canopy impacts by creating equivalent canopy on-site.

AECOM inventoried 68 trees representing 13 species within and adjacent to the boundaries of the study area on August 13, 2020 (AECOM 2020b). Most trees inventoried are nonnative Chinese hackberry (*Celtis sinensis*) (25 trees), planted in rows along the frontage to Watt Avenue in a landscaped turf area. Other nonnative tree species inventoried within or adjacent to the study area include Chinese pistache (*Pistacia chinensis*), Chinese tallow (*Triadica sebifera*), Italian pine (*Pinus pinea*), London plane (*Platanus × acerifolia*), mulberry (*Morus alba*), pecan (*Carya illinoensis*), and red iron bark eucalyptus (*Eucalyptus sideroxylon*). Native trees mapped in the project site include eight valley oak (*Quercus lobata*) trees, one black willow (*Salix gooddingii*), one sapling Fremont cottonwood (*Populus fremontii*), and two Oregon ash (*Fraxinus latifolia*).

Most trees in the project site are mature landscape trees planted in a turf lawn in the southeast corner of the project site along Watt Avenue. All the eucalyptus trees are large and exist in a planted stand along a maintenance vehicle access road along the northeast boundary of the project site. Other trees, including several native trees, are scattered as small individuals along the banks of Sierra Creek or in disturbed grassland.

DISCUSSION OF PROJECT IMPACTS

The project design is currently at a conceptual stage of development and the location of pedestrian pathways and other infrastructure would be modified as needed to preserve existing trees to the extent feasible. The District's goal is to retain all existing trees where feasible (Mazucca pers. comm., 2020). However, this assessment conservatively assumes that some trees may need to be removed or trimmed. Based on the results of the August 2020 arborist survey, the project may require the removal of nine trees, accumulating about 0.2 acre of urban tree canopy. Species that may be removed include seven Chinese hackberry, one pecan, and one native Oregon ash. Another twelve trees, nine of which are Chinese hackberry and one of which is a native valley oak, may be trimmed to accommodate construction and installation of the proposed park fence/wall and pedestrian pathways. The location of trees in relation to project components is included as Figure 4 of the Arborist Report (AECOM 2020b).

The removal of up to nine urban landscape trees and trimming of up to 12 trees would be mitigated by submitting a Tree Permit Application to the County of Sacramento as required by Mitigation Measure G. With implementation of tree protection measures and on-site compensatory planting of tree canopy, impacts to trees are ***less than significant***.

GEOLOGY AND SOILS

This section supplements the Initial Study Checklist by analyzing if the project would:

- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature

PALEONTOLOGICAL RESOURCES

Based on geologic mapping prepared by Gutierrez (2011), the project site is located in the Turlock Lake Formation. This formation consists of arkosic alluvium that includes fine sand and silt at the base, grading upward into coarse sand and coarse pebbly sand or gravel. The sediments of the Turlock Lake Formation originated from the Sierra Nevada and have been divided into upper and lower members. The lower member includes gravel and coarse sand that overlies finer, well-sorted sand, silt, and clay of possible lacustrine (lake) origin. The upper unit is found topographically above the lower unit and includes gravel beds and silt and fine sand that may be lacustrine in origin (Marchand and Allwardt 1981). The Turlock Lake Formation is known to contain unique, scientifically important vertebrate fossil remains and is considered to be of high paleontological sensitivity.

DISCUSSION OF PROJECT IMPACTS

As discussed above, the project site is located in the Turlock Lake Formation, that is considered to be of high paleontological sensitivity. Therefore, the possibility would exist for discovery of unknown paleontological resources during project construction. To prevent a substantial adverse impact to unknown paleontological resources, incorporation of construction personnel education and inadvertent discovery mitigation (Mitigation Measure H) has been included. Impacts to paleontological resources, sites, or unique geologic features are considered ***less than significant***.

CULTURAL RESOURCES

This section supplements the Initial Study Checklist by analyzing if the project would:

- Cause a substantial adverse change in the significance of a historical resource
- Have a substantial adverse effect on an archaeological resource
- Disturb any human remains, including those interred outside of formal cemeteries

ARCHAEOLOGICAL RESOURCES

A Cultural Resource Report (CRR) was prepared by AECOM for the project. The following information is based on this report. A discussion of the historic, prehistoric, and ethnographic setting can be found in the CRR (AECOM 2020).

A review of files maintained at the North Central Information Center (NCIC) of the California Historical Resources Information System was conducted on September 1, 2020 for the project area and a 0.25-mile radius of the project boundary. No previously recorded cultural resources are located within the project boundary or within a quarter mile of the project.

On August 31, 2020 a request with the Native American Heritage Commission (NAHC) for a Sacred Lands Files Search and Tribal Consultation List request was sent by AECOM Archaeologist Diana Ewing. On September 16, 2020 the NAHC responded with a negative Sacred Lands Files (SLF) search indicating no known sacred lands were recorded within the project area or a 0.25-mile radius thereof. The NAHC responded with Native American Contact list of four tribes. Consultation letters were sent to Shingle Springs Band of Miwok Indians, Tsi Akim Maidu, United Auburn Indian Community of the Auburn Rancheria, and Colfax-Todds Valley Consolidated Tribe from the NAHC list. In addition, Wilton Rancheria and Lone Band of Miwok were also sent consultation letters as they have previously requested consultation with Sacramento County regarding projects. As of publication of this IS/MND, no tribes have requested further involvement in the project, or identified potential impacts to sensitive tribal cultural resources associated with the proposed project.

On August 13, 2020, AECOM archaeologist Diana Ewing conducted a cultural resources pedestrian survey of the Sierra Creek Park Project site. No cultural material or sites were observed at any point during the pedestrian survey. No historic-age built environment features were identified within the project site.

Based on review of the background research, NAHC SLF negative results, and results of the field survey, there are no identified cultural resources in the project area.

DISCUSSION OF PROJECT IMPACTS

The project would involve installation of new infrastructure, including a parking lot, play structures, picnic area, shade structure, restroom building, signage, lighting, fencing/walls along Watt Avenue, and pedestrian pathway system including

pedestrian/bicycle access bridge crossings over Sierra Creek, and a community garden. Construction of these facilities would result in disturbance of the ground surface to a depth of several feet.

Based on review of previous investigations and pedestrian survey, no cultural resources were identified within the project site during the current investigation, and the probability for the presence of unanticipated finds is considered to be extremely low; however, there is always a possibility that unknown cultural resources may exist in the project area and be obscured by ground disturbing activities during project implementation.

There is no indication that the project area has been used for human burials in the recent or distant past; therefore, human remains are unlikely to be encountered during project implementation. However, in the unlikely event that human remains are discovered during subsurface activities, they could be inadvertently damaged.

Implementation of Mitigation Measure I would minimize potential project impacts on previously unknown cultural resources that may be discovered during project implementation. With implementation of this mitigation measure, combined with the negative record search results for known cultural resources from both the NCIC and NAHC, impacts to cultural resources from ground disturbance during project implementation would be ***less than significant***.

TRIBAL CULTURAL RESOURCES

This section supplements the Initial Study Checklist by analyzing if the project would:

- Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 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 a cultural value to a California Native American tribe, that is:
 - Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or
 - A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Under California Public Resources Code (PRC) Section 21084.3, public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. California Native American tribes traditionally and culturally affiliated with a geographic area may have expertise concerning their tribal cultural resources (21080.3.1(a)).

TRIBAL CULTURAL RESOURCE SETTING

The *Cultural Resource* section above contains a more detailed description of the environmental setting for the project site, relating to cultural and tribal resources.

In accordance with Assembly Bill (AB) 52, codified as Section 21080.3.1 of CEQA, formal notification letters were sent to Wilton Rancheria and Lone Band of Miwok that have previously requested consultation with Sacramento County regarding projects. Consultation letters were also sent to Shingle Springs Band of Miwok Indians, Tsi Akim Maidu, United Auburn Indian Community of the Auburn Rancheria, and Colfax-Todds Valley Consolidated Tribe from the NAHC Native American Tribes Contact list. The NHRPD is the CEQA Lead Agency for Native American consultation.

The NAHC responded with a negative Sacred Lands Files search indicating no known sacred lands were recorded within the project area or a 0.25-mile radius thereof.

