DRAFT Initial Study & Mitigated Negative Declaration

Carmichael Water District

Winding Way Aquifer Storage and Recovery Well Project

Prepared By:

Carmichael Water District

September 2023

CARMICHAEL WATER DISTRICT

Serving the Community of Carmichael, California Since 1916

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Abbreviations and Acronyms

µg/m 3	micrograms per cubic meter
Aerojet	Aerojet Rocketdyne, Inc.
APN	Accessor Parcel Number
AFY	acre-feet per year
ASR	Aquifer storage and recovery
Bgs	below ground surface
BMP	Best Management Practices
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CalFire	California Department of Forestry and Fire Protection
CalOSHA	California Occupational Safety and Health Administration
CAP	Climate Action Plan
Caltrans	California Department of Transportation
CARB	California Air Resource Boards
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	Californai Environmental Quality Act
CGS	California Geologic Survey
CWD	Carmichael Water District
CO	carbon monoxide
County	Sacramento County
dB	decibels
dBA	A-weighted decibels
DOC	California Department of Conservation
DOF	Department of Finance
DTSC	Department of Toxic Substance Control
EIR	Environmental Impact Report
EPA	U.S. Environmental Protection Agency
FEMA	Federal Emergency Management Act
FMMP	Farmland Mapping and Monitoring Program
GEI	GEI Consultants, Inc.
GET	groundwater extraction and treatment

GET L-A	Bajamont Groundwater Treatment Facility
GHG	greenhouse gas
Gpm	gallons per minute
HCP	Habitat Conservation Plans
IS/MND	Initial Study/Mitigated Negative Declaration
KWh	kilowatts per hour
Leq	equivalent continuous sound level in decibels
MT CO2e	metric tons of carbon dioxide equivalents
NAAQS	National Ambient Air Quality Standards
NCCP	Natural Community Conservation Plans
NCIC	North Central Information Center
NDMA	N-Nitrosodimethylamin
NO_2	nitrogen dioxide
NPDES	National Pollutant Discharge Elimination System
PM_{10}	particulate matter less than 10 microns in diameter
$PM_{2.5}$	particulate matter less than 2.5 microns in diameter
Ppm	parts per million
PRC	Public Resources Code
proposed project/ project	Winding Way Aquifer Storage and Recovery Well Project
RPA	registered professional archaeologist
RWA	Regional Water Authority's
RWQCB	Regional Water Quality Control Board
SGA	Sacramento Groundwater Authority's
SJUSD	San Juan Unified School District
SMARA	Surface Mining and Reclamation Act of 1975
SMAQMD	Sacramento Metropolitan Air Quality Management District
SMUD	Sacramento Municipal Utility District
SO_2	sulfur dioxide
SRCSD	Sacramento Regional County Sanitation and Sacramento Area Sewer Districts
Subbasin	North American Subbasin
SVAB	Sacramento Valley Air Basin
SWRCB	State Water Resource Control Board
TDS	Total disolved solids
USGS	United States Geological Survey

UV	Ultra-violet

1.0 Introduction

The Carmichael Water District (CWD) has prepared this Draft Initial Study/Mitigated Negative Declaration (IS/MND) in compliance with the California Environmental Quality Act (CEQA) and the State CEQA Guidelines to address the potentially significant environmental impacts of the proposed Winding Way Aquifer Storage and Recovery Well Project (proposed project or project) in Carmichael, California. The CWD is the lead agency under CEQA.

To satisfy specific CEQA requirements for the proposed project, this document includes:

- an Initial Study,
- a proposed MND, and
- a Notice of Availability and intent to adopt an MND for the proposed project.

After the required public review of this document is complete, the CWD Board of Directors will consider all comments received on the IS/MND, the entirety of the administrative record for the project, and whether to adopt the proposed MND and a Mitigation Monitoring and Reporting Program and approve the proposed project.

1.1 Purpose of Initial Study

This document is a Draft IS/MND prepared in accordance with CEQA (California Public Resources Code, Section 21000 et seq.) and the State CEQA Guidelines (Title 14, Section 15000 et seq. of the California Code of Regulations [CCR]). The purpose of this IS is to (1) determine whether proposed project implementation would result in potentially significant or significant impacts on the physical environment; and (2) incorporate mitigation measures into the proposed project design, as necessary, to eliminate the proposed project's potentially significant or significant project impacts or reduce them to a less-than-significant level. An MND is prepared if the IS identified potentially significant impacts, but: (1) revisions in the proposed project plans or proposals mitigate the impacts to a point where clearly no significant impacts would occur; and (2) there is no substantial evidence, in light of the whole record before the agency, that the proposed project as revised may have a potentially significant or significant impact on the physical environment.

An IS presents environmental analysis and substantial evidence in support of its conclusions regarding the significance of environmental impacts. Substantial evidence may include expert opinion based on facts, technical studies, or reasonable assumptions based on facts. An IS is neither intended nor required to include the level of detail provided in an environmental impact report (EIR).

CEQA requires that all State and local government agencies consider the potentially significant and significant environmental impacts of projects they propose to carry out or over which they have discretionary authority, before implementing or approving those projects. The public agency that has the principal responsibility for carrying out or approving a proposed project is the lead

agency for CEQA compliance (State CEQA Guidelines, CCR Section 15367). The CWD has principal responsibility for carrying out the proposed project and is therefore the CEQA lead agency for this IS/MND.

If there is substantial evidence (such as the findings of an IS) that a proposed project, either individually or cumulatively, may have a significant or potentially significant impact on the physical environment, the lead agency must prepare an EIR (State CEQA Guidelines, CCR Section 15064[a]). If the IS concludes that impacts would be less-than-significant, or that mitigation measures committed to by the CWD would clearly reduce impacts to a less-than-significant level, a Negative Declaration or MND can be prepared.

The CWD has prepared this IS to evaluate the potential environmental impacts of the proposed project and has incorporated mitigation measures to reduce or eliminate any potentially significant project-related impacts. Therefore, an MND has been prepared for this project.

1.2 Summary of Findings

Chapter 4 of this document contains the analysis and discussion of potential environmental impacts of the proposed project. Based on the issues evaluated in that chapter, it was determined that:

The proposed project would result in no impacts on the following issue areas:

- Agriculture
- Land Use and Planning
- Mineral Resources
- Public Services
- Wildlife

The proposed project would result in less-than-significant impacts on the following issue areas:

- Aesthetics
- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Population and Housing
- Recreation
- Transportation
- Utilities and Service Systems

The proposed project would result in less-than-significant impacts *after* mitigation implementation on the following issue areas:

- Air Quality
- Biological Resources
- Cultural Resources
- Hazards and Hazardous Waste
- Hydrology and Water Quality
- Noise
- Tribal Cultural Resources

1.3 Other Key Public Agencies Relying on this IS/MND

CEQA requires that State and local governmental agencies consider the environmental effects of projects over which they have discretionary authority before taking action on those projects (Public Resources Code [PRC] Section 21000 et seq.). CEQA also requires that each lead agency avoid or mitigate to less-than-significant levels, wherever feasible, the significant environmental effects of projects it approves or implements.

1.4 Document Organization

This entire document is divided into the following three key sections required under CEQA:

Proposed Mitigated Negative Declaration. The MND, which precedes the presentation of the IS analysis in this document, briefly summarizes the proposed project, summarizes the environmental conclusions, and identifies mitigation measures that would be implemented in conjunction with the proposed project.

Initial Study. The IS constitutes the remaining portion of this document and provides an introduction, project description, environmental checklist, references cited, report preparers, and distribution list, as briefly summarized below:

Chapter 1, "Introduction." This chapter describes the purpose of the IS/MND, summarizes findings, and describes the organization of this IS/MND.

Chapter 2, "Response to Comments." This chapter includes all comments received during the public comment period as well as all of SWID's response to comments.

Chapter 3, "Project Description." This chapter describes the project location and background, project need and objectives, project characteristics, construction activities, project operations, and discretionary actions and approvals that may be required.

Chapter 4, "Environmental Checklist." This chapter presents an analysis of environmental issues identified in the CEQA environmental checklist and determines whether project implementation would result in a beneficial impact, no impact, less-than-significant impact, less-than-significant impact with mitigation incorporated, potentially significant impact, or significant impact on the physical environment in each topic area. Should any impacts be determined to be potentially significant or significant, an EIR would be required. For this proposed project, however, mitigation measures have been incorporated as needed to reduce all potentially significant and significant impacts to a less-than-significant level.

Chapter 5 , "References Cited." This chapter lists the references used to prepare this IS/MND.

Chapter 5, "Report Preparers." This chapter identifies report preparers who contributed to the preparation of this document.

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2.0 Comments and Responses

This Draft IS/MND for the proposed project will be circulated for a 30-day public review period (September 29, 2023 to October 30, 2023). During the public comment period, CWD will record comment letters from the public in **Table 2-1**.

Table 2-1. List of Commenters

Letter Number	Name

2.1 Response to Comments

CWD's response to comment will be provided on the following pages in the proposed Final Initial Study / Mitigated Negative Declaration following the 30-day review period.

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3.0 Project Description

This chapter describes the proposed project. The project location and policy framework are described along with existing conditions, project objectives, project activities, project operations, and discretionally actions and approvals that may be required.

3.1 Project Location

The CWD is located in the North American Subbasin (Subbasin) within the Sacramento Valley Groundwater Basin. The proposed project is located within the CWD at 4513 Charleston Way , Carmichael, California, with Assessor's Parcel Number (APN) 247-0010-005. The project location is adjacent to O'Donnell Heritage Park, as shown in **Figure 3-1**.