DISCUSSION OF PROJECT IMPACTS

As discussed above, Native American consultation pursuant to AB 52 is being completed by NHRPD. Additionally, no tribal cultural resources were identified during background research at the NCIC or NAHC. However, there is always a possibility that unknown tribal cultural resources may exist in the project area and could be disturbed or damaged by ground disturbing activities during project construction. Based on the negative results of the NAHC Sacred Lands Files search, combined with the negative

NCIC search results and implementation of Mitigation Measure I, project impacts to tribal cultural resources are anticipated to be ***less than significant***.

GREENHOUSE GAS EMISSIONS

This section supplements the Initial Study Checklist by analyzing if the project would:

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

GREENHOUSE GAS BACKGROUND

Certain gases in Earth's atmosphere, classified as greenhouse gases (GHGs), play a critical role in determining the earth's surface temperature. Solar radiation enters the earth's atmosphere from space. A portion of the radiation is absorbed by Earth's surface, and a smaller portion of this radiation is reflected toward space through the atmosphere. Infrared radiation is selectively absorbed by GHGs. As a result, infrared radiation released from Earth that otherwise would have escaped back into space is instead "trapped," resulting in a warming of the atmosphere. This phenomenon, known as the "greenhouse effect," is responsible for maintaining a habitable climate on Earth.

GHGs are present in the atmosphere naturally; are released by natural sources and anthropogenic sources (e.g., human caused); and are formed from secondary reactions taking place in the atmosphere. Natural sources of GHGs include the respiration of humans, animals, and plants; decomposition of organic matter; volcanic activity; and evaporation from the oceans. Anthropogenic sources include the combustion of fossil fuels by stationary and mobile sources, waste treatment, and agricultural processes. Anthropogenic sources lead to atmospheric levels of GHGs in excess of natural ambient concentrations and have the potential to adversely affect the environment because such emissions contribute, on a cumulative basis, to global climate change.

The following are GHGs that are widely accepted as the principal contributors to human-induced global climate change that are relevant to the project:

- Carbon dioxide (CO₂)
- Methane (CH₄)
- Nitrous oxide (N₂O)

Emissions of CO₂ are byproducts of fossil fuel combustion. CH₄ is the main component of natural gas and is associated with agricultural practices and landfills. N₂O is a colorless GHG that results from industrial processes, vehicle emissions, and agricultural practices.

Global warming potential (GWP) is a concept developed to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The GWP of a GHG is based on several factors, including the relative effectiveness of a gas to absorb infrared radiation, and length of time that the gas remains in the atmosphere ("atmospheric lifetime"). The reference gas for GWP is CO₂; therefore, CO₂ has a GWP of 1. The other main GHGs that have been attributed to human activity include CH₄, which has a GWP

of 28, and N₂O, which has a GWP of 265 (IPCC 2014). For example, 1 ton of CH₄ has the same contribution to the greenhouse effect as approximately 28 tons of CO₂. GHGs with lower emission rates than CO₂ still may contribute to climate change because they are more effective at absorbing outgoing infrared radiation than CO₂ (i.e., high GWP).

Climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (about one day), GHGs have long atmospheric lifetimes (one to several thousand years). GHGs persist in the atmosphere for long enough time periods to be dispersed around the globe. Although the exact lifetime of any particular GHG molecule is dependent on multiple variables and cannot be pinpointed, it is understood that more CO₂ is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, or other forms. GHGs typically persist in the atmosphere for extensive periods time, long enough to be dispersed throughout the globe and result in long-term global impacts. As such, the project would not, by itself, contribute significantly to climate change; however, cumulative emissions from many projects and plans all contribute to global GHG concentrations and the climate system.

REGULATORY BACKGROUND

As California has adopted statewide legislation addressing various aspects of climate change and GHG emissions mitigation. Much of this establishes a broad framework for the State's long-term GHG reduction and climate change adaptation program. Of particular importance is AB 32, which establishes a statewide goal to reduce GHG emissions back to 1990 levels by 2020, and Senate Bill (SB) 375 supports AB 32 through coordinated transportation and land use planning with the goal of more sustainable communities. SB 32 extends the State's GHG policies and establishes a near-term GHG reduction goal of 40% below 1990 emissions levels by 2030. Executive Order (EO) S-03-05 identifies a longer-term goal for 2050¹.

COUNTY OF SACRAMENTO CLIMATE ACTION PLANNING

In November of 2011, Sacramento County approved the Phase 1 Climate Action Plan Strategy and Framework document (Phase 1 CAP), which is the first phase of developing a community-level Climate Action Plan. The Phase 1 CAP provides a framework and overall policy strategy for reducing greenhouse gas emissions and managing our resources in order to comply with AB 32. It also highlights actions already taken to become more efficient, and targets future mitigation and adaptation strategies. This document is available at http://www.green.saccounty.net/Documents/sac_030843.pdf. The CAP contains policies/goals related to agriculture, energy, transportation/land use, waste, and water.

The Phase 1 CAP is a strategy and framework document. The County adopted the Phase 2A CAP (Government Operations) on September 11, 2012. Neither the Phase 1

¹ EO S-03-05 has set forth a reduction target to reduce GHG emissions by 80 percent below 1990 levels by 2050. This target has not been legislatively adopted.

CAP nor the Phase 2A CAP are “qualified” plans through which subsequent projects may receive CEQA streamlining benefits. The Communitywide CAP (Phase 2B) has been in progress for some time (<https://planning.saccounty.net/PlansandProjectsIn-Progress/Pages/CAP.aspx>) but was placed on hold in late 2018 pending in-depth review of CAP-related litigation in other jurisdictions.

The commitment to a Communitywide CAP is identified in General Plan Policy LU-115 and associated Implementation Measures F through J on page 117 of the General Plan Land Use Element. This commitment was made in part due to the County’s General Plan Update process and potential expansion of the Urban Policy Area to accommodate new growth areas. General Plan Policies LU-119 and LU-120 were developed with SACOG to be consistent with smart growth policies in the SACOG Blueprint, which are intended to reduce VMT and GHG emissions. This second phase CAP is intended to flesh out the strategies involved in the strategy and framework CAP, and will include economic analysis, intensive vetting with all internal departments, community outreach/information sharing, timelines, and detailed performance measures. The County is currently preparing this second phase CAP and it is expected to be completed in 2020. The Countywide CAP was re-initiated in early 2020, with a target adoption of 12-18 months from July 1, 2020.

THRESHOLDS OF SIGNIFICANCE

Addressing GHG generation impacts requires an agency to make a determination as to what constitutes a significant impact. Governor’s Office of Planning and Research’s Guidance does not include a quantitative threshold of significance to use for assessing a proposed development’s GHG emissions under CEQA. Moreover, California Air Resources Board (CARB) has not established such a threshold or recommended a method for setting a threshold for proposed development-level analysis.

Thresholds applicable to construction activities have not been developed by the County of Sacramento. Therefore, this analysis would rely on the SMAQMD’s construction-related numeric bright-line mass emission threshold of 1,100 metric tons of CO₂e annually, as the air quality district for the region. Although the County of Sacramento has established quantitative thresholds for GHG emissions generated by operations of new development, these thresholds are geared toward the residential and transportation sectors in terms of emissions per capita and the commercial and industrial sectors in terms of emissions per thousand square feet of development. Therefore, although the project is under the jurisdiction of Sacramento County, and, thus, is subject to the County’s thresholds of significance for GHG emissions, considering the recent adoption of the updated GHG thresholds by SMAQMD’s board and the applicability of these thresholds across all sectors in the region, the SMAQMD’s updated thresholds (April 2020) are applied to this analysis for the purpose of determining whether the project’s operational GHG emissions may result in a cumulatively considerable contribution to the significant impact of climate change. For land development and construction projects, SMAQMD considers a project to exceed GHG emission thresholds if (SMAQMD 2020a) In April 2020, SMAQMD adopted an update to their land development project operational GHG threshold, which requires a project to demonstrate consistency with CARB’s 2017 Climate Change Scoping Plan. SMAQMD’s technical support document,

“Greenhouse Gas Thresholds for Sacramento County”, identifies operational measures that should be applied to a project to demonstrate consistency.

All projects must implement Tier 1 Best Management Practices (BMPs) to demonstrate consistency with the Climate Change Scoping Plan. After implementation of Tier 1 BMPs, project emissions are compared to the operational land use screening levels table (equivalent to 1,100 metric tons of CO₂e per year). If a project's operational emissions are less than or equal to 1,100 metric tons of CO₂e per year after implementation of Tier 1 BMPs, the project will result in a less than cumulatively considerable contribution and has no further action. Tier 1 BMPs include:

- All projects must implement Tier 1 BMPs (BPM 1 and 2):
- BMP 1 – no natural gas: projects shall be designed and constructed without natural gas infrastructure;
- BMP 2 – electric vehicle (EV) ready: projects shall meet the current CalGreen Tier 2 standards, except all EV Capable spaces shall instead be EV Ready.
 - EV Capable requires the installation of “raceway” (the enclosed conduit that forms the physical pathway for electrical wiring to protect it from damage) and adequate panel capacity to accommodate future installation of a dedicated branch circuit and charging station(s)
 - EV Ready requires all EV Capable improvements plus installation of dedicated branch circuit(s) (electrical pre-wiring), circuit breakers, and other electrical components, including a receptacle (240-volt outlet) or blank cover needed to support future installation of one or more charging stations.

Projects that implement BMP 1 and BMP 2 can utilize the screening criteria for operation emissions outlined in Table IS-9. Projects that do not exceed 1,100 metric tons per year are then screened out of further requirements. For projects that exceed 1,100 metric tons per year, then compliance with BMP 3 is also required:

- BMP 3 – Reduce applicable project VMT by 15% residential and 15% worker relative to Sacramento County targets, and no net increase in retail VMT. In areas with above-average existing VMT, commit to provide electrical capacity for 100% electric vehicles.

Table IS-8 SMAQMD Thresholds of Significance for Greenhouse Gas Emissions

Greenhouse Gas as CO ₂ e	Construction Phase	Operational Phase
Land Development and Construction Projects	1,100 metric tons per year	1,100 metric tons per year
Stationary Source Only	1,100 metric tons per year	10,000 metric tons per year

Notes: SMAQMD = Sacramento Metropolitan Air Quality Management District; CO₂e = carbon dioxide equivalent.
Source: SMAQMD 2020

Because the SMAQMD threshold of significance for GHG emissions is set based upon the intent of consistency with State GHG reduction goals, the project is considered to be consistent with existing State plans if it does not exceed the SMAQMD thresholds of significance.

DISCUSSION OF PROJECT IMPACTS

Project implementation would generate short-term construction and long-term operational GHG emissions. Construction-related GHG emissions would cease following construction of the project. Operational emissions are considered long-term and assumed to occur for the lifetime the project. Construction-related GHG emissions would be generated primarily from exhaust emissions associated with off-road construction equipment, construction worker commutes, and vendor and haul truck trips. Operational GHG emissions can be categorized into direct and indirect GHG emissions. Direct GHG emissions are those emissions that are generated at the location of consumption or use. For example, mobile-source emissions are direct emissions because GHG emissions are generated as a vehicle is operated. Conversely, indirect emissions are those emissions that occur at a different time or location from the point of consumption or use. For example, electricity-related GHG emissions are indirect emission because as a consumer uses electricity, the fuel combustion and emissions associated with creating that electricity likely occurred off-site or at a different time. Other indirect GHG emissions include emissions associated with solid waste disposal and water consumption.

The resultant GHG emissions of the project were estimated using CalEEMod version 2016.3.2; refer to AECOM 2020 for model output files.

The CalEEMod estimates direct emissions associated with the project's construction-related emission sources, as well as operational mobile (e.g., park user and staff-related vehicles) and area (e.g., landscape maintenance equipment), sources; and indirect emissions associated with operational energy (i.e., electricity), water (i.e., conveyance and distribution), and solid waste (i.e., decomposition) sources.

Table IS-9 presents a summary of the project's potential annual construction-related and operational GHG emissions to compare with the applicable threshold of significance.

Table IS-9 GHG Emissions Associated with Construction and Operation of the Project– Construction GHG Emission

Emissions Source	GHG Emissions (MT CO₂e / year)
Maximum Annual Construction Emissions*	547
Total Annual Operational Emissions	74
SMAQMD Threshold of Significance (Construction-related or Operational)	1,100
Exceed Thresholds?	No

Notes: GHG = greenhouse gas; MT CO₂e = metric tons of carbon dioxide emissions; SMAQMD = Sacramento Metropolitan Air Quality Management District.

* Construction emissions are shown for the modeled maximum annual scenario. Total construction emissions would be approximately 571 MT CO₂e, but would occur over the entirety of the proposed construction period and would not continue after the completion of construction activities.

Source: AECOM 2020; AECOM 2020.

As shown in Table IS-9 total maximum annual GHG construction emissions were estimated to be approximately 547 MT CO₂e and total annual GHG operational emissions were estimated to be approximately 74 MT CO₂e per year. The project's

short-term construction and long-term operational GHG emissions would not exceed the SMAQMD thresholds of significance of 1,100 MT CO₂e/year. In addition to the mass emission threshold, SMAQMD also requires that all projects implement the SMAQMD Tier 1 BMPs, as detailed in the Thresholds of Significance identified above. Consistent with SMAQMD's Tier 1 BMP 1, the project is not anticipated to require natural gas infrastructure. The project is proposed to include up to 25 new parking spaces. Mitigation has been incorporated (Mitigation Measure J) to ensure that the project would implement the SMAQMD-required Tier 1 BMPs. In addition, as noted above, because the SMAQMD threshold of significance for GHG emissions is set based upon the intent of compliance with State GHG reduction goals, the project is considered to be consistent with existing State plans because it is consistent with the SMAQMD thresholds of significance. Therefore, with implementation of Mitigation Measure J, GHG emissions that would be generated by the construction and operations of the project would result in a less than cumulatively considerable contribution to the significant impact of climate change, and this impact would be ***less than significant***.

ENVIRONMENTAL MITIGATION MEASURES

MITIGATION MEASURE A: SMAQMD BASIC CONSTRUCTION EMISSION CONTROL PRACTICES

Comply with Basic Construction Emission Control Practices identified by the SMAQMD and listed below or as they may be updated in the future:

- Water all exposed surfaces two times daily. Exposed surfaces include, but are not limited to soil piles, graded areas, unpaved parking areas, staging areas, and access roads.
- Cover or maintain at least two feet of free board space on haul trucks transporting soil, sand, or other loose material on the site. Any haul trucks that would be traveling along freeways or major roadways should be covered.
- Use wet power vacuum street sweepers to remove any visible track out mud or dirt onto adjacent public roads at least once a day. Use of dry powered sweeping is prohibited.
- Limit vehicle speeds on unpaved roads to 15 miles per hour (mph).
- All roadways, driveways, sidewalks, parking lots to be paved should be completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used.
- Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes [required by California Code of Regulations, Title 13, sections 2449(d) and 2485]. Provide clear signage that posts this requirement for workers at the entrances to the site.
- Provide current certificate(s) of compliance for CARB's In-Use Off-Road Diesel-Fueled Fleets Regulation [California Code of Regulations, Title 13, sections 2449 and 2449.1]. For more information contact CARB at 877-593-6677, doors@arb.ca.gov, or www.arb.ca.gov/doors/compliance_cert1.html
- Maintain all construction equipment in proper working condition according to manufacturer's specifications. The equipment must be checked by a certified mechanic and determined to be running in proper condition before it is operated.

MITIGATION MEASURE B: IMPLEMENT MEASURES TO REDUCE SHORT-TERM, CONSTRUCTION-RELATED NOISE

- Provide written notification to the residents south of the project site and within 500 feet² from the southern project boundary at least three weeks prior to construction, identifying the type, duration, and frequency of construction

² Building rows located within 500 feet of the construction site, would shield construction noise. Therefore, construction noise would be attenuated to ambient level beyond this distance.

activities. Notification materials will also identify a mechanism for residents to contact regarding construction noise. Post contact information in the conspicuous locations adjacent to the site with contact information regarding construction noise and activities. The notification will include anticipated dates and hours during which construction activities are anticipated to occur and contact information, including a daytime telephone number, for the project representative to be contacted in the event that noise levels are deemed excessive.

Recommendations to assist noise-sensitive land uses in reducing interior noise levels (e.g., closing windows and doors) will be included in the notification. If there is communication-related to construction noise, implement feasible methods to reduce noise exposure effects, such as shielding, changing the location of stationary sources, and changing construction hours.