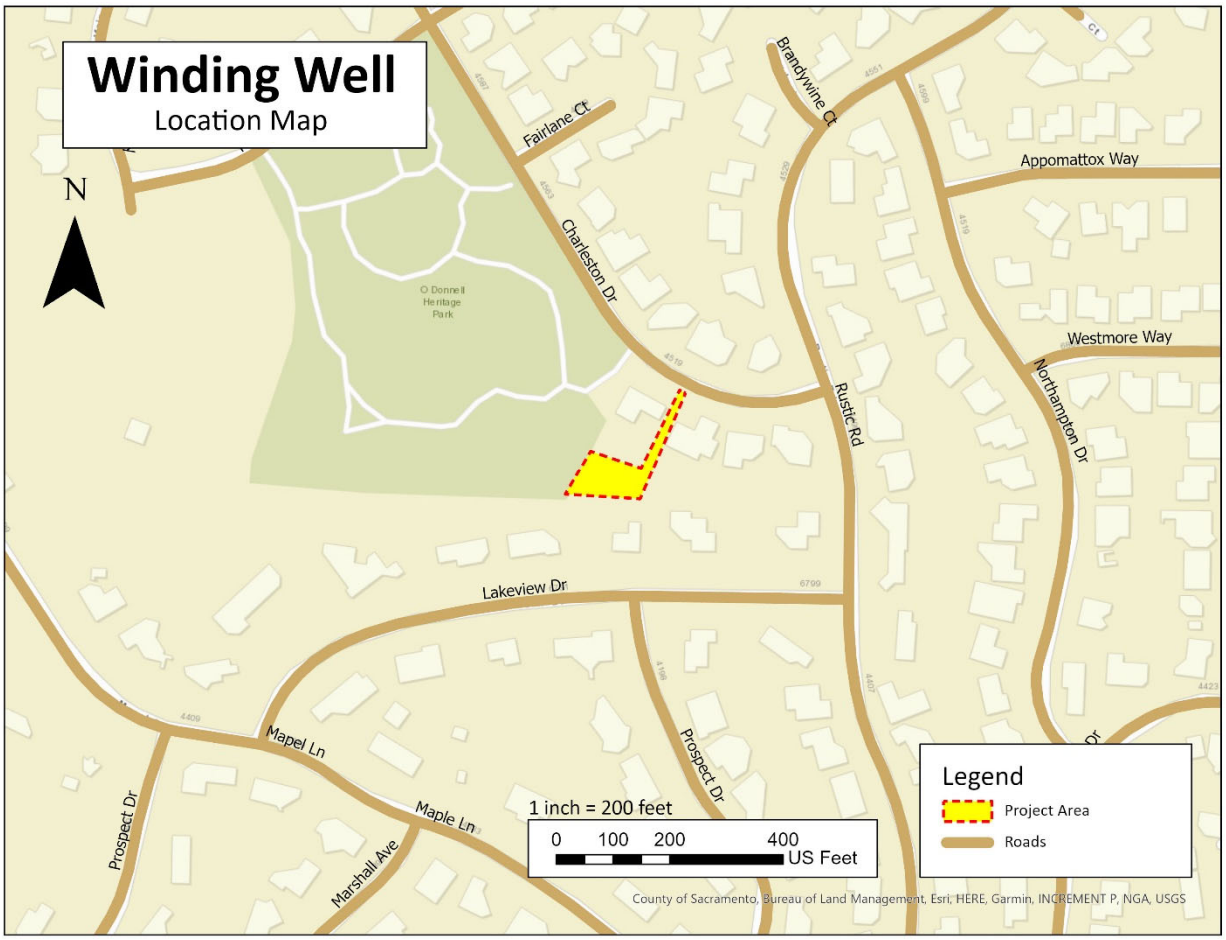

Figure 3-1. Project Location Map

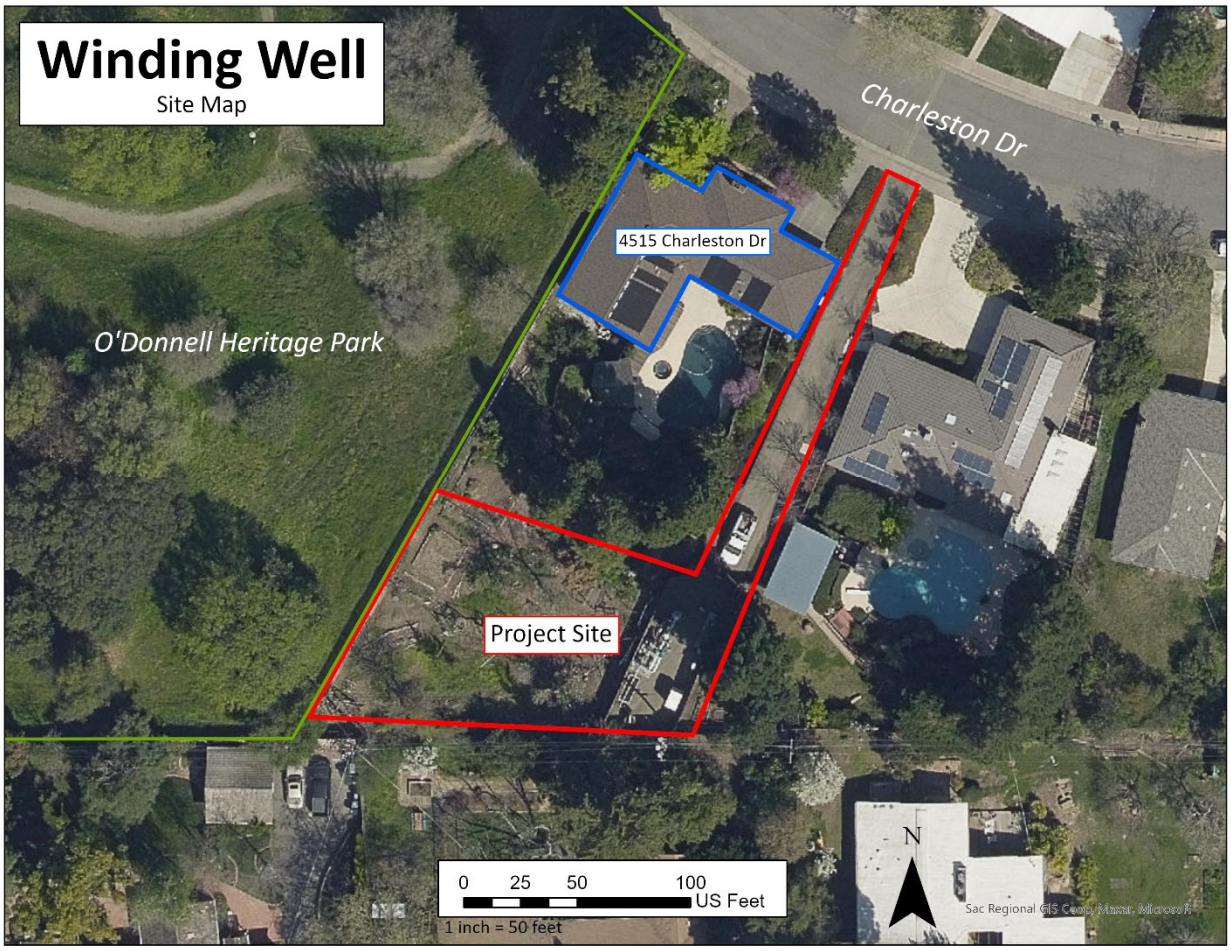

Figure 3-2. Project Site Map

3.2 Policy Framework

The proposed project is consistent with and implements the CWD's responsibilities and obligations under the Sacramento Water Forum Agreement (April 2000, updated October 2015), the Regional Water Authority's (RWA) American River Basin Integrated Regional Water Management Plan (June 2006, updated 2013), and the Sacramento Groundwater Authority's (SGA) Groundwater Management Plan (December 2008, revised December 2014). The facilities constructed under the proposed project would directly serve to operate and maintain the groundwater in the North American Subbasin for use in drought years through conjunctive use, and water efficiency/conservation programs as provided by the regional water plans cited above.

The CWD is participating in the conjunctive management of the Subbasin through the RWA and the SGA. In 2019, the RWA obtained Proposition 1 grant funding to implement a conjunctive use program under their Integrated Regional Water Management Program. This program will use the region's surface water when it is abundant, thus allowing the groundwater aquifers to recharge. During dry to critically dry years, the member agencies will use groundwater to meet their demands, allowing surface water to be used to meet other needs. Implementing this conjunctive management program requires the construction of infrastructure to provide water supply flexibility and redundancy in the distribution systems. Historically, the CWD relied on surface water to meet

their needs, with their groundwater wells being used for main system pressure in localized areas. The CWD's participation in the groundwater conjunctive use program requires construction of new groundwater wells to firm up their water supply. Part of the conjunctive use program would also allow the Winding Way ASR well to be used for ASR where treated surface water could be injected into the aquifers during times of abundant surface water and then later extracted during dry years when surface water supplies may not be adequate, such as in 2015. The Winding Way ASR well is estimated to produce about 1,500 gallons per minute (gpm) and have recharge capacity of approximately 750 gpm.

3.3 Existing Conditions

The project site is located in a residential neighborhood and consists a small grass lot with sparse vegetation. Single Family homes surround the site. (*see* **Appendix A** for site photos). The project site would be accessed via Charleston Way as depicted in Figure 3-1.

3.4 Project Objectives

The proposed project consists of the construction and operation of a new ASR well within the service area of the CWD. The proposed project is intended to provide the CWD directly, and the region indirectly, with additional water resources for typical municipal and industrial uses, or other purposes as determined by the CWD to:

- Supplement surface water entitlements in the event of a long- or short-term drought or surface water curtailment.
- Promote conjunctive use of both the American River surface water and the groundwater of the Subbasin within the Sacramento Valley Groundwater Basin.
- Enhance the reliability and redundancy of water supplies that are available to serve the CWD customers.
- Serve as a source of water supply in the event of a water infrastructure or water supply emergency.

3.5 Proposed Project

The proposed project includes construction of a new water supply well with ASR capacity. The Winding Way ASR well would produce up to 1,500 gpm and have a recharge capacity of up to 750 gpm. The project would include associated aboveground improvements, including a fenced perimeter, site paving, installation of a pedestal to rest the motor on, installation of a pump, and constructing a small (8- by 12-foot) prefabricated building to house the hypochlorite disinfecting solution and associated equipment, a pad to rest electrical equipment and instrumentation controls cabinet and a small shade structure to protect it.

A new ASR well will greatly enhance the CWD conjunctive use objectives, allowing the CWD to bank water during normal and wet years and utilize the banked water during drought periods, reducing the demand on the stressed American River up to 1,200 acre-feet per year (AFY) when operated during the peak demand season of May through October. The CWD currently operates four groundwater wells in addition to its American River supply for peak demand. The wells

typically include belowground (well components) and aboveground (top side) improvements. The new well will have the same improvements.

During well construction, all construction activities would implement stormwater pollution prevention Best Management Practices (BMP) designed to reduce potential impacts to water quality during construction of the project and in accordance with the guidelines of the Sacramento Stormwater Management Program as follows:

- Complying with the requirements of the "General Permit for Stormwater Discharges Associated with Construction Activity",
- Preserving all existing vegetation on site where possible,
- Scheduling as much project work as possible during the dry season,
- Stabilizing the construction access route,
- Protecting storm drain inlets,
- Using other BMPs as necessary, including applying rainy season erosion controls, managing stockpiles, disposing of well development water properly, and correctly managing and disposing of construction wastes,
- Maintaining all BMPs, and
- Stabilizing the site after construction is complete.

3.6 Construction Activities

The construction of the well and pumping facilities are described below. Well construction will occur first by a drilling contractor followed by construction of the facilities.

3.6.1 Phase 1: Well Construction and Testing

Well construction would take place over a period of about 8 weeks with periods of inactivity of 3 to 7 days between activities. During three periods of approximately 5 to 10 days each, the work will proceed on a 24-hour-a-day basis. The remaining time periods operations will be between 7:00 AM to 5:30 PM (normal operating hours). All material deliveries (about 20 semi-trucks, including concrete) will be made during non-peak hour periods.

Temporary fencing and 16-foot-tall sound walls will be installed to protect the public from the work area. Temporary, downward-facing, lighting will also be established to light the work area during 24-hours work periods. Sanitary facilities (port-a-potty) will be brought onto site and cleaned as needed. Additionally, a site yard/staging area would be established, and a project trailer may be moved onto the construction site. Upon completion of the project, all the equipment and temporary facilities will be removed from the site. Water for the well drilling and construction operations would be obtained by installing temporary hoses to a nearby fire hydrant. Hazard warning barricades would be placed over the hose leading across any public access areas.

The mobilization of equipment and materials to the project site would occur over approximately a week period and would include a diesel-powered drill rig and approximately six semi-truck loads of support equipment. Twice per day, about 3 to 4 construction workers will arrive in one to two pickup trucks.

Construction of the water supply well will start with installing and sealing of a permanent conductor casing. A 48-inch-diameter hole will be drilled to a depth of 50 feet. A 36-inch-diameter steel well casing will be placed into the hole and surrounded by concrete to provide the primary sanitary protection of the well in accordance with State and County regulations. The work will be accomplished during normal operating hours.

An 18-inch pilot borehole beneath the conductor casing then would be drilled to a depth of up to 700 feet. After completion of the drilling geophysical logging will occur. This work is expected to take about 7 days to complete and will occur on a 24-hour-a-day basis, after which the drilling crew will likely take a few days off to rest. During this period the geophysical logs will be interpreted and intervals for isolation zone aquifer testing to collect water quality will be identified. The contractor will then return and complete this testing over the next 7 days, operating 24 hours per day. After this work is completed the drilling crew will again take a few days off to rest before the final well design is prepared.

Following completion of testing, the contractor will ream the borehole to 28 inches in diameter. Well casing and screen (up to 40-foot in length per section) will be delivered to the property and placed into the reamed borehole. The well will be constructed to a depth of 700 feet belowground surface (bgs) and draw groundwater through the well screens from intervals between 200 and 700 feet bgs. The lower portions of the well casing and screen will be surrounded with a gravel pack and the upper portions with concrete. Approximately six to eight diesel-powered semi-trucks will deliver the casing, screen, and gravel pack to the property. Concrete will be delivered to the site in two trips. The operating hours for drilling and well construction will be 24 hours per day for a period of about 7 days followed by a few days off to allow workers to rest. The CWD will provide alternate nighttime accommodations if needed to mitigate noise impacts during drilling.