- Prohibit the start-up of machines or equipment before place between the hours of 8:00 p.m. and 6:00 a.m. on weekdays and Friday commencing at 8:00 p.m. through and including 7:00 a.m. on Saturday; Saturdays commencing at 8:00 p.m. through and including 7:00 a.m. on the next following Sunday and on each Sunday after the hour of 8:00 p.m.
- Prohibit use of materials and equipment deliveries before 7:00 a.m. and after 7:00 p.m., Monday through Saturday and before 9:00 a.m. and past 5:00 p.m. on Sunday.
- Restrict the use of bells, whistles, alarms, and horns to safety-warning purposes.
- Equip all construction equipment with noise-reduction devices, such as mufflers to minimize construction noise and operate all internal combustion engines with exhaust and intake silencers.
- Locate fixed construction equipment (e.g., compressors and generators), construction staging and stockpiling areas, and construction vehicle routes as far as feasible from noise-sensitive receptors, the northern portion of the site, and/or off-site staging areas north of the site.

MITIGATION MEASURE C: CONDUCT BOTANICAL SURVEYS FOR SANFORD'S ARROWHEAD; AVOID PLACING PEDESTRIAN BRIDGES OVER SANFORD'S ARROWHEAD POPULATIONS

Retain a qualified botanist to conduct a survey to map the extent of Sanford's arrowhead in the project area during its bloom period (i.e., May through October) at least 1 year prior to the initiation of construction. Final design of pedestrian bridges over Sierra Creek would be located to avoid disturbance to or shading of these populations of Sanford's arrowhead.

MITIGATION MEASURE D: AVOID IMPACTS ON WESTERN POND TURTLE DURING CONSTRUCTION

Implement the measures listed below to avoid impacts on western pond turtle during project construction:

- Where feasible, construction activities involving construction with heavy equipment (e.g., excavation, grading, contouring) within suitable western pond turtle upland habitat (i.e., any undeveloped areas within 1,300 feet of Sierra Creek) would avoid the western pond turtle nesting period (generally mid-May to early July).
- If ground-disturbing activities occur during the nesting season, the District would retain a qualified biologist prior to the start of construction to conduct preconstruction surveys and monitor construction, if needed. Preconstruction surveys would be conducted within suitable western pond turtle aquatic and upland habitat 1 week before and within 24 hours of beginning work within suitable western pond turtle upland habitat (i.e., any undeveloped areas within 1,300 feet of Sierra Creek).

The surveys would be timed to coincide with the time of day when turtles are most likely to be active (the cooler part of the day between 8:00 a.m. and 12:00 p.m. during spring and summer). Prior to conducting the surveys, the biologist would locate the microhabitats for turtle basking (floating vegetation mats) and determine a location to quietly observe turtles. Each survey would include a 30-minute wait time after arriving on the site to allow startled turtles to return to open basking areas. The survey would consist of a minimum 15-minute observation time per area where turtles could be observed.

If western pond turtles are observed during either survey, the District would consult with CDFW to determine the best course of action to avoid harm and harassment of individuals.

MITIGATION MEASURE E: CONDUCT A PRECONSTRUCTION SURVEY FOR NESTING BIRDS AND RAPTORS, AND IMPLEMENT AVOIDANCE MEASURES, AS NEEDED

If project implementation is to occur during the bird breeding season (February 1 through August 31), the District would retain a qualified biologist to conduct preconstruction surveys no more than 7 days prior to the start of project construction. The survey would determine if active nest sites for any avian species protected under the federal MBTA occur within all project work areas and a 300-foot buffer. If work is conducted outside of this timeframe, then no preconstruction surveys are necessary. If an active nest (defined as a bird building a nest, sitting on a nest, carrying food to young, etc.) is found, then a 100-foot buffer would be established.

At the discretion of the qualified biologist, the buffer for certain species may be reduced to permit project implementation to occur (depending on the duration, intensity, and type

of work that is necessary). The biologist would monitor as needed to ensure that no harassment or potential take occurs. The biologist would have the authority to stop work if they determine that the activity may result in harassment, through the bird flushing off the nest or preventing adult birds from carrying food to the nest, or otherwise jeopardize the survival of the nest contents (eggs, young, fledglings, etc.).

MITIGATION MEASURE F: COMPLY WITH THE SECTION 1600 STREAMBED ALTERATION AGREEMENT

Before construction, obtain a Section 1600 Streambed Alteration Agreement from CDFW for any activities proposed in or near the Sierra Creek drainage that would potentially alter the banks of Sierra Creek and implement all conditions in the permit.

MITIGATION MEASURE G: SUBMIT A TREE PERMIT APPLICATION WITH THE COUNTY OF SACRAMENTO DEPARTMENT OF PUBLIC WORKS

Before construction, submit a Tree Permit Application to the County of Sacramento Department of Public Works accompanied by the application fee established by the Board of Supervisors, in accordance with Section 19.12.180 of County Code. A copy of this report and the final project site plan should accompany the application. Once reviewed by the County, final determination of tree replacement requirements will be provided.

MITIGATION MEASURE H: PALEONTOLOGICAL RESOURCES UNANTICIPATED DISCOVERY

Prior to the start of earthmoving activities at the project site, inform all construction personnel involved with earthmoving activities regarding the possibility of encountering fossils, the appearance and types of fossils likely to be seen during construction, and proper notification procedures should fossils be encountered. This worker training may either be prepared and presented by an experienced field archaeologist at the same time as construction worker education on cultural resources or prepared and presented separately by a qualified paleontologist.

If paleontological resources are discovered during earthmoving activities, immediately cease work in the vicinity of the find and notify the County. The Sacramento County Office of Planning and Environmental Review will also be notified. NHRPD will retain a qualified paleontologist to evaluate the resource and prepare a recovery plan based on Society of Vertebrate Paleontology (SVP) Guidelines (SVP 1996). The recovery plan may include, but is not limited to, a field survey, construction monitoring, sampling and data recovery procedures, museum curation for any specimen recovered, and a report of findings. Recommendations in the recovery plan that are determined by NHRPD, as the CEQA lead agency, to be necessary and feasible will be implemented before construction activities can resume at the site where the paleontological resources were discovered.

MITIGATION MEASURE I: CULTURAL RESOURCES UNANTICIPATED**DISCOVERY**

If human remains are discovered during any ground disturbing/construction activities during project implementation, work will be halted and the County Coroner contacted. For all other unexpected cultural resources discovered during project construction, work will be halted until a qualified archaeologist may evaluate the resource encountered.

1. Pursuant to Sections 5097.97 and 5097.98 of the State Public Resources Code, and Section 7050.5 of the State Health and Safety Code, if a human bone or bone of unknown origin is found during construction, all work is to stop and the County Coroner and the Office of Planning and Environmental Review will be immediately notified. If the remains are determined to be Native American, the coroner will notify the Native American Heritage Commission (NAHC) within 24 hours, and the NAHC will identify the person or persons it believes to be the most likely descendent (MLD) from the deceased Native American. The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposition of, with appropriate dignity, the human remains and any associated grave goods.
2. In the event of an inadvertent discovery of cultural resources (excluding human remains) during construction, all work must halt within a 150-foot radius of the discovery. A qualified professional archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeology, will be retained at the Applicant's expense to evaluate the significance of the find. If it is determined due to the types of deposits discovered that a Native American monitor is required, the Guidelines for Monitors/Consultants of Native American Cultural, Religious, and Burial Sites as established by the Native American Heritage Commission will be followed, and the monitor will be retained at the Applicant's expense.
 - a Work cannot continue within the 150-foot radius of the discovery site until the archaeologist and/or tribal monitor conducts sufficient research and data collection to make a determination that the resource is either 1) not cultural in origin; or 2) not potentially eligible for listing on the National Register of Historic Places or California Register of Historical Resources.
 - b If a potentially-eligible resource is encountered, then the archaeologist and/or tribal monitor, the Planning and Environmental Review Division staff, and project proponent will arrange for either 1) total avoidance of the resource, if possible; or 2) test excavations or total data recovery as mitigation. The determination will be formally documented in writing and submitted to the County Environmental Coordinator as verification that the provisions of CEQA for managing unanticipated discoveries have been met.

MITIGATION MEASURE J: IMPLEMENT THE SMAQMD GHG TIER 1 BMPs

Require, as a part of plans for development within the project site, the implementation of the following SMAQMD GHG Tier 1 BMPs, or BMPs as they may be revised in the future.

- All projects must implement Tier 1 BMPs (BPM 1 and 2):
 - BMP 1 – no natural gas: projects will be designed and constructed without natural gas infrastructure;
 - BMP 2 – EV Ready: projects will meet the current CalGreen Tier 2 standards, except all EV Capable spaces will instead be EV Ready.

MITIGATION MEASURE COMPLIANCE

Comply with the Mitigation Monitoring and Reporting Program for this project, including the payment of 100% of the Office of Planning and Environmental Review staff costs, and the costs of any technical consultant services incurred during implementation of that Program.

INITIAL STUDY CHECKLIST

Appendix G of the California Environmental Quality Act (CEQA) provides guidance for assessing the significance of potential environmental impacts. Based on this guidance, Sacramento County has developed the following Initial Study Checklist. The Checklist identifies a range of potential significant effects by topical area. The words “significant” and “significance” used throughout the following checklist are related to impacts as defined by the California Environmental Quality Act as follows:

- Potentially Significant indicates there is substantial evidence that an effect MAY be significant. If there are one or more “Potentially Significant” entries an Environmental Impact Report (EIR) is required. Further research of a potentially significant impact may reveal that the impact is actually less than significant or less than significant with mitigation.
- Less than Significant with Mitigation applies where an impact could be significant but specific mitigation has been identified that reduces the impact to a less than significant level.
- ☐ Less than Significant or No Impact indicates that either a project would have an impact but the impact is considered minor or that a project does not impact the particular resource.

Table IS-9.1 Initial Study Checklist – Land Use

Environmental Issue Would the project:	Significance	Discussion
a. Cause a significant environmental impact due to a conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	No Impact	The project would not change recreational uses of the park and would not introduce changes in land use that would be inconsistent with existing uses. The project would be consistent with environmental policies of the Sacramento County General Plan and the Sacramento County Zoning Code (Sacramento County 2017; 2020).
b. Physically disrupt or divide an established community?	No Impact	The project would not include any linear features, such as new roadways or barriers, that could divide existing communities in the vicinity of the park or impede interaction among land uses within these communities.

Table IS-9.2 Initial Study Checklist – Population/Housing

Environmental Issue Would the project:	Significance	Discussion
a. Induce substantial unplanned population growth in an area either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of infrastructure)?	No Impact	The project would not include the construction of dwellings or an increase in the resident population of the surrounding area. The source of the labor force for project construction is unknown at this time, but workers would likely come from the local labor pool, and would not involve relocation of construction workers to Antelope from other areas. The project is intended to serve existing and planned development and would not induce substantial unplanned population growth.
b. Displace substantial amounts of existing people or housing, necessitating the construction of replacement housing elsewhere?	No Impact	The project would not remove or displace existing housing and would not necessitate the construction of replacement housing elsewhere.

Table IS-9.3 Initial Study Checklist – Agricultural Resources

Environmental Issue Would the project:	Significance	Discussion
a. Convert Prime Farmland, Unique Farmland, Farmland of Statewide Importance or areas containing prime soils to uses not conducive to agricultural production?	No Impact	The project site and surrounding area is designated Urban and Built-Up Land by the California Department of Conservation (DOC) California Important Farmland Finder (DOC 2016). Therefore, the project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use.
b. Conflict with any existing Williamson Act contract?	No Impact	No parcels in or adjacent to the project site are under Williamson Act contracts (Sacramento County 2020).
c. Introduce incompatible uses in the vicinity of existing agricultural uses?	No Impact	The project would not occur in an area of agricultural production and would not introduce incompatible uses in the vicinity of existing agricultural uses.

Table IS-9.4 Initial Study Checklist – Aesthetics

Environmental Issue Would the project:	Significance	Discussion
a. Substantially alter existing viewsheds such as scenic highways, corridors or vistas?	No Impact	There are no scenic vistas or state-or locally- designated scenic highways in the project vicinity. The nearest state-designated state highway, State Route 160, is approximately 30 miles to the southwest (Caltrans n.d.). The nearest locally- designated scenic corridor is I-80, approximately 3.25 miles to the southeast (Sacramento County 2017).
b. In non-urbanized area, substantially degrade the existing visual character or quality of public views of the site and its surroundings?	No Impact	The project site is not located in a non-urbanized area.
c. If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	Less Than Significant	The project would not conflict with applicable zoning or other regulations governing scenic quality. See <i>Aesthetics</i> section above.
d. Create a new source of substantial light, glare, or shadow that would result in safety hazards or adversely affect day or nighttime views in the area?	Less Than Significant	The project would not result in a new source of substantial light, glare or shadow that would result in safety hazards or adversely affect day or nighttime views in the area. See <i>Aesthetics</i> section above.

Table IS-9.5 Initial Study Checklist – Airports

Environmental Issue Would the project:	Significance	Discussion
a. Result in a safety hazard for people residing or working in the vicinity of an airport/airstrip?	No Impact	The project would not be located within an identified public or private airport/airstrip safety zones. The nearest airport to the project site is Sacramento McClellan Airport, approximately two miles to the southwest (Sacramento County 2011). Therefore, the project would not result in a safety hazard for people residing or working in the vicinity of an airport/airstrip.
b. Expose people residing or working in the project area to aircraft noise levels in excess of applicable standards?	No Impact	The project would not be located within an identified public or private airport/airstrip noise zones or contours.
c. Result in a substantial adverse effect upon the safe and efficient use of navigable airspace by aircraft?	No Impact	Construction and operation of the project would not involve activities that would result in a substantial adverse effect upon the safe and efficient use of navigable airspace by aircraft.
d. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	No Impact	Construction and operation of the project would not involve activities that would result a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.

Table IS-9.6 Initial Study Checklist – Public Services

Environmental Issue Would the project:	Significance	Discussion
a. Have an adequate water supply for full buildout of the project?	Less Than Significant	California American Water provides water service to the project area and would continue to serve the project site. Historically, California American Water has been able to supply 100% of its demand during normal, dry, and multiple dry years (California American Water 2016). The project may lead to an increase in use at the park, however the increase in water consumption from irrigation and the new restroom building would be minor. Additionally, the park is expected to serve the surrounding community. Therefore, there would be no net increase in the demand for water within a given service area. Any increase that would not have already been accounted for would result from the minor increase in park users. Therefore, it is anticipated California American Water would have sufficient water supplies to serve the project.

Environmental Issue Would the project:	Significance	Discussion
b. Have adequate wastewater treatment and disposal facilities for full buildout of the project?	Less Than Significant	The Sacramento Area Sewer District (SASD) and Sacramento Regional County Sanitation District (Regional San) would provide wastewater service to the project site. The Sacramento Regional Wastewater Treatment Plant has an operation capacity of 119 million gallons per day (MGD) and permitted capacity of 181 MGD (California Regional Water Quality Control Board Central Valley Region 2016). The small amount of wastewater created from the new restroom building could be accommodated by wastewater treatment facilities within the project area. Additionally, since the park is expected to serve the surrounding community, there would be no net increase in the demand for wastewater treatment within a given service area. Any increase that would not have already been accounted for would result from the minor increase in park users. The anticipated increased wastewater generation at the project site would not substantially alter the Sacramento Regional Wastewater Treatment Plant's operational capacity.
c. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	Less Than Significant	Project construction would involve site preparation and would generate construction waste that would require disposal at an off-site solid waste facility. The 2019 CalGreen Code (Cal. Code Regs., tit. 24, pt. 11) requires all construction contractors to reduce construction waste and demolition debris by 65 percent. Those materials that cannot be reused on-site would be conveyed to the nearest solid waste facility that is permitted to accept construction and demolition (C&D) waste. Project operation would also result in a minimal increase in long-term generation of solid waste from park users. The Sacramento County Department Waste Management and Recycling provides waste collection services to the unincorporated areas of Sacramento County. Solid waste collected is transported to the Sacramento County North Area Recovery Station (NARS) and then transported to the Sacramento County Kiefer Landfill. Kiefer Landfill is permitted for 10,815 tons per day, has a remaining capacity 112,900,000 cubic yards, and is projected to be in operation until 2064 (Cal Recycle 2020). Therefore, the Kiefer Landfill would be able to accommodate the project's solid waste disposal needs.