After construction of the well, the well will be developed, to remove residual drilling fluids and maximize the production capacity of the aquifers and minimize the drawdown. Groundwater will be extracted from the well at rates of 500 to 2,000 gpm for short periods over a period of about 3 days where work will again continue 24 hours per day. The water will initially be discharged to the sanitary sewer and once clear to the storm drain system.

After construction and development are completed, there will be a period of 7 to 14 days where the drilling equipment will be removed from the site and a diesel motor driven test pump will be delivered and installed into the well. All equipment exchanges and short-term pumping will occur only between the hours of 7:00 AM and 5:30 PM.

After the test pump is installed, the well will be test pumped for short periods of time for about 4 days. This work will be accomplished between the hours of 7:00 AM and 5:30 PM.

A long-term test will be conducted when the well will be pumped continuously for a period of 24 hours. Water quality samples will be collected during this testing and analyzed to confirm that the water meets all drinking water standards.

After this work is completed the test pump will be removed from the well and final inspection will occur over a period of about 5 days. During this period work will only occur between the hours of 7:00 AM and 5:30 PM. The well construction portion of the work will be complete at this time.

Clear water produced during well development and pump testing will be conveyed by temporary piping laid within CWD's easement to existing storm drain or sanitary sewer. The water will be discharged under CWD's existing National Pollutant Discharge Elimination System (NPDES) permit for Drinking Water Systems. Development water containing solids, including sand and silts, would be contained in two settling tank(s) before being discharged into the storm drain. All other waters would be contained and disposed of off-site at an appropriate facility in compliance with State law.

Drill cuttings (approximately 70 cubic yards) will be generated during the drilling and the development process and will be disposed of at a landfill or reused at other District or developer site where clean-fill dirt is desired.

3.6.2 Phase 2: Aboveground Improvements

After the well has been drilled, the construction of above ground improvements would take place over a 3-to-6-month period. During this phase of work small excavators, asphalt paving equipment and small hand tools will be used. Concrete trucks will deliver 2 to 3 concrete batches to the site. The construction period the work will be limited to 7:00 AM to 5:30 PM. All deliveries will be made during non-peak hour periods.

Aboveground improvements include constructing chain link fencing to surround the facility, site paving, installation of above and below ground pipes to connect to the distribution system and storm drain system, installing a small (6- by 6-foot) concrete pedestal to rest the motor on, installing a pump, and constructing a small (8- by 12-foot) prefabricated building to house the hypochlorite disinfectant and equipment, a pad to rest electrical equipment and instrumentation controls cabinet and a small shade structure to protect it. Temporary lane closures me be required to connect the well to the distribution system piping. A one-lane flagger would be used, subject to Sacramento County Department of Transportation approval, during this time to facilitate the movement of vehicles.

Power for the motor/pump and facility will be from an existing power line along the eastern side of the property. An electrical service, including underground primary and secondary conduits and conductors from the transformer pad to the motor control center, would be installed to provide power for the pump and operation of associated machinery. SMUD has identified existing 12kV and 69kV overhead facilities near the area that must remain. The CWD will coordinate with SMUD on any impacts related to these and any other SMUD facilities during the detailed design period, prior to construction. Emergency power would be provided by a portable diesel or battery backup

generator system that would be brought to the site for testing in the event of a sustained power outage. The CWD will periodically test the generator to maintain it in good working order and/or to train CWD personnel in the operation of the generator.

3.6.3 Phase 3: Long-term Operations

CWD plans to use the well under three varying conditions: 1) during normal operations, 2) as part of the CWD conjunctive use program, and 3) for ASR purposes. Generally speaking, in California, ASR is the enhancement of natural groundwater supplies from a source of treated drinking water. The purpose of ASR is to increase underground water supplies by injecting water into an aquifer in times of abundant supply, and later extracting water when it is needed.

CWD plans to use the well under normal operations for about 7 days each month to extract groundwater for potable purposes. During drought conditions the well may be operated on a more continuous basis. The well will be turned on and off automatically based on public demand for water. CWD operators will visit the well at least once per week during these normal operations using a pickup truck to check well operations and as necessary bring additional hypochlorite to the site.

CWD, as part of the conjunctive use program, may use the Winding Way Ave ASR well, in conjunction with its other wells, to pump groundwater for 180 days (during the winter and spring months) to replace surface water supplies during dry years while during wet years surface water will be used and the wells will be idle. CWD operators will visit the well at least once per week during these conjunctive use operations using a pickup truck to check well operations and as necessary bring additional water disinfectant to the site.

CWD may elect to use the well for ASR purposes when surface water supplies are abundant and typically would occur during the winter months of each year or during above average precipitation years. Treated surface water, that meets all drinking water standards, will be injected into the well and stored in the aquifers until it is needed. CWD may purchase the treated surface water from San Juan Water District, U.S. Bureau of Reclamation, or other willing sellers to inject water into the aquifers. These water purveyors all obtain surface water from a common source, the American River watershed. CWD operators will visit the well at on a daily basis and then may lengthen the duration to least once per week during these ASR operations using a pickup truck to check well operations.

3.7 Regulatory Requirements, Permits, and Approval

As the lead agency under CEQA, the District has the principal responsibility for approving and carrying out the proposed project and for ensuring that CEQA requirements and all other applicable regulations are met. Other agencies that may have permitting approval or review authority over portions of the proposed project are listed below:

- Sacramento County Environmental Management Division, Well Permit (which includes approvals from the Regional Water Quality Control Board [RWQCB] and the Groundwater Sustainability Agency)

- State Water Resource Control Board (SWRCB) Statewide National Pollutant Discharge Elimination System (NPDES) for Drinking Water Systems (existing permit)
- Sacramento Regional County Sanitation District Temporary Discharge Permit
- Sacramento County Storm Water Permit and Under-an-Acre Stormwater Pollution Prevention Plan
- Sacramento County Tree Preservation and Protection ordinance (Chapter 19.12)

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4.0 Environmental Checklist

Project Information

1. Project title:	Winding Way Aquifer Storage and Recovery Well Project
2. Lead agency name and address:	Carmichael Water District
3. Contact person and phone number:	Greg Norris (916) 483-2452
4. Project location:	4500 Winding Way
5. Project sponsor's name and address:	Carmichael Water District 7837 Fair Oaks Boulevard Carmichael, CA 95608
6. General plan designation:	Low Density Residential
7. Zoning:	Residential (RD-2)
8. Description of project: (Describe the whole action involved, including but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheets if necessary.)	The project will consist of three phases: 1) construction of the well and testing 2) construction of above-ground improvements 3) long-term operation of the well for water supply.
9. Surrounding land uses and setting: Briefly describe the project's surroundings:	The property is bounded to the west by the O'Donell Heritage Park and by homes in all other directions. The predominate land use in the vicinity is RD-2.
10. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement.)	Sacramento County, RWQCB, Groundwater Sustainability Agency, and SWRCB.
11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code (PRC) Section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.? Note: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See PRC Section 21080.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per PRC Section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that PRC Section 21082.3(c) contains provisions specific to confidentiality.	Wilton Rancheria has requested consultation. A Tribal notification letter was sent out on 09/29/2023.

Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages. Mitigation measures are proposed for each of these resources, which will reduce impacts to the **less-than-significant** level.

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

Determination (to be completed by the Lead Agency)

On the basis of this initial evaluation:

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

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

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

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

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

Gregory R. Norris — 09/29/2023

Signature — Date

Greg Norris — Engineering Manager

Print Name — Title

Carmichael Water District

Agency

Evaluation of Environmental Impacts

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

2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts. Operations and maintenance impacts of the proposed project are routine, minimal, and essentially the same as current operations and maintenance of the existing facilities. There is no potential for a significant impact to any resource category from project operations and maintenance of the existing and proposed facilities.

3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less-than-significant with mitigation, or less-than-significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required. "Beneficial impact" is also identified where appropriate to provide full disclosure of any benefits from implementing the proposed project.

4) "Less-than-Significant Impact with Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less-than-Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less-than-significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).

5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration (Section 15063[c][3][D]). In this case, a brief discussion should identify the following:

   a) Earlier Analysis Used. Identify and state where they are available for review.

   b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

   c) Mitigation Measures. For effects that are a "Less-than-Significant Impact with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

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

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

9) The explanation of each issue should identify:

   a) the significance criteria or threshold, if any, used to evaluate each question; and

   b) the mitigation measure identified, if any, to reduce the impact to less-than-significance.

4.1 Aesthetics

	Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
I.	**AESTHETICS.** Except as provided in PRC Section 21099, **would the project:**					
a)	Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐	☐
b)	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?	☐	☐	☒	☒	☐
c)	In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☐	☒	☐
d)	Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☒	☐

4.1.1 Environmental Setting

The proposed project is located in the unincorporated community of Carmichael in Sacramento County on Charleston Drive near Winding Way. The project site resides in a low-density residential neighborhood characterized by single-family and multi-family development (Sacramento County 2021a). The project site is a single parcel (APN 247-0010-005) which is part of the SJUSD and includes several non-native trees along the edges of the project site. The property is bounded to the west by O'Donnell Heritage county park and by homes in all other directions. (*see* **Appendix A** for site photos). The project site would be accessed via Charleston Drive.

The project site is flat, and the surrounding areas have little variation in topography. Views tend to be blocked by surrounding development and scattered vegetation. There are no California Department of Transportation (Caltrans) designated scenic highways or vistas located in the project vicinity, nor are such resources visible from the project site (Caltrans 2020).

4.1.2 Discussion

a) Have a substantial adverse effect on a scenic vista?

Implementation of the proposed project would result in a change in the scenic character of the site, converting an undeveloped grass field to a well station. Moreover, all fencing, and the prefabricated building would be designed in such a manner as to not detract from the residential character of the site and neighborhood. Because no scenic vistas are within the viewshed of the project, and the project is not within a scenic view, implementation of the proposed project would not interfere with scenic vistas or adversely affect visual character or quality. This would be a **less-than-significant** impact, and no mitigation would be necessary.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?

There are no state or locally designated scenic highways in the vicinity of the proposed project. Thus, implementation of the project would not adversely affect scenic resources within a designated scenic highway. There would be **no impact**, and no mitigation would be necessary.

c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

The proposed project is located in an urbanized area; however, the project would not conflict with County zoning or other regulations governing scenic quality. There would be **no impact**, and no mitigation would be necessary.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

There are no permanent light fixtures proposed as part of the project; however, urban residential levels of night lighting occur in the vicinity of the site. Lighting is also used by the adjacent SJUSD enrollment center which provides additional sources of residential night lighting. Additionally, during construction, temporary, downward-facing lights would be set up during the periods of continuous work associated with well drilling. Lighting during the construction period would be temporary in nature and confined to about 30 nights. Additionally, temporary sound walls would serve to attenuate impacts from the lights employed during construction. Therefore, the lighting associated with the project would not introduce a substantial, permanent change from the urban light levels already experienced in the area. There would be a **less-than-significant** impact and no mitigation would be required.

4.2 Agriculture and Forestry Resources

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
II. AGRICULTURE AND FORESTRY RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997, as updated) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the State's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. **Would the project:**					
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒	☐
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒	☐
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in PRC Section 12220(g)), timberland (as defined by PRC Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	☐	☐	☐	☒	☐
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒	☐
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒	☐

4.2.1 Environmental Setting

The project site is located in the unincorporated community of Carmichael in a low-density residential neighborhood. The Department of Conservation (DOC) Farmland Mapping and Monitoring Program (FMMP) designates the project site as Urban and Built-Up Land (DOC 2018). No portion of the site is designated as prime farmland, unique farmland, or farmland of statewide importance. Additionally, the project site is not zoned for agriculture use, forestland, or timberland zoned for timberland production.

4.2.2 Discussion

a, b) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? Conflict with existing zoning for agricultural use, or a Williamson Act contract?

The project site is designated as Urban and Built-Up Land and is not subject to a Williamson Act contract. No portion of the project site is identified as prime farmland, unique farmland, or farmlands of statewide importance. Because the proposed project would not convert designated farmland to a non-agricultural use, there would be **no impact**. No mitigation would be required.

c, d) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by PRC Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))? Result in the loss of forest land or conversion of forest land to non-forest use?