Environmental Issue Would the project:	Significance	Discussion
d. Result in substantial adverse physical impacts associated with the construction of new water supply or wastewater treatment and disposal facilities or expansion of existing facilities?	Less Than Significant	The majority of the project site is not currently developed and does not include existing utilities and service connections. The project would require connection to sewer and water lines to serve the new restroom building. New water and wastewater infrastructure would be designed in accordance with County Improvement Standards (2018). Construction of water and wastewater infrastructure would result in potentially significant environmental impacts identified in relevant sections throughout this document, in connection with discussions of the impacts of overall site development. Mitigation measures are identified for potentially significant construction-related impacts to ensure that those impacts would be reduced to a less-than-significant level. There are no additional significant impacts beyond those comprehensively considered throughout the other sections of this document.
e. Result in substantial adverse physical impacts associated with the provision of storm water drainage facilities?	Less Than Significant	It is anticipated the project would connect to existing storm water drainage facilities. Any required storm drainage improvements or infrastructure would be developed in compliance with Sacramento County Improvement Standards (2018). Construction of storm drainage infrastructure (as required) would result in environmental impacts identified in relevant sections throughout this document, in connection with discussions of the impacts of overall site development. Mitigation measures are identified for potentially significant construction-related impacts to ensure that those impacts would be reduced to a less-than-significant level. There are no additional significant impacts beyond those comprehensively considered throughout the other sections of this document.

Environmental Issue Would the project:	Significance	Discussion
f. Result in substantial adverse physical impacts associated with the provision of electric or natural gas service?	Less Than Significant	The project would require connection to electrical services to accommodate new security lighting. New electrical infrastructure would be designed in accordance with County Standard Construction Specifications (2016). The project does not anticipate the need for natural gas service. Construction of electrical infrastructure would result in potentially significant environmental impacts identified in relevant sections throughout this document, in connection with discussions of the impacts of overall site development. Mitigation measures are identified for potentially significant construction-related impacts to ensure that those impacts would be reduced to a less-than-significant level. There are no additional significant impacts beyond those comprehensively considered throughout the other sections of this document.
g. Result in substantial adverse physical impacts associated with the provision of emergency services?	Less Than Significant	The Sacramento Metropolitan Fire District (Metro Fire) and North Division of the Sacramento County Sheriff's Department serve the project area and would continue to serve the project site (Metro Fire n.d.; Sacramento County Sheriff n.d.). Project improvements would incorporate California Fire Code requirements and Metro Fire's fire prevention standards into project designs. NHRPD would also be required to demonstrate to the Sacramento County Community Development Department and Metro Fire that applicable California Fire Code requirements and Metro Fire's fire prevention standards have been incorporated into project designs during review and approval of project plans or final inspections. The project would also include security lighting to discourage crime. The project is not anticipated to affect Metro Fire's and Sacramento County Sheriff's response times or other performance objectives and would not result in construction of new, or expansion of existing emergency services facilities.
h. Result in substantial adverse physical impacts associated with the provision of public school services?	No Impact	The project would not provide any new housing that generates students or increase the demand for school services or facilities.

Environmental Issue Would the project:	Significance	Discussion
i. Result in substantial adverse physical impacts associated with the provision of park and recreation services?	Less Than Significant	The project would include improvements to allow the functional use of, and access to Sierra Creek Park. The increase in use of the park is considered minor and would meet the recreational needs of the existing and planned development. Construction of the project would result in potentially significant environmental impacts identified in relevant sections throughout this Initial Study in connection with discussions of the impacts of overall site development, but mitigation measures are identified for potentially significant construction-related impacts to ensure those impacts are reduced to a less-than-significant level. There are no additional significant impacts beyond those comprehensively considered throughout the other sections of this document.

Table IS-9.7 Initial Study Checklist – Transportation

Environmental Issue Would the project:	Significance	Discussion
a. Conflict with or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b) – measuring transportation impacts individually or cumulatively, using a vehicles miles traveled standard established by the County?	Less Than Significant	The project would result in temporary, short-term increases in commute trips during construction. However, temporary construction worker commute trips and truck trips associated with materials and equipment deliveries are anticipated to originate from the greater Sacramento region. The project is located and designed specifically to serve the existing and proposed development in the community directly surrounding the project site and therefore would reduce potential travel demand associated with seeking parks and recreational services at a greater distance. Therefore, the project would not conflict or be inconsistent with the State CEQA Guidelines.
b. Result in a substantial adverse impact to access and/or circulation?	Less Than Significant	The project would include a new public parking area on the northwest side of the project site along Watt Avenue that would provide approximately 20-25 parking spaces. The project would be required to comply with applicable access and circulation requirements of the County Improvement Standards (2018). Additionally, during construction activities, heavy truck vehicles, such as haul trucks or flatbed trailers, would access the project site via Watt Avenue. No public roads would be closed during project construction.

Environmental Issue Would the project:	Significance	Discussion
c. Result in a substantial adverse impact to public safety on area roadways?	Less Than Significant	As discussed above, the project would be required to comply with applicable access and circulation requirements of the County Improvement Standards (2018). No unusual angles or other hazardous design elements would exist in the proposed circulation and access that would adversely impact public safety on area roadways.
d. Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	Less Than Significant	The project would include a new pedestrian pathway system that would provide access throughout Sierra Creek Park. The project would not change the availability of any transit service, nor would it interrupt service during construction NHRPD would coordinate with the Sacramento Regional Transit District prior to construction to ensure there is no disruption to the bus stop of Watt Avenue, near the proposed parking area. The project could add a minimal amount of pedestrian and bicycle traffic on roadways in the immediate vicinity and on streets leading to the project site. However, construction and operation of the project would not conflict with adopted policies, plans, or programs supporting alternative transportation.

Table IS-9.8 Initial Study Checklist – Air Quality

Environmental Issue Would the project:	Significance	Discussion
a. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard?	Less Than Significant w/Mitigation	The California Emissions Estimator Model (CalEEMod) was used to analyze criteria air pollutant and ozone precursor emissions. The project would not result in emissions that exceed the SMAQMD-recommended construction or operational thresholds of significance, which were set with consideration of attaining and maintaining air quality standards for the region. Mitigation is identified to ensure compliance with the SMAQMD required Basic Construction Emission Control Practices, and thereby ensure that construction air quality impacts are less than significant. See <i>Air Quality</i> section above.

Environmental Issue Would the project:	Significance	Discussion
b. Expose sensitive receptors to pollutant concentrations in excess of standards?	Less Than Significant	See response to 8a. In addition, project operations would not include substantial sources of toxic air contaminants. Project construction would include sources of diesel particulate matter; however, these emissions would be short-term, distributed throughout the project site, and would disperse rapidly with distance. Sensitive receptors would not be exposed to substantial pollutant concentrations. See <i>Air Quality</i> section above.
c. Create objectionable odors affecting a substantial number of people?	Less Than Significant	The project would not generate objectionable odors.

Table IS-9.9 Initial Study Checklist – Noise

Environmental Issue Would the project:	Significance	Discussion
a. Result in generation of a temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established by the local general plan, noise ordinance or applicable standards of other agencies?	Less Than Significant	Project construction would result in a temporary increase in ambient noise levels in the project vicinity. This impact is less than significant due to the temporary nature of these activities, limits on the duration of noise, and evening and nighttime restrictions imposed by the County Noise Ordinance (Chapter 6.68 of the County Code). The project, when completed, would not generate substantial noise in excess of applicable standards. See <i>Noise</i> section above.
b. Result in a substantial temporary increase in ambient noise levels in the project vicinity?	Less Than Significant w/Mitigation	Project construction would result in a temporary increase in ambient noise levels in the project vicinity. This impact would be less than significant with mitigation measures. See <i>Noise</i> section above.
c. Generate excessive groundborne vibration or groundborne noise levels.	Less Than Significant	The project would not involve the use of pile driving or other methods that would produce excessive groundborne vibration or noise levels at the property boundary. See <i>Noise</i> section above.

Table IS-9.10 Initial Study Checklist – Hydrology and Water Quality

Environmental Issue Would the project:	Significance	Discussion
a. Substantially deplete groundwater supplies or substantially interfere with groundwater recharge?	Less Than Significant	There are no on-site groundwater wells and no new wells are proposed as part of the project that would affect groundwater recharge. The U.S. Natural Resources Conservation Service (NRCS) soil survey data specifies that majority of the project site consists of a soil that is classified as hydrologic group D, which indicates a very slow infiltration rate when thoroughly wet and very low amounts of recharge occur from irrigation and stormwater runoff (NRCS 2020). As such, soil conditions on the project site have a very slow infiltration rate and limit groundwater recharge.
b. Substantially alter the existing drainage pattern of the project area and/or increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?	Less Than Significant	The project includes the addition of a new surface parking lot and concrete walkways throughout the park, which would result in minor increases in the amount of impervious surfaces. Proposed landscaped areas and turf or non-irrigated hydroseeded areas would provide infiltration of stormwater and reduce the volume of stormwater flowing off-site. In addition, the project is anticipated to connect to existing stormwater infrastructure off-site. Therefore, the project would not substantially alter the existing drainage pattern or substantially increase the potential for on-site and off-site flooding by increasing the amount of surface runoff through minor additions of impervious surfaces. The project would be constructed in compliance with the Regional Stormwater Quality Design Manual.
c. Develop within a 100-year floodplain as mapped on a federal Flood Insurance Rate Map or within a local flood hazard area?	Less Than Significant	The project site is not within a 100-year flood zone. However, the project site is located within a local flood hazard area. See <i>Hydrology and Water Quality</i> section above.
d. Place structures that would impede or redirect flood flows within a 100-year floodplain?	No Impact	See Response 10c.
e. Develop in an area that is subject to 200 year urban levels of flood protection (ULOP)?	No Impact	The project site is not located in a flood hazard zone as mapped by FEMA (FEMA 2020). Therefore, the project is not located in an area subject to 200-year urban levels of flood protection (ULOP) (Sacramento County 2017a).
f. Expose people or structures to a substantial risk of loss, injury or death involving flooding, including flooding as a result of the failure of	No Impact	The project site is not within an area protected by levees. However, the project site is located within the Folsom Dam failure flood area (Sacramento County 2017b). See <i>Hydrology and Water Quality</i>

Environmental Issue Would the project:	Significance	Discussion
a levee or dam?		section above.
g. Create or contribute runoff that would exceed the capacity of existing or planned stormwater drainage systems?	Less Than Significant	It is anticipated the project would connect to existing stormwater infrastructure in the adjacent roadway. Any storm drainage improvements at the project site would be developed in compliance with Sacramento County Improvement Standards (2018). The project would result in a minor increase in the amount of impervious surfaces, but would not substantially increase the rate or amount of surface runoff such that the capacity of the existing drainage system would be exceeded or provide substantial additional sources of polluted runoff. In addition, the proposed landscaped areas and turf or non-irrigated hydroseeded areas would provide infiltration of stormwater and further reduce the volume of stormwater flowing off-site.
h. Create substantial sources of polluted runoff or otherwise substantially degrade ground or surface water quality?	Less Than Significant	The project would not create substantial sources of polluted runoff or otherwise substantially degrade ground or surface water quality. See <i>Hydrology and Water Quality</i> section above.

Table IS-9.11 Initial Study Checklist – Geology and Soils

Environmental Issue Would the project:	Significance	Discussion
a. Directly or indirectly cause potential substantial adverse effects, including 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?	Less Than Significant	The project site is located outside the Alquist-Priolo Earthquake Fault Zone and no known major active faults are present in the project site (DOC 2020). The project would be required to follow the seismic standards of the most recent version of the California Building Code (CBC) and project-related facilities would be designed and constructed in accordance with standard engineering practices and the Sacramento County Improvement Standards (2018). Therefore, project construction or operation would not directly or indirectly cause potential substantial adverse effects because of fault rupture.

Environmental Issue Would the project:	Significance	Discussion
b. Result in substantial soil erosion, siltation or loss of topsoil?	Less Than Significant	Necessary earthmoving activities, such as grading, at the project site would have the potential to cause soil erosion. As discussed in Response 10h, if more than 1 acre of land is disturbed, the project would be required to develop a SWPPP and implement BMPs to minimize erosion and topsoil loss. Additionally, if applicable, the project would be required to comply with Sacramento County's Land Grading and Erosion Control Ordinance (Chapter 16.44 of the Sacramento County Code), which includes specific standards for project construction related to erosion control. Therefore, compliance with existing regulations would reduce the potential for substantial soil erosion, siltation, or loss of topsoil.
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, soil expansion, liquefaction or collapse?	Less Than Significant	Majority of the project site is located on Fiddymont fine sandy loam. The project site is not on or near any known landslide hazard areas and is not anticipated to be subject to landslide due to the topography sloping slightly (USGS 2020). The project would be required to be designed in accordance with the most recent version of the CBC, Sacramento County Improvement Standards (2018), and standard engineering requirements which would incorporate specific recommendations for construction on unstable soils (where necessary), and would ensure that the proposed improvements are designed appropriately based on site-specific conditions.
d. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available?	No Impact	The project would not include any septic tanks or alternative wastewater disposal. New wastewater utilities would connect to existing off-site utility infrastructure.
e. Result in a substantial loss of an important mineral resource?	No Impact	The project would not be in an area known to contain significant mineral resources and is not located within an Aggregate Resource Area as identified by the Sacramento County General Plan Land Use Diagram (Sacramento County 2017). Therefore, the project would not result in the loss of availability of a known mineral resource of value to the region or state.
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	Less Than Significant w/Mitigation	Project-related construction activities could result in accidental damage to or destruction of unique paleontological resources. Mitigation is identified to include procedures for inadvertent discovery of paleontological resources, thereby reducing impacts to less than significant. See <i>Geology and Soils</i> section above.

Table IS-9.12 Initial Study Checklist – Biological Resources

Environmental Issue Would the project:	Significance	Discussion
a. Have a substantial adverse effect on any special status species, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, or threaten to eliminate a plant or animal community?	Less Than Significant w/Mitigation	The only special-status species known to be present in the project area is Sanford's arrowhead (<i>Sagittaria sanfordii</i>), and CRPR List 1B.2 plant, observed growing in the center channel of Sierra Creek during the biological survey on 13 August 2020. The project site contains suitable habitat for four species of special status wildlife, including one reptile (western pond turtle [<i>Emys marmorata</i>]), one bird (Cooper's hawk [<i>Accipiter cooperii</i>]) and two bats (western red bat [<i>Lasiurus blossevillii</i>] and hoary bat [<i>L. cinereus</i>]). In addition, the project site provides suitable habitat for nesting migratory birds protected by the Federal Migratory Bird Treaty Act. Implementation of Mitigation Measures C through E would avoid and minimize potential impacts on special-status species.
b. Have a substantial adverse effect on riparian habitat or other sensitive natural communities?	No Impact	No riparian habitat or sensitive natural communities are present within the project site.
c. Have a substantial adverse effect on streams, wetlands, or other surface waters that are protected by federal, state, or local regulations and policies?	Less Than Significant w/Mitigation	The Sierra Creek channel is the only aquatic feature present in the project site. This feature is considered a potentially jurisdictional feature pursuant to Section 404 of the Clean Water Act. No in-water work is proposed. If the design of pedestrian bridge crossings over Sierra Creek alters the banks of Sierra Creek, consultation with CDFW under Fish and Game Code Section 1600 would be required. Indirect impacts to waters would be mitigated through implementation of measures to protect Sierra Creek water quality as described in the <i>Hydrology and Water Quality</i> section. Implementation of Mitigation Measure F would reduce project impacts on Sierra Creek banks by implementing BMPs and other measures specified in the District's Lake and Streambed Alteration Agreement.
d. Have a substantial adverse effect on the movement of any native resident or migratory fish or wildlife species?	Less Than Significant	With the limited extent of new infrastructure in an already developed and disturbed setting, a lack of new barriers to wildlife movement corridors that would impede wildlife movement, and the availability of large expanses of suitable habitat in the nearby Dry Creek riparian corridor, the project would not have a substantial adverse effect on movement of any native resident or migratory fish or wildlife species.

Environmental Issue Would the project:	Significance	Discussion
e. Adversely affect or result in the removal of native or landmark trees?	Less Than Significant w/Mitigation	Only one native tree (Oregon ash [<i>Fraxinus latifolia</i>]) may be removed by the project. Another 8 nonnative landscape trees may also require removal to allow for construction of a park fence or wall along Watt Avenue, and installation of pathways. Another 12 trees may need to be trimmed, including one native valley oak (<i>Quercus lobata</i>). Implementation of Mitigation Measure G requires a Tree Permit and on-site compensatory mitigation, thereby reducing any adverse effects to native or landmark trees to less than significant.
f. Conflict with any local policies or ordinances protecting biological resources?	No Impact	Section 19.12.180 of Sacramento County Code and the Conservation Element of the Sacramento County General Plan require mitigation for impacts to native and urban trees. Implementation of Mitigation Measure G requires a Tree Permit from the County of Sacramento and on-site replacement of trees, if any existing trees require removal. The project would not conflict with local policies or ordinances protecting biological resources.
g. Conflict with the provisions of an adopted Habitat Conservation Plan or other approved local, regional, state or federal plan for the conservation of habitat?	No Impact	The project site does not overlap or conflict with an adopted Habitat Conservation Plan or other approved local, regional, state or federal plan for the conservation of habitat. Nearby regional conservation plans include the Natomas Basin Habitat Conservation Plan (HCP) and South Sacramento HCP. The plan area boundaries for these two regional HCPs are located 5.5 miles to the southwest and 10 miles to the south, respectively, of the project site. Therefore, the project is not subject to and would not conflict with the provisions of either conservation plan.