The proposed project site is not zoned for forest lands or timberland production, and no such lands exist on the project site or in the vicinity. Because the proposed project would not conflict with any existing forest land or timberland productions zoning, and no changes associated with the project are proposed that would result in the conversion of existing forest land or timber lands, **no impact** would occur. No mitigation would be required.

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

As stated above, the proposed project site and the vicinity does not contain farmland and forest land. Because the proposed project does not involve other changes in the existing environment that could result in the conversion of farmland or forest lands to other uses, **no impact** would occur. No mitigation would be required.

4.3 Air Quality

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
III. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied on to make the following determinations. **Would the project:**					
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☒	☐	☐	☐
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard?	☐	☒	☐	☐	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☒	☐	☐	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐	☐

4.3.1 Environmental Setting

The proposed project is located in the Sacramento Valley Air Basin (SVAB) within Sacramento County (County). The Sacramento Metropolitan Air Quality Management District (SMAQMD) is responsible for obtaining and maintaining air quality conditions in the County.

The Federal Clean Air Act and California Clean Air Act required the U.S. Environmental Protection Agency (EPA) and California Air Resource Boards (CARB) to establish health-based air quality standards at the federal and state levels. National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) were established for the following criteria pollutants: carbon monoxide (CO), ozone (O_3), sulfur dioxide (SO_2), nitrogen dioxide (NO_2), particulate matter less than 10 microns in diameter (PM_{10}), particulate matter less than 2.5 microns in diameter ($PM_{2.5}$), and lead. Areas of the state are designated as attainment, nonattainment, maintenance, or unclassified for the various pollutant standards according to the Federal Clean Air Act and California Clean Air Act.

An "attainment" designation for an area signifies that pollutant concentrations did not violate the NAAQS or CAAQS for that pollutant in that area. A "nonattainment" designation indicates that a pollutant concentration violated the standard at least once, excluding those occasions when a violation was caused by an exceptional event, as identified in the criteria. A "maintenance" designation indicated that the area previously categorized as nonattainment is currently categorized

as attainment for the applicable pollutant; though the area must demonstrate continued attainment for a specific number of years before it can be re-designated as an attainment area. An "unclassified" designation signifies that data does not support either an attainment or a nonattainment status. The EPA established NAAQS in 1971 for six air pollution constituents. States have the option to add other pollutants, to require more stringent compliance, or to include different exposure periods. CAAQS and NAAQS are listed in **Table 4-1**.

Table 4-1. Federal and California Ambient Air Quality Standards and Attainment Status.

Pollutant	Averaging Time	California Standards Concentration	Federal Primary Standards Concentration
Ozone (O_3)	8-hour	0.07 ppm (137 µg/m^3)	0.070 ppm (137 µg/m^3)[a]
	1-hour	0.09 ppm (180 µg/m^3)	--- [b]
Respirable Particulate Matter (PM_{10})	24-hour	50 µg/m^3	150 µg/m^3
	Annual Arithmetic Mean	20 µg/m^3	---
Fine Particulate Matter ($PM_{2.5}$)	24-hour	---	35 µg/m^3
	Annual Average	12 µg/m^3	12 µg/m^3
Carbon Monoxide	8-hour	9.0 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)
	1-hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)
Nitrogen Dioxide	Annual Average	0.03 ppm (57 µg/m^3)	0.053 ppm (100 µg/m^3)
	1-hour	0.18 ppm (339 µg/m^3)	0.100 ppm (188 µg/m^3)
Lead	30-day Average	1.5 µg/m^3	---
	Rolling 3-Month Average	---	0.15 µg/m^3
	Quarterly Average	---	1.5 µg/m^3
Sulfur Dioxide	24-hour	0.04 ppm (105 µg/m^3)	0.14 ppm (for certain areas)
	3-hour	---	---
	1-hour	0.25 ppm (655 µg/m^3)	0.075 ppm (196 µg/m^3)
Sulfates	24-hour	25 µg/m^3	No Federal Standard
Hydrogen Sulfide	1-hour	0.03 ppm (42 µg/m^3)	No Federal Standard
Vinyl Chloride	24-hour	0.01 ppm (26 µg/m^3)	No Federal Standard

Notes: ppm = parts per million; mg/m3 = milligrams per cubic meter; µg/m 3= micrograms per cubic meter
Shaded areas indicate that Sacramento County is in non-attainment for that air pollutant standard
a On October 1, 2015, the national 8-hour ozone (O_3) primary and secondary standards were lowered from 0.075 to 0.070 ppm.
b 1-Hour ozone standard revoked effective June 15, 2005, although some areas have continuing obligations under that standard ("anti-backsliding").
Source: CARB 2019, EPA 2016, EPA 2017.

Under the NAAQA, the County is designated as nonattainment for 8-hour ozone and $PM_{2.5}$ (CARB 2019). Under CAAQS, the County is designated nonattainment for 8-hour ozone and PM_{10} (CARB 2019).

The area's air quality monitoring network provides information on ambient concentrations of air pollutants in the SVAB. SMAQMD operates a monitoring station in Sacramento, California, near the project area, where air quality data was obtained. **Table 4-2** compares a 5-year summary of the

highest annual criteria air pollutant emissions collected at this monitoring station with applicable CAAQS, which are more stringent than the corresponding NAAQS. Due to the regional nature of these pollutants, O_3, $PM_{2.5}$, and PM_{10} are expected to be fairly representative of the project site.

As indicated in **Table 4-2**, O_3, $PM_{2.5}$, and PM_{10} standards have been exceeded over the past 5 years. A significant increase in particulate matter was experienced in 2018 due to the campfire in Butte County (SMAQMD 2020).

Table 4-2. Ambient Air Quality Monitoring Data Measured at the Carmichael Area Monitoring Stations.

Pollutant Standards	2016	2017	2018	2019	2020
1-Hour Ozone (Del Paso Manor)					
Maximum 1-hour concentration (ppm)	0.107	0.102	0.102	0.087	0.120
Days Exceeding[a] CAAQS 1-hour (>0.09 ppm)	5	1	3	0	4
8-Hour Ozone (Del Paso Manor)					
National maximum 8-hour concentration (ppm)	0.090	0.079	0.087	0.069	0.085
State max. 8-hour concentration (ppm)	0.090	0.080	0.088	0.069	0.085
Days Exceeding[a] NAAQS 8-hour (>0.075 ppm)	4	1	2	0	4
Days Exceeding[a] CAAQS 8-hour (>0.070 ppm)	11	5	7	0	10
Particulate Matter (PM_{10}) (Del Paso Manor)					
National max. 24-hour concentration ($\mu g/m^3$)	31.0	59.0	212.0	53.0	188.0
State max. 24-hour concentration ($\mu g/m^3$)	42.2	65.8	224.0	110.4	190.0
State max. 3-year average concentration ($\mu g/m^3$)	19	21	25	25	25
State annual average concentration ($\mu g/m^3$)	17.6	20.5	24.5	-	-
Days Exceeding[a] NAAQS 24-hour (>150 $\mu g/m^3$)	0	0	12.3	-	6.1
Days Exceeding[a] CAAQS 24-hour (>50 $\mu g/m^3$)	0	18.6	12.2	-	-
Particulate Matter ($PM_{2.5}$) (Del Paso Manor)					
National max. 24-hour concentration ($\mu g/m^3$)	46.8	42.0	228.4	41.4	147.3
State max. 24-hour concentration ($\mu g/m^3$)	57.5	45.2	250.0	41.4	147.3
State annual average concentration ($\mu g/m^3$)	9.7	14.0	16.5	-	-
Days Exceeding[a] NAAQS 24-hour (>35 $\mu g/m^3$)	3.3	6.2	10.6	3.0	28.1

Notes: Underlined Values in excess of applicable standard. ppm = parts per million / µg/m3 = micrograms per cubic meter.
2018 is the latest year of data available as of preparation of this section
a. An exceedance is not necessarily a violation. Sources: CARB 2020

4.3.2 Discussion

a, b) Conflict with or obstruct implementation of the applicable air quality plan? Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard?

The SMAQMD has developed a screening process to assist in determining if constructing a project in the County would exceed the Districts construction significance threshold for pollutants. Construction of a project that does not exceed the screening level and meets all the screening parameters will be considered to have a less-than-significant impact on air quality. However, all construction projects regardless of the screening level are required to implement SMAQMD Basic Construction Emission Control Practices. (SMAQMD 2020)

Projects that are 35 acres or less in size generally will not exceed SMAQMD construction pollutant thresholds of significance. This screening level was developed using default construction inputs in the California Emissions Estimator Model (CalEEMod). This screening level cannot be used to determine if a project's construction emissions will have a less-than significant impact on air quality unless all of the following parameters are met. The project does not:

- Include buildings more than 4 stories tall
- Include demolition activities
- Include major trenching activities
- Have a construction schedule that is unusually compact, fast-paced, or involves more than two phases (i.e., grading, paving, building construction, and architectural coatings) occurring simultaneously involve cut-and-fill operations (moving earth with haul trucks and/or flattening terracing hills)
- Require import or export of soil materials that will require a considerable amount of haul truck activity (SMAQMD 2019)

SMAQMD has developed screening levels to help lead agencies analyze operational reactive organic gas, oxides of nitrogen, PM_{10}, and $PM_{2.5}$ emissions from projects in the County. As provided by SMAQMD, the screening levels shall not be used to evaluate operational emissions from projects that have 1 or more of the following characteristics:

- The project will not include wood stoves or wood-burning appliances
- The project does not include BMP for PM emissions
- Project trip generation rates are expected to be greater than the default trip rates in CalEEMod. The default trip rates in CalEEMod, which can be viewed in the Operational-Mobile Vehicle Trips tab, are based on standard rates from the Institute of Transportation Engineers Trip Generation Manual
- The vehicle fleet mix for the project is expected to be substantially different from the average vehicle fleet mix for the County. For example, the fleet mix associated with an industrial land use project will likely consist of a high portion of heavy-duty trucks
- The project will include mixed-use development
- The project will include any industrial land use types (possibly including stationary sources of emissions

Except for vehicle fleet mix, the proposed project would not include any of the disqualifying characteristics cited above. While the vehicle fleet mix would be substantially different from the average fleet mix for the County, since large trucks would be used during construction, the proposed project would not require an excess amount of truck trips given the relatively small size of the project (less than 1 acre). During construction the proposed project would generate approximately 20 truck trips for material drop off and up to four truck trips for crew members arriving to the site each day. Additionally, during operations, approximately 1 employee trip per month during operations. The project would not generate substantial truck trips during construction or operation; therefore, the project would meet SMAQMD screening criteria. The pump and associated facilities would be powered by electricity. Implementation of the project would not result in construction or operational emissions in excess of SMAQMD significance criteria.

However, the project would generate a significant amount of particulate matter (PM) from ground disturbing activities and use of diesel-powered equipment. Therefore, the project would have a **potentially significant** impact due to the generation of criteria pollutants. The following mitigation measure has been identified to address this impact.

AQ-1: SMAQMD Basic Construction Emission Control Practices

All projects are subject to SMAQMD rules in effect at the time of construction. Control of fugitive dust is required by SMAQMD Rule 403 and enforced by SMAQMD staff. The CWD shall implement, or require its contractors to implement, all of the following measures as identified by SMAQMD:

- Water all exposed surfaces twice a day – 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 2 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 power 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 CCR, Title 13, sections 2449(d)(3) and 2485]. Provide clear signage that posts this requirement for workers at the entrances to the site.

- Maintain all construction equipment in proper working condition according to manufacturer's specifications. The equipment must be checked by a certified mechanic and determine to be running in proper condition before it is operated.

With implementation of Mitigation Measure AQ-1, the impact would be reduced to less-than-significant by reducing the generation of criteria pollutants during construction activities, specifically the generation of PM, by implementing best management practices such as watering all exposed surfaces and limiting vehicle speed to keep. There will be some grading around the well to allow the site to match the adjacent residential sites. Additionally, the proposed project site is less than 1-acre in size, and therefore is considered to be relatively small. The project would not require an excess amount of truck trips during construction or operation. Construction of a project that does not exceed the screening level, meets all the screening parameters, and implements the SMAQMD's Basic Construction Emission Control Practices, also known as BMP, would be considered to have a less-than-significant impact on air quality. (SMAQMD 2020). Implementation of Mitigation Measure AQ-1 would ensure that SMAQMD Practices would be implemented during project construction, and this impact would be **less-than-significant with mitigation**.

c) Expose sensitive receptors to substantial pollutant concentrations?

Some members of the population are especially sensitive to emissions of air pollutants and should be given special consideration during the evaluation of the project air quality impacts. These people include children, senior citizens, and persons with pre-existing respiratory or cardiovascular illnesses, and athletes and other who engage in frequent exercise, especially outdoors. Sensitive receptors include schools, residences, playgrounds, childcare centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. The project site is within a residential neighborhood.

During construction, most of the particulate matter (PM2.5 and PM10), emissions are released in the form of fugitive dust during ground disturbance activities, mostly during the drilling and grading phases. PM emissions are also generated in the form of equipment exhaust and re-entrained road dust from vehicle travel on paved and unpaved surfaces. Impacts from PM emissions will be temporary and will go back to normal after completing the construction phase.

Power for the motor/pump and facility would be from an existing power line along the eastern side of the property. An electrical service would be installed to provide power for the pump and operation of associated machinery. During operations, emergency power would be provided by a portable diesel generator that would be brought to the site for testing and in the event of a sustained power outage.

Due to the close proximity of sensitive receptors and temporary generation of PM emissions during construction, the project would have a **potentially significant** impact.

AQ-1: SMAQMD Basic Construction Emission Control Practices

Please see Question "a" above for the full description.

With the implementation of Mitigation Measure AQ-1, significant impacts to sensitive receptors during construction would be reduced to less-than-significant by reducing the generation of criteria pollutants during construction activities, specifically the generation of PM. Therefore, this impact is considered **less-than-significant with mitigation**.

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Human response to odors is subjective, and sensitivity to odor varies from person to person. Typically, odors are considered an annoyance rather than a health hazard. However, a person's response to odor can range from psychological (e.g., irrigation, anger, anxiety) to physiological (e.g., circulatory and respiration reaction, nausea, headaches, etc.). During operation, the project would consist of the operation of an electrically powered pump. No odors would be generated by this use. Potential odor effects would be **less-than-significant**, and no mitigation would be necessary.

4.4 Biological Resources

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
IV. BIOLOGICAL RESOURCES. Would the project:					
e) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐	☐
f) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☐	☒	☐
g) Have a substantial adverse effect on State or Federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒	☐
h) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☒	☐
i) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒	☐	☐	☐
j) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan?	☐	☐	☐	☒	☐

Information on biological resources relevant to the proposed project is based on review of aerial photographs, a site survey, and review of documents that address biological resources in the project vicinity. Several online biological data resources were queried, including the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) and Quickview Tool, the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (iPaC) tool, the California Native Plant Society (CNPS) Inventory of Rare and Endangered Vascular Plants of California, and the USFWS National Wetlands Mapper. Additional occurrence information on individual plant and wildlife species was also reviewed, including various websites such as eBird, iNaturalist, and MonarchMapper,

4.4.1 Environmental Setting

The Project is located behind a residential house in Carmichael, California in a medium density residential neighborhood characterized primarily by single-family homes. The Project site is a single parcel (APN 247-0010-005) that currently contains an existing well and pump station facility with fencing. Trees within the boundary of the Project site include: two fruit trees, one ornamental tree, and one valley oak (*Quercus lobata*) that are planted in the fenced off backyard adjacent to the old well site. The site is bounded to the north, east, and south by fences and residential homes that are outside of the Project limit. To the west, the Project site is also bounded by a fence and the O'Donnell Heritage Park. A study area was identified for biological resources to include the entirety of the project site and a 100-foot-wide buffer, to account for special-status species that may be in the Project vicinity that could be affected by the proposed Project.

There are no surface water features located within the Project site boundary. The existing pump station facility and abandoned backyard do not provide optimal conditions for native plants or wildlife. However, the various trees within the Project site and trees in the adjacent O'Donnel Heritage Park do provide potential habitat for bird species, especially those species particularly accustomed to human disturbance and general urbanization.

Wildlife

A variety of birds may use habitat in the study area for nesting and/or foraging. Species that are likely to forage or nest within or adjacent to the study site, include red-tailed hawk (*Buteo jamaicensis*), white-tailed kite (*Elanus leucurus*), American kestrel (*Falco sparverius*), American robin (*Turdus migratorius*), northern mockingbird (*Mimus polyglottos*), California scrub-jay (*Aphelocoma californica*), mourning dove (*Zenaida macroura*), western kingbird (*Tyrannus verticalis*), Bewick's wren (*Thryomanes bewickii*), bushtit (*Psaltriparus minimus*), California towhee (*Melozone crissalis*), and house finch (*Carpodacus mexicanus*).

Several species of common reptiles and small- and medium-sized mammals are also likely to occur in the study area. Common reptiles and mammals anticipated to occur in the study area include western fence lizard (*Sceloperus occidentalis*), Pacific gopher snake (*Pituophis catenifer catenifer*), California king snake (*Lampropeltis getula californiae*), Botta's pocket gopher (*Thomomys bottae*), jackrabbit (*Lepus californicus*), California ground squirrel (*Spermophilus beecheyii*), opossum (*Didelphis virginiana*), and raccoon (*Procyon lotor*). No common amphibian species are anticipated to occur based on the absence of aquatic habitat.

4.4.2 Sensitive Biological Resources

Sensitive biological resources addressed in this section include those that are afforded consideration or protection under CEQA, California Fish and Game Code, California Endangered Species Act (CESA), Endangered Species Act (ESA), Clean Water Act (CWA), and the Porter-Cologne Water Quality Control Act.

4.4.2.1 Special-status Species

Special-status species include plants and animals in the following categories:

- species officially listed by the State or Federal government as endangered, threatened, or rare;
- candidates for State or Federal listing as endangered or threatened;
- taxa (i.e., taxonomic categories or groups) that meet the criteria for listing, even if not currently included on any list, as described in State CEQA Guidelines California Code of Regulations Section 15380;
- species identified by California Department of Fish and Wildlife as species of special concern;
- species listed as Fully Protected under the California Fish and Game Code;
- species afforded protection under local or regional planning documents; and
- plant taxa considered by CDFW to be "rare, threatened, or endangered in California" and assigned a California Rare Plant Rank (CRPR).

The CRPR system includes six rarity and endangerment ranks for categorizing plant species of concern. All plants with a CRPR are considered "special plants" by CDFW. The term "special plants" is a broad term used by CDFW to refer to all plant taxa inventoried in the CNDDB, regardless of their legal or protection status. Plants ranked as CRPR 1A, 1B, 2A, and 2B may qualify as endangered, rare, or threatened species within the definition of State CEQA Guidelines CCR Section 15380, and CDFW recommends that potential impacts to CRPR 1 and 2 species be evaluated in CEQA documents.

The term "California species of special concern" is applied by CDFW to animals not listed under the Federal ESA or CESA, but that are nonetheless declining at a rate that could result in listing, or that historically occurred in low numbers and have known threats to their persistence.

An initial list of special-status species that could potentially occur in or adjacent to the project site, given suitable habitat conditions are present, was developed through review of CNDDB (CDFW 2023a) and CNPS Rare Plant Inventory (CNPS 2023) records for the Citrus Heights U.S. Geological Survey (USGS) 7.5-minute quadrangle that includes the Project footprint. A species list was also generated by the USFWS iPaC tool (USFWS 2023).

Special-status Plants

Only one special-status plant species, Sanford's arrowhead (*Sagittaria sanfordii*), was evaluated for its potential to occur in the study area, due to its presence during database searches. This species was determined to have no potential to occur due to the lack of suitable aquatic habitat associated with this plant species.

Special-status Wildlife

Twelve special-status wildlife species were evaluated for their potential to occur in the study area. **Table 4-1** summarizes, for each species, the regulatory status, habitat associations, and potential to occur in the study area. As with the plant species, most special-status wildlife species were determined to have little or no potential to occur in the study area, because of limited distribution, habitat requirements, and/or lack of recent CNDDB occurrences in the project vicinity. Two special-status species were determined to have potential to occur within the study area, as discussed further below.

Two special-status birds, Swainson's hawk (*Buteo swainsonii*) and white-tailed kite, were determined to have moderate to low potential to occur in or adjacent to the study area, for foraging and/or nesting.

Two fish species, Pacific lamprey (*Entosphenus tridentatus*) and Central Valley steelhead (*Oncorhynchus mykiss*), appeared on the CNDDB database list, but due to there being no aquatic habitat on or adjacent to the study area, these species are not addressed in the table below or further in this section.

Table 4-3. Special-status Wildlife Species Evaluated for Potential to Occur In and Adjacent to the Project Site

Species Name	Legal Status Federal/State[1]	Habitat Associations	Potential to Occur In and Adjacent to the Project Site[2]
vernal pool fairy shrimp *Branchinecta lynchi*	T/–	Vernal pools and other seasonal wetlands.	**No potential to occur**; no suitable habitat is present in the study area.
Monarch butterfly *Desmocerus californicus dimorphus*	C/–	Overwinter in forested areas for protection, typically preferring eucalyptus trees, and breed where nectar and milkweed are readily available.	**Unlikely to occur**; no suitable flowering plants or milkweed are present in the study area for foraging and no suitable overwintering habitat is present.
valley elderberry longhorn beetle *Desmocerus californicus dimorphus*	T/–	Closely associated with blue elderberry, an obligate host for the beetle larvae.	**No potential to occur**; no suitable habitat (i.e., no elderberry shrubs) are present in the study area.
vernal pool tadpole shrimp *Lepidurus packardi*	E/–	Vernal pools and other seasonal wetlands.	**No potential to occur**; no suitable habitat is present in the study area.
California tiger salamander *Ambystoma californiense*	T/T	Typically, in annual grassland of lower hills and valleys with temporary and permanent ponds and in streams.	**No potential to occur**; no suitable habitat is present in the study area.
northwestern pond turtle *Actinemys marmorata*	–/SSC	Permanent or nearly permanent water bodies with abundant vegetation and rocky or muddy bottoms.	**No potential to occur**; no suitable habitat is present in the study area.

Species Name	Legal Status Federal/State[1]	Habitat Associations	Potential to Occur In and Adjacent to the Project Site[2]
coast horned lizard *Phrynosoma blainvillii*	–/SSC	Open areas of sandy soil and low vegetation.	**No potential to occur**; no suitable habitat is present in the study area.
Swainson's hawk *Buteo swainsonii*	–/T	Forages in grasslands and agricultural fields; nests in open woodland or scattered trees.	**Could occur**; foraging and nesting habitat is present immediately outside of the study area, but there is no suitable nesting habitat inside of the study area.
Vaux's swift *Chaetura vauxi*	–/SSC	Nests in large hollow trees, with preference for redwood and Douglas fir.	**No potential to occur**; outside of the known range for this species.
northern harrier *Circus cyaneus*	–/SSC	Nests and forages in grasslands, agricultural fields, and marshes.	**Unlikely to occur**; there is no suitable nesting or foraging habitat inside of the study area.
white-tailed kite *Elanus leucurus*	–/FP	Forages in grasslands and agricultural fields; nests in woodlands and isolated trees and.	**Could occur**; foraging and nesting habitat is present inside of the study area.
Bank swallow *Riparia riparia*	–/T	Forages and nests in cavities dug into steep sandy cliffs along bodies of water.	**No potential to occur**; no suitable habitat is present in the study area.

Notes: CNDDB = California Natural Diversity Database

[1] Legal Status Definitions:

E Wildlife species listed as Endangered under the Federal and/or California Endangered Species Act.