Table IS-9.13 Initial Study Checklist – Cultural Resources

Environmental Issue Would the project:	Significance	Discussion
a. Cause a substantial adverse change in the significance of a historical resource?	Less Than Significant	No historical resources would be affected by the project. See <i>Cultural Resources</i> section above.
b. Have a substantial adverse effect on an archaeological resource?	Less Than Significant w/Mitigation	An archaeological survey was conducted on the project site. No known archaeological resources would be affected by the project. Refer to the Cultural Resources Report. See <i>Cultural Resources</i> section above.
c. Disturb any human remains, including those interred outside of formal cemeteries?	Less Than Significant w/Mitigation	No known human remains exist on the project site. Nonetheless, mitigation has been recommended to ensure appropriate treatment should remains be uncovered during project implementation. See <i>Cultural Resources</i> section above.
d. Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code 21074?	Less Than Significant w/Mitigation	Based on the negative results of the NAHC Sacred Lands Files search, combined with the negative NCIC search results, the project would not result in a substantial adverse change in the significance of a tribal cultural resource. See <i>Tribal Cultural Resources</i> section above.

Table IS-9.14 Initial Study Checklist – Hazards and Hazardous Materials

Environmental Issue Would the project:	Significance	Discussion
a. Create a substantial hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	Less Than Significant	Transportation of hazardous materials on roadways is regulated by the California Highway Patrol (CHP) and the California Department of Transportation (Caltrans), and the use of these materials is regulated by California Department of Toxic Substances Control (DTSC), as outlined in California Code of Regulations (CCR) Title 22. NHRPD and its contractors would be required to use, store, and transport hazardous materials in compliance with applicable federal, State, and local laws, including California Division of Occupational Safety and Health (Cal/OSHA) requirements during construction and operation.

Environmental Issue Would the project:	Significance	Discussion
b. Expose the public or the environment to a substantial hazard through reasonably foreseeable upset conditions involving the release of hazardous materials?	Less Than Significant	Construction and operation of the project could entail the use of small amounts of hazardous materials such as fuel, oils, paints, and solvents. The handling, use, and disposal of hazardous materials during construction would occur in compliance with applicable federal, State, and local laws, including Cal/OSHA requirements. Additionally, if the project would disturb more than 1 acre of land, the NHRPD would be required under the statewide NPDES General Permit through the SWRCB to develop and implement a SWPPP with appropriate BMPs, such as spill prevention and contingency measures to reduce the potential for accidental spills and procedures for implementation of appropriate and timely cleanup activities if spills do occur.
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances or waste within one-quarter mile of an existing or proposed school?	Less Than Significant	The project site is located adjacent to Cyril Spinelli Elementary School and Spinelli Child Development Center. Minor amounts of hazardous materials such as fuel, oils, paints, and solvents could be used during construction activities, and could also be stored on-site during the project's operational phase. As discussed above, NHRPD and contractors would be required to handle, use, and dispose of hazardous materials in occur in compliance with applicable federal, State, and local laws.
d. Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, resulting in a substantial hazard to the public or the environment?	No Impact	The project site is not included on the list of hazardous waste sites (Cortese List), compiled by DTSC pursuant to Government Code Section 65962.5 (CalEPA 2020a, 2020b; DTSC 2020; SWRCB 2020). Therefore, the project would not create a significant hazard to the public or environment.
e. Impair implementation of or physically interfere with an adopted emergency response or emergency evacuation plan?	No Impact	The project would not change the existing emergency access and would comply with existing State and County fire codes. The relatively limited amount of proposed on-site improvements and associated construction would result in only minor increases in short-term, construction-related traffic on local roadways. Additionally, no public roads would be closed during project construction. Therefore, the project would not impede or conflict with any adopted emergency response or evacuation plans.

Environmental Issue Would the project:	Significance	Discussion
f. Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to or intermixed with urbanized areas?	No Impact	The project site is in an urbanized area and is not in a State Responsibility Area or Very High Fire Hazard Severity Zone. California Department of Forestry and Fire Protection (CAL FIRE) identifies the project site as a Non-Very High Fire Hazard Severity Zone (CAL FIRE 2007; 2008). Therefore, the project would not expose people or structures to a substantial risk of loss, injury, or death involving wildland fires.

Table IS-9.15 Initial Study Checklist – Wildfire

Environmental Issue Would the project:	Significance	Discussion
a. Substantially impair an adopted emergency response plan or emergency evacuation plan?	No Impact	The project site is in an urbanized area and is not in or near a State Responsibility Area, or an area classified as a Very High Fire Hazard Severity Zone, and it is more than 1.5 miles from the nearest such area or zone (CAL FIRE 2007; 2008). Additionally, the project would not alter or impair any existing roadway network. Therefore, the project would not impair an adopted emergency response plan or emergency evacuation plan.
b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	No Impact	The project site is located in a developed area designated as a Non-Hazard Fire Hazard Severity Zone. Therefore, construction and operation of the project would not exacerbate wildfire risks.
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 risk or that may result in temporary or ongoing impacts to the environment?	No Impact	See response to item b. above. The project would not install or maintain infrastructure that could exacerbate fire risks within a State Responsibility Area or Very High Fire Hazard Severity Zone.
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?	No Impact	See response to item b. above. The project would not expose people or structures to significant risks from downstream flooding, landslides, slope instability or drainage changes.

Table IS-9.16 Initial Study Checklist – Energy

Environmental Issue Would the project:	Significance	Discussion
a. Result in potentially significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction?	Less Than Significant	The primary energy demands during construction would be associated with construction equipment and vehicle fueling. Construction equipment and vehicles would be required to comply with federal, State, and local standards and regulations, including the Sacramento Metropolitan Air Quality Management District (SMAQMD) standards that are aimed at reducing air pollution, including minimizing idling and ensuring proper maintenance, that would minimize the wasteful consumption of energy resources during construction. The construction duration is unknown at this time, however energy use during construction would be temporary and short-term. No additional energy use would be necessary during operation beyond the minor increases in energy from the new restroom building and proposed lighting. Adverse physical environmental effects associated with energy use during construction and operations are reported in the air quality and greenhouse gas emissions section of this document. Therefore, energy use during construction and operation would not result in wasteful, inefficient, or unnecessary consumption of energy resources.
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	Less Than Significant	There is no relevant energy efficiency plan with which the project would conflict with that could lead to adverse physical effects. The project would be subject to the energy conservation standards and building regulations as required by Title 24, including the 2019 California Green Building Standards Code.

Table IS-9.17 Initial Study Checklist – Greenhouse Gas Emissions

Environmental Issue Would the project:	Significance	Discussion
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Less Than Significant	The California Emissions Estimator Model (CalEEMod) was used to estimate the greenhouse gas emissions associated with the project. Based on the results, the project would not exceed applicable thresholds of significance established to ensure consistency with State GHG reduction targets. See <i>Greenhouse Gas Emissions</i> section above.

SUPPLEMENTAL INFORMATION**Table IS-10 Supplemental Information**

Land Use Consistency	Current Land Use Designation	Consistent/ Not Consistent	Comments
General Plan	Recreation	Consistent	NA
Community Plan (Antelope)	Recreation	Consistent	NA
Land Use Zone	O-Recreation	Consistent	NA

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INITIAL STUDY PREPARERS

SACRAMENTO COUNTY

Senior Environmental Analyst: Marianne Biner

NORTH HIGHLANDS RECREATION AND PARK DISTRICT

District Administrator: Larry Mazzuca

AECOM

Project Manager: Matthew Gerken

Senior Biologist: Susan Sanders

Senior Archaeologist: Richard Deis

Environmental Planner: Emily Biro

Air Quality and Greenhouse Gas Emissions Specialist: Suzanne McFerran

Archaeologist: Diana Ewing

Architectural Historian: Chandra Miller

Biologist: Jasmine Wurlitzer

Noise Analyst: Issa Mahmodi