T Wildlife species listed as Threatened under the Federal Endangered Species Act.

FP Wildlife species listed as Fully Protected under the California Fish and Game Code.

C Wildlife species identified as a candidate species for listing under the California Endangered Species Act.

SSC Wildlife species listed as Species of Special Concern by the California Department of Fish and Wildlife.

– No status under Federal and/or California laws and regulations.

[2] Potential for Occurrence Definitions:

Known to occur: The species, or evidence of its presence, was observed in the project site during previous field surveys (as reported in background information materials) or was recently reported by others.
Could occur: Extant species distribution, habitat conditions, behavior of the species, known occurrences (as documented in the CNDDB or USFWS database) in the vicinity, or other factors, indicate that the species could occur.
Unlikely to occur: Although the project site is located within the extant range of the species, the species is unlikely to be present because of very restricted distribution and/or because only low-quality habitat or very limited habitat is present in the project site and vicinity.
No potential to occur: The project site is located outside of the species extant distribution and/or potential habitat to support the species is not present.

Sources: CDFW 2023; USFWS 2023; data collected and compiled by GEI Consultants Inc., in 2023

4.4.3 Discussion

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

Implementation of the Project would remove nonnative grassland habitat for common urban species. The Project also would require removal of up to three trees (two fruit trees, one

ornamental, and one valley oak), which may provide nesting habitat for bird species protected by the Federal Migratory Bird Treaty Act, California Migratory Bird Protection Act, and the California Fish and Game Code. If construction occurs during the nesting season, nesting birds could be disturbed, leading to nest abandonment and subsequent loss of reproductive potential or morbidity of young. Therefore, implementation of the Project could have a **potentially significant** impact on nesting birds. The following mitigation measures have been identified to address this impact.

Mitigation Measure BIO-1. Conduct Pre-construction Surveys for Active Raptor and Migratory Bird Nests and Implement Avoidance and Minimization Measures.

Vegetation removal, particularly tree removal, will be conducted between September 15 and February 15, to the extent feasible, to minimize potential loss of active bird nests. For any clearing and/or construction activities that occur during the nesting season (February 15–September 15), surveys to identify active raptor and migratory bird nests, including ground-nesting birds, shall be conducted by a qualified biologist no more than 48 hours prior to construction initiation.

If active migratory bird nest sites are identified within 100 feet of Project activities, CWD shall impose an exclusionary buffer for all active nest sites prior to commencement of any Project construction activities to avoid construction- or access-related disturbances to migratory bird nesting activities. An exclusionary buffer constitutes an area where Project-related activities (i.e., vegetation removal, earth moving, construction, Project staging) would not occur and would be imposed within 100 feet of any active nest sites until the nest is deemed inactive by a qualified biologist. Activities permitted within and the size (i.e., 100 feet) of the exclusionary buffer may be adjusted through consultation with CDFW.

If active raptor nests are identified within 500 feet of Project activities, a 500-foot initial temporary nest disturbance buffer shall be established. If project-related activities within the temporary raptor nest disturbance buffer are determined to be necessary during the nesting season, an on-site biologist/monitor experienced with raptor behavior shall be retained by the CWD to monitor the nest, and CWD shall consult with the CDFW to determine the best course of action necessary to avoid nest abandonment or take of individuals. Work may only be allowed to proceed within the temporary nest disturbance buffer if raptors are not exhibiting agitated behavior such as defensive flights at intruders, getting up from a brooding position, or flying off the nest, and only with the agreement of the CDFW. Based on the behavior observed, the buffer may be reduced if the birds are tolerant of construction activities. The designated on-site biologist/monitor shall be on-site daily while construction-related activities are taking place within the above 500-foot-widebuffer and shall have the authority to stop work if raptors are exhibiting agitated behavior.

Timing: Before and during construction.

Responsibility: CWD

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

Neither riparian habitat nor sensitive natural communities are located on or near the Project site (CDFW 2010). Thus, the Project would have **no impact** on riparian habitat or sensitive natural communities, and no mitigation is necessary.

c) Have a substantial adverse effect on state- or federally-protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No potentially jurisdictional wetlands or Wetlands of the State or United States were identified on or near the Project site (USFWS 2023b). Because the Project would not affect protected wetlands, **no impact** would occur. No mitigation is required.

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

A wildlife corridor is generally a topographical or landscape feature or movement area that connects two areas of habitat that otherwise would be entirely fragmented or isolated from one another. Overall, the study area (which extends beyond the project site) does not serve as a corridor between isolated habitat areas. Because the Project would not substantially interfere with wildlife movement, **no impact** would occur. No mitigation is required.

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

In preparation for the new well installation, up to three trees (two fruit, one ornamental, and one valley oak) will be removed from the Project site to allow for access to the old well location and support equipment and material storage. Carmichael is in unincorporated Sacramento County and is, therefore, under the umbrella of the Sacramento County Code (County of Sacramento 2021). The County's Tree Preservation and Protection ordinance (Chapter 19.12) states that "no person shall trench, grade or fill within the dripline of any tree or destroy, kill or remove any tree as defined, in the designated urban area of the unincorporated area of Sacramento County, on any property, public or private, without a tree permit…" The permit application must be approved and/or the proposed Project must have discretionary approval from the County Board of Supervisors, County Planning Commission, Zoning Board of Appeals, the Zoning Administrator, or the Subdivision Review Committee before any trees may be removed. As the County's tree protection measures were enacted primarily to prevent loss of oak trees and associated woodland, special attention will be paid to permit applications for the removal of any oak trees (*Quercus* sp.).

At the time of survey, there was one valley oak tree with a diameter breast height of 12 inches slated for removal. The removal of any trees within the Project site may be a **potentially significant** impact. The following mitigation measure has been identified to address this impact.

Mitigation Measure BIO-2: Comply with County of Sacramento's Tree Ordinance

During Project design and construction, CWD shall avoid all trees, including their protected zones as defined by Chapter 19.12 of the County of Sacramento Code. The CWD shall implement the standard policies and procedures set forth in Section 19 of the County's Code during the design and construction of proposed improvements. In the event that a protected tree cannot be avoided, CWD shall obtain a Tree Permit from the County and implement all requirements of the permit. The County may condition any Tree Permit involving removal of a protected tree. Alternatively, the County may require instead payment of a cash contribution based upon the cost of purchasing, planting, irrigating and maintaining the required number of replanted trees used to offset those removed for the Project.

Timing: Before and during construction.

Responsibility: CWD

Implementation of Mitigation Measure BIO-2 would ensure that loss of protected trees would be not conflict with the County's tree ordinance. Implementation of the following mitigation measure would ensure compliance with the County's Tree Preservation and Protection ordinance, and this impact would be **less-than-significant with mitigation**.

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

There are no Habitat Conservation Plans (HCP), Natural Community Conservation Plans (NCCP), or other approved habitat conservation plans on or near the Project site (CDFW 2023b). Because the Project would not affect an HCP, NCCP, or other habitat conservation plan, **no impact** would occur. No mitigation is required.

4.5 Cultural Resources

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
V. CULTURAL RESOURCES. Would the project:					
k) Cause a substantial adverse change in the significance of a historical resource pursuant to CCR Section 15064.5?	☐	☒	☐	☐	☐
l) Cause a substantial adverse change in the significance of an archaeological resource pursuant to CCR Section 15064.5?	☐	☒	☐	☐	☐
m) Disturb any human remains, including remains interred outside of dedicated cemeteries?	☐	☐	☒	☐	☐

4.5.1 Environmental Setting

GEI archaeologist Amy Wolpert, a registered professional archaeologist (RPA), requested a records search of the project area and a surrounding 250-foot radius at the North Central Information Center (NCIC) on September 12, 2023. The records search included a review of NCIC's United States Geological Survey 7.5-minute topographic base maps indicating previously conducted investigations and previously reported cultural resources, Department of Parks and Recreation 523 forms, and California Historic Landmarks documentation. The NCIC sent a response the same day (NCIC File No.: SAC-23-171). The records search identified no cultural resources within the project boundary itself or the surrounding radius. No reported studies have been conducted within the project boundary or within the 250-foot radius.

GEI archaeologist Jesse Martinez, RPA, completed a pedestrian survey of the project area on September 13, 2023. The project area consists of a landscaped residential back yard approximately one-quarter acre in size. Visibility was generally poor due to tall, thick grasses and ornamental yard features. The project area contains rock lined planters, a single row vineyard approximately 20 feet in length, some yard furniture, mature ornamental trees, and sporadic flowering plants.

One cultural, built environment resource was identified, the Winding Way Well. No archaeological resources were identified. The well is in a fenced-in paved area and consists of above-ground pipes descending into an underground component and a pump set on concrete supports. Some elements of the well structure appear to have been replaced in recent years. Associated equipment housed in metal cabinets is adjacent to the well structure.

4.5.2 Discussion

a, b) Cause a substantial adverse change in the significance of a historical resource pursuant to in CCR Section 15064.5? Cause a substantial adverse change in the significance of an archaeological resource pursuant to CCR Section 15064.5?

Results of the records search conducted by the NCIC show no recorded prehistoric or historic archaeological resources or historic building or structures on the project site or within the surrounding radius. The pedestrian survey did not identify any prehistoric, historic era archaeological resources but did identify one historic-era (more than 45 years old) built environment resource, the Winding Way Well. The well was built circa 1965 as part of the infrastructure for the surrounding neighborhood which was developed during the same period. It is a ubiquitous resource type and does not appear to be associated with important events or individuals. Therefore, the well does not meet CRHR criteria and it is not considered a historical resource per CEQA.

However, while unlikely, project construction could result in the destruction or degradation of unknown cultural or historic resources. This would be a **potentially significant** impact and the following mitigation measure has been identified to address this impact.

> **Mitigation Measure CR-1: Address Previously Undiscovered Historic Properties, Archaeological Resources, and Tribal Cultural Resources.**
>
> If cultural resources are discovered during project-related ground-disturbing activities, then all construction activities that may damage the discovery will stop within 100 feet of the discovery and CWD will be immediately notified. CWD will hire a qualified archaeologist to determine if the discovery is an historical resource or unique archaeological resource per CEQA. If necessary, the qualified archaeologist will develop a testing plan to determine if the discovery meets significance criteria for a historical resource or unique archaeological resource; any testing plan will not be implemented until review by CWD.
>
> If the discovery is determined not to be either an historical resource or unique archaeological resource, then construction in the area of the discovery may continue.
>
> If the discovery is determined to meet significance criteria, then the qualified archaeologist will develop and implement a treatment plan in consultation with CWD to mitigate any significant impacts to the discovery; preservation in place is the preferred mitigation measure. Work in the area of the discovery will not continue until treatment is completed.
>
> **Timing:** During construction.
>
> **Responsibility:** CWD

Implementation of Mitigation Measure CR-1 would reduce this impact to less-than-significant by facilitating actions to reduce potential impacts to unknown prehistoric, historic resources, and archaeological resources in the event of an inadvertent discovery. Therefore, this impact is considered **less-than-significant with mitigation**.

c) Disturb any human remains, including remains interred outside of dedicated cemeteries?

It is not anticipated that human remains, including those interred outside of dedicated cemeteries, would be discovered during project-related ground-disturbance activities. There is no indication from the record search or pedestrian survey that human remains are present within the project site. However, in the event that human remains are discovered during subsurface activities, the human remains, and associated items could be inadvertently damaged. The following existing regulatory requirements acting as a mitigation measure would facilitate actions to reduce potential impacts to unknown human remains to a **less-than significant with mitigation** level.

Mitigation Measure CR-2: Address Previously Undiscovered Human Remains.

If human remains are found, CWD should be immediately notified. The California Health and Safety Code requires that excavation be halted in the immediate area and that the county coroner be notified to determine the nature of the remains. The coroner is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or state lands (Health and Safety Code, Section 7050.5[b]). If the coroner determines that the remains are those of a Native American, the coroner must contact the Native American Heritage Commission (NAHC) by telephone within 24 hours of making that determination (Health and Safety Code, Section 7050.5[c]).

Once notified by the coroner, the NAHC shall identify the person determined to be the Most Likely Descendant (MLD) of the Native American remains. With permission of the legal landowner(s), the MLD may visit the site and make recommendations regarding the treatment and disposition of the human remains and any associated grave goods. This visit should be conducted within 24 hours of the MLD's notification by the NAHC (Public Resources Code [PRC], Section 5097.98[a]). If a satisfactory agreement for treatment of the remains cannot be reached, any of the parties may request mediation by the NAHC (PRC, Section 5097.94[k]). Should mediation fail, the landowner or the landowner's representative must reinter the remains and associated items with appropriate dignity on the property in a location not subject to further subsurface disturbance (PRC, Section 5097.98[b]).

Timing: During construction.

Responsibility: CWD

Implementation of Mitigation Measure CR-2 would reduce this impact to less-than-significant by facilitating actions to reduce potential impacts to unknown human remains in the event of an inadvertent discovery. Therefore, this impact is considered less-than-significant with mitigation.

4.6 Energy

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
VI. ENERGY. Would the project:					
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐	☐
b) Conflict with or obstruct a State or local plan for renewable energy or energy efficiency?	☐	☐	☐	☒	☐

4.6.1 Environmental Setting

Electric power in the County is supplied by the Sacramento Municipal Utility District (SMUD), and natural gas is supplied by Pacific Gas and Electric (PG&E). The County consumed approximately 11,063 million kilowatts per hour (KWh) of electricity in 2020 (CEC 2020).

4.6.2 Discussion

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

The project would involve the installation of electrical panels. Power for the pump would be provided from an existing power line along the eastern side of the property. An electrical service would be installed to provide power for the pump and operation of associated machinery. Emergency power would be provided by a portable diesel generator that would be brought to the site for testing and in the event of a sustained power outage.

CDW plans to use the well 7 days a month to extract groundwater for the purpose of obtaining potable water. The well will be turned on and off automatically based on public demand for water. As part of the conjunctive use program, CDW may use the well, in conjunction with other wells, to pump groundwater for a total of 180 days to replace surface water supplies annually. The well will be used only during times of need and will be shut off when it is not in use.

During construction, use of energy resources would be from loading, hauling, and placing material at the site, and the use of temporary lighting. Energy use from the project would be limited to use of fuel for short-term, standard operations of construction equipment, hauling trucks and vehicles, and lighting. Emissions associated with fuel use during construction are analyzed in the "Air Quality" and "Greenhouse Gas Emissions" sections. Project construction use of energy resources

would be temporary and would not include unnecessary, inefficient, or wasteful energy use. Equipment use would consist of a drill rig, semi-trucks, small excavators, asphalt paving equipment, and small hand tools. *See* Chapter 3, Section 3.6.1 for a list of construction equipment and number of personnel onsite during construction. There would be **less-than-significant** impacts and mitigation would not be necessary.

b) Conflict with or obstruct a State or local plan for renewable energy or energy efficiency?

The project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. The project will require the use of energy resources for operation of the well but would provide a reliable water supply that would be beneficial to the County. There would be **no impact** and mitigation would not be necessary.

4.7 Geology and Soils

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
VII. GEOLOGY AND SOILS. **Would the project:**					
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:					
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to California Geological Survey Special Publication 42.)	☐	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐	☐
iv) Landslides?	☐	☐	☒	☐	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated),), creating substantial direct or indirect risks to life or property?	☐	☐	☒	☐	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒	☐
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐	☐

4.7.1 Environmental Setting

The project site is located on Urban land-Xerarents-Fiddyment complex, 0 to 8 percent slopes, which is comprised of fine sandy loam to sandy clay loam (NRCS 2021). Nearby faults include an unnamed Pre-Quaternary fault located approximately 4.5 miles west of the project site (CGS 2015). There are no Alquist-Priolo Earthquake Fault Zones near the project (CGS 2021).

The uppermost geologic formation underlying the soils in the area of the proposed project is the Pleistocene and Pliocene loosely consolidated deposits formation. The project site is not located in an area of known paleontological resources.

4.7.2 Discussion

a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to California Geological Survey Special Publication 42.)

The project site is not located within an Alquisto-Priolo Earthquake Fault Zone, nor is it in the vicinity of any active faults. Surface rupture is most likely to occur on active faults (i.e., faults that have shown evidence of movement within the last 11,700 years). Damage from surface fault rupture is limited to linear zone generally a few yards wide. There would be **no impact** and no mitigation would be necessary.

ii, iii, iv) Strong seismic ground shaking, Seismic-related ground failure, including liquefaction, or Landsides?

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

Strong earthquakes generally create ground shaking, effects of which are reduced with increased distance from the earthquake epicenter. The earthquakes intensity, duration, and distance from the project site will determine the area affected by ground shaking. The Sacramento County General Plan (2017) states that because no major faults transect Sacramento County, the County is less affected by seismic events than other portions of the state. Nevertheless, some property damage has occurred in the past largely due to major seismic events occurring in adjacent areas (Sacramento County 2017). Although there are no active faults in the vicinity of the project site, there is still potential for ground shaking to occur. The proposed project would follow standard construction practices and comply with CWD standards, which are consistent with California Building Code requirements for the state of California. Following these standards would limit seismic hazards to levels deemed acceptable in the state and region.

Soil liquefaction is a phenomenon that occurs when soils become saturated and lose shear strength in response to strong ground shaking. This typically occurs in soils that are loosely packed and have higher porosity and low permeability. The Sacramento General Plan Background Report identifies only two areas in the County susceptible to liquefaction, the downtown area and the Delta. Since the project site resides outside of these areas the likelihood of liquefaction impacting the project site is low.

The project site consists of a flat parcel consisting of a grass field and paved parking lot and includes several non-native trees located along the edges of the site. There are no steep slopes that would pose a landslide risk. Minimal grading would occur around the well site. Additionally, the project site is not located on a geologic unit or soil that is unstable or likely to become unstable. Therefore, this impact is considered **less-than-significant** and no mitigation would be necessary.

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

The project site consists of flat land with no steep slopes that pose a landslide risk on the project site location. During construction some clearing, and grading activities would occur around the at the project site that could result in temporary and short-term disturbance of soils, leading to soil erosion.

Stormwater pollution prevention BMPs would be implemented to reduce potential impacts to water quality during construction and would and in accordance with the Sacramento Stormwater Management Program as follows:

- Complying with the requirements of the "General Permit for Stormwater Discharges Associated with Construction Activity"
- Preserving all existing vegetation on site where possible
- Scheduling as much project work as possible during the dry season
- Stabilizing the construction access route
- Protecting storm drain inlets
- Using other BMPs as necessary, including applying rainy season erosion controls, managing stockpiles, disposing of well development water properly, and correctly managing and disposing of construction wastes
- Maintaining all BMPs
- Stabilizing the site after construction is complete

Due to the flat topography of the project site, implementation of the above-mentioned BMPs, and engineered drainage system, the project would result in minimal soil erosion. There would be **less-than-significant** impacts and no mitigation would be necessary.

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

The soil present at the project site can experience low to high expansion. Typically, common engineering solutions can remedy potential expansive soils. No structures intended for human use will be constructed on the project site. The site will be visited once a week to observe the well and equipment and make repairs as necessary. There will be **less-than-significant** impacts and mitigation would not be necessary.

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

The project would not require the use of on-site wastewater treatment or disposal. There would be **no impact** and mitigation would not be necessary.

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Since the proposed project site is not located in an area of known paleontological resources, and there are no unique geological features present within the area, no adverse effects to these resources would occur. This would be a **less-than-significant** impact and no mitigation would be necessary.

4.8 Greenhouse Gas Emissions

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
VIII. GREENHOUSE GAS EMISSIONS.					
Would the project:					
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	☒	☐

4.8.1 Environmental Setting

Sacramento County adopted a Climate Action Plan (CAP) in March 2021. The CAP includes specific measures to reduce greenhouse gas emissions from countywide activities and government operations and will be implemented in Sacramento County by 2030. Additionally, the CAP includes an adaptation plan that recommends actions to reduce the community's vulnerability to the anticipated impacts of climate change. The CAP was developed in response to mitigation measures included in the Land Use Element of the Sacramento County General Plan, and the County's adoption of a Climate Emergency Resolution in December 2020. Based on the forecast GHG emissions and population projections, Sacramento County is expected to have an emissions rate of 4.8 metric tons of carbon dioxide equivalents (MT CO2e) per capita in 2030, which is below the rate of 6 MT CO2e per capita by 2030 recommended by the CARB in the 2017 Climate Change Scoping Plan. (Sacramento County 2021b).

4.8.2 Discussion

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

GHG emissions would be generated during the construction and operation of the proposed project. Temporary GHG emissions, primarily for the use of diesel-powered vehicles, would occur during the construction phases. During operations, GHG emissions would occur from maintenance vehicles accessing the site and from secondary emissions associated with the well pump's electrical use.

The SMAQMD's adopted threshold of significance for construction and operational greenhouse gas emissions is 1,100 metric tons of carbon dioxide equivalent (MTCO2e) per year each. The SMAQMD provides screening levels for construction and operational greenhouse gas emissions;

projects that meet the screening levels are considered less than significant and do not require emissions quantification. Per the SMAQMD's guidance, operational and construction emissions from projects that are smaller than the land use sizes in the Operational Screening Levels table, that also meet the screening parameters regarding construction-generated criteria pollutants, may be considered less-than–cumulatively considerable (SMAQMD 2018). The Project meets the SMAQMD's screening parameters regarding construction-generated criteria pollutants. Therefore, project construction would result in a less-than-significant greenhouse gas impact.

During Project operations, vehicle usage would be minimal, for the operation and maintenance of the well. Therefore, the Project would not generate operational greenhouse gases that exceed 1,100 MTCO2e. The project's contribution to global climate change through GHG emissions is **less-than-significant** and no mitigation is required.

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

Sacramento County has an adopted CAP which addresses GHG emissions. Additionally, the County also enforces the provisions of the Green Building Standards Code and Energy Code adopted by the State of California. The CWD will cooperate with the CAP and applicable Green Building Standards Code and Energy Code. Therefore, the project would not conflict with the any applicable plan, policy, or regulation regarding reducing emissions of GHG and would result in **no impact**. No mitigation is required.

4.9 Hazards and Hazardous Materials

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
IX. HAZARDS AND HAZARDOUS MATERIALS.					
Would the project:					
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☒	☐	☐	☐
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☒	☐
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒	☐
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☐	☒	☐

4.9.1 Environmental Setting

To identify the potential for exposure to hazardous materials along the project alignment federal, state, and local databases were reviewed to evaluate current and historic land uses and identify the presence of hazardous materials sites listed pursuant to Government Code 65962.5 (Cortese List). These sources include the GeoTracker database, a groundwater information management system that is maintained by the SWRCB; the Hazardous Waste and Substances Site List (i.e., the EnviroStor database), maintained by the California Department of Toxic Substances Control (DTSC); and EPA's Superfund Site database (DTSC 2021a and 2021b, SWRCB 2021a and 2021b, CalEPA 2021). There were no active hazardous materials sites identified within 0.25 mile of the Project site. The project is not located in an area identified as more likely to contain asbestos by the DOC (DOC 2000). This issue is not discussed further in this IS.

The proposed project is not located within an Airport Land Use Plan. The nearest airport is the Sacramento McClellan Airport, located approximately 3.5 miles northwest of the project site. There is no adopted Emergency Response Plan or Emergency Evacuation Plan for the proposed project area. The project site is not located in a very high fire hazard severity zone or within a state or local responsibility area (CalFire 2007 and 2008).

4.9.2 Discussion

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

As needed, after completion of the proposed project, based on the usage of the well, state-required disinfection chemicals calcium hypochlorite will be delivered to the project site and stored in the building onsite. The disinfection chemical will be injected into the recovered groundwater supply prior to it being placed into the distribution pipeline to prevent bacteria growth. The onsite building will be locked and maintained by CWD personnel.

Although the proposed project would require the use and storage of disinfection chemicals, its presence would not result in a hazard under normal operations. Hypochlorite is toxic and can cause skin and eye irritation if used improperly. The chemical in noncombustible but can accelerate the burning of combustible materials. Since the chemical will be secured in the locked building onsite, the site will be monitored once per week by CWD personnel, and only CWD personnel will have access to the chemical.

During construction oil, diesel fuel, paints, solvents, and other hazardous material would be used at the site. If spilled these substances could present a localized risk to the environment and human health. All construction actives will comply with California Occupational Safety and Health Administration (CalOSHA) regulations, which would protect personnel handling hazardous materials and the environmental from potential spills or releases. The storage of calcium hypochlorite would follow CalOSHA regulations. Additionally, CWD will follow all standards set

forth in Section 6.28.040 Water Well Standards established by the Sacramento County Code (Sacramento County 2021c).

Compliance with CalOSHA, and County requirements would reduce risk related from hazards and hazardous materials to **less-than-significant** and no mitigation would be necessary.

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

As mentioned in the previous questions, the state-required disinfection chemical calcium hypochlorite will be stored onsite and injected into the groundwater supply prior to being placed in the distribution pipeline. Under normal operations the storage of calcium hypochlorite would not result in a hazard.

In addition, the use of a backup diesel generator would be brought onsite and periodically tested and could be a source of diesel particulate matter, which is identified as a toxic air containment. The backup diesel generator would be used in the case of an emergency such as in the event of a power failure. Because there is a school located within a quarter mile of the proposed project site, the use of a diesel fueled backup generator could present a **potentially significant** risk of hazardous emissions. The following Mitigation Measure has been identified to address this impact.

AQ-1: SMAQMD Basic Construction Emission Control Practices

Please see Section 4.3 "Air Quality" for a full description of this Mitigation Measure.

Implementation of Mitigation Measure AQ-1 would reduce impacts to less-than-significant by requiring construction equipment be maintained in proper working condition according to manufacturer's specifications and by shutting off equipment when not in use. Therefore, this impact is considered **less-than-significant with mitigation**.

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

The project site is not identified on lists compiled pursuant to Government Code Section 65962.5. There would be **no impact** and no mitigation would be necessary.

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

The project is not located within an airport land use plan or within 2 miles of a public or public use airport. The nearest airport is the Sacramento McClellan Airport, located approximately 3.5 miles northwest of the project. There would be **no impact** and no mitigation would be necessary.

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

There is no adopted emergency response plan or emergency evacuation plan near the proposed project. The proposed project would not impact any roadways. The well and associated infrastructure would infrequently be accessed by CWD staff for maintenance and/or operation. The project would not result in the modification or blockage of any evacuation route. There would be **no impacts** from the proposed project and no mitigation would be necessary.

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

The proposed project is not located in a very high fire hazard severity zone (CalFire 2007 and 2008). The project is within a low-density residential neighborhood and as such is not exposed to the risk of wildland fires. Construction and operation of the proposed project would not increase the risk of loss, injury or death from wildland fires at the project site or within the vicinity. There would be **no impact** and no mitigation would be necessary.

4.10 Hydrology and Water Quality

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
X. HYDROLOGY AND WATER QUALITY.					
Would the project:					
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☒	☐	☐	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☐	☐	☒
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:	☐	☐	☒	☐	☐
i) result in substantial erosion or siltation on- or off-site;	☐	☐	☒	☐	☐
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	☒	☐	☐
iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☒	☐	☐
iv) impede or redirect flood flows?	☐	☐	☐	☐	☐
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☒	☐
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	☒	☐

4.10.1 Environmental Setting

The proposed project consists of the construction and operation of a new water well within an area less than 1-acre in size that contains the SJUSD enrollment center.

The project site is not located within a 100- or 500-year floodplain as identified by the Federal Emergency Management Agency (FEMA). According to FEMA, the project site is located in an area of "minimal flood hazard." (FEMA 2020). The County's Hazard Mitigation Plan Update states that inundation of the project site as a result of dam or levee failure would be unlikely to occasional, have a medium to high significance, and the magnitude/severity would be catastrophic (Sacramento County 2017).

The CWD obtains water to serve its customers from both surface water and groundwater resources. CWD supplements its surface water supply with groundwater for readiness-to-serve purposes and to meet peaking, pressure, shortage, and emergency demands.

CWD maintains 4 operating wells with a production rate of 1,200 to 4,700 AFY over the past 10 years, based on the assumption of 7 months of operation, during the dry season. In the near future, the CWD anticipates expanding its groundwater extraction capability and will have a total groundwater supply of 8,066 AFY from 2021 to 2025. CWD cycles its wells weekly to maintain operational readiness-to-serve capabilities and to supplement the surface water supply. Although CWD has no plans to increase groundwater withdrawals, production could increase up to the full well capacities in successive dry year scenarios to supplement available surface water supplies consistent with CWD's responsibilities under the Water Forum Agreement and other regional water management plans. (CWD 2020)

The groundwater basin underlying the CWD is the North American Subbasin, part of the larger Sacramento Valley groundwater basin. Groundwater-bearing formations in the project area include an upper aquifer system consisting of the Riverbank, Turlock Lake, and Laguna Formations, and a lower aquifer system consisting of the Mehrten Formation. The formations are typically composed of lenses of interbedded sand, silt, and clay, interlaced with coarse-grained stream channel deposits (RD1001 GSA et al. 2021). Groundwater in the project area moves from sources of recharge to areas of discharge. Most recharge to the local aquifer system occurs along active stream channels where extensive sand and gravel deposits exist. As a result, the highest groundwater elevations occur near the American and Sacramento rivers and along the eastern edge of the Subbasin near the foothills from tributaries to the rivers.

Regional water quality analyses of the aquifers underlying the project area have shown that groundwater found in the upper portions of the aquifer is generally of higher quality than that found in the lower portions of the aquifer. Water from the upper portions of the aquifer (specifically the Laguna Formation) generally does not require treatment (unless high arsenic levels or anthropogenic contamination are encountered), other than disinfection for public drinking water systems. In contrast, the lower aquifer system (specifically the lower portions of the Mehrten Formation) generally contains higher concentrations of iron and manganese. The lower portions of the aquifer system may have higher concentrations of total dissolved solids (TDS), although

this portion of the aquifer also typically meets water quality standards as a potable water source. (RD1001 GSA et al. 2021). Locally dissolved gases may be present in the groundwater in the lower portions of the aquifer and are commonly associated with elevated concentrations of manganese and iron.

The larger groundwater subbasin in the vicinity of the CWD contains significant major groundwater contamination from Aerojet Rocketdyne, Inc. (Aerojet) facility located south of the American River. The groundwater contamination plume attributed to Aerojet's historic operations was first detected in groundwater south of the American River in 1979. Since that time, Aerojet has installed groundwater treatment facilities and has conducted other efforts to treat and control the plume migration. However, the plume was detected north of the American River near Fair Oaks in 2000 and another plume was detected north of the American River in 2005 near Ancil Hoffman Park in Carmichael. Two groundwater extraction and treatment (GET) facilities were constructed, one in Ancil Hoffman Park, designated by Aerojet as GET L-A and one at CWD's Bajamont Water Treatment Plant, locally known as the Bajamont Groundwater Treatment Facility, designated as GET L-B. The GET facilities were designed to remove N-Nitrosodimethylamin (NDMA) from groundwater via a network of extraction wells. Extracted groundwater is exposed to an ultra-violet (UV) light treatment technology approved by the US EPA and the California Department of Public Health for the removal of NDMA. Treated groundwater, when available, is used to irrigate the park and any excess is discharged to the American River. The facility has extra space should the treatment system require expansion (SWRCB 2021c). About 2018 a small-detached plume of NDMA was found further north of the GET L-B treatment plant, about 6,000 feet upgradient of the proposed project. This detached portion of the NDMA plume is currently not being remediated.

4.10.2 Discussion

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

The proposed project has the potential to impact groundwater and surface water quality during well construction and operation.

Temporary increases in the erosion of exposed soils during construction of the facility concrete pads and paving could result in minor on-or-off site water quality impacts, particularly if rainfall events occur during the construction phases. Chemicals used during construction (fuel, lubricants) could be released into the environment if spilled. *See* section 4.9 "Hazards and Hazardous Materials" for more details. CWD has identified several requirements and stormwater management practices that would be instituted during the construction phase. In coordination with the County, all construction activities would implement stormwater pollution prevention BMP designed to reduce potential impacts to water quality during construction of the project and in accordance with the guidelines of the Sacramento Stormwater Management Program as follows:

- Complying with the requirements of the SWRCB's "General Permit for Stormwater Discharges Associated with Construction Activity"

- Protecting adjacent properties and storm drainage facilities from the discharge of sediment or other contaminants from the construction site
- Preserving all existing vegetation onsite where possible
- Scheduling as much project work as possible during the dry season
- Stabilizing the construction access route
- Protecting storm drain inlets
- Using other Best Management Practices as necessary, including applying rainy season erosion controls, managing stockpiles, disposing of well development water properly, and correctly managing and disposing of construction wastes
- Maintaining all Best Management Practices
- Stabilizing the site after construction is complete

During construction of the proposed project, pump testing would occur to analyze the pumped water and confirm that it meets all drinking water standards. Clear water produced during well development and pump testing would be conveyed by temporary piping laid within CWDs easement to a storm drain inlet located on the northern side of Engle Avenue. The water would be discharged under CWDs existing permit with the SWRCB NPDES permit for Drinking Water Systems. Development water containing solids, including sand and silts, would be contained in settling tank(s) or by other means on-site before being discharged into the storm drain. All other waters would be contained and disposed of off-site at an appropriate facility in compliance with state law.

With respect to construction period water quality, due to the gentle site topography, the planned drainage system, the implementation of BMP and construction requirements as set forth above, NPDES permit requirements, and County and state well construction requirements, this would be a **less-than-significant** impact. No additional mitigation would be necessary beyond required well construction standards, identified BMP, and NPDES requirements.

During operation, implementation of the project could adversely affect groundwater or surface water. Effects to groundwater could occur if the well represented a preferred pathway for pollutant migration to groundwater. Wells that do not meet current well standards of construction may act as conduits for pollutant migration to the subsurface. However, construction and operation of the proposed well would be consistent with legally adopted standards and programs to protect the quality of groundwater in the subterranean aquifers underlying the site, as well as surface waters that may be impacted by the well facility discharges. The proposed project would consist of groundwater extracted at the project site and the use of a calcium hypochlorite disinfection system to treat the raw groundwater.

The potential impact of pumping the Winding Way Well on the migration of Aerojet's NDMA would be **potentially significant**. CWD contacted the Central Valley Regional Water Quality Control Board and informed them of the intent to construct and pump the Winding Way well.

Aerojet's consultants' groundwater modeling results (using particle tracking) showed that the Winding Way well location (modeled as CWD2) has the potential for capturing the NDMA plumes. Aerojet's (GET L-A) treatment facility has extra space should the treatment system require expansion, in the event the Winding Way Well pumping affects containment of the plume. The CWD Winding Way property is also large enough that should the detached portion of the plume migrate to the well and result in concentrations above the maximum contaminant level for drinking water, a well head treatment plant could be installed. The treatment does not use any chemicals other than UV light.

As mitigation for potential groundwater quality degradation that does not exceed water quality objectives, applicants seeking coverage under the proposed SWRCB General Order (Water Quality Order 2012-0010) for use of ASR wells are required to demonstrate that:

- Injected water complies with State Water Resources Control Board Division of Drinking Water (DDW) drinking water standards
- Certain minimum treatment or control measures will be implemented
- The project will not cause exceedance of any applicable water quality objectives

In summary, construction and operation of the proposed project as a source of drinking water would not violate any water quality standards or discharge requirements. The use of the Winding Way well ASR components could be **potentially significant**. Implementation of the following measures would ensure that implementation of the ASR component would not adversely affect groundwater quality.

Mitigation Measure HYDRO-1: Expansion of Treatment Facility or Construction of Well Head Treatment Plant

In the event that the Winding Way well begins to allow NDMA to migrate, Aerojet's (GET L-A) treatment facility has extra space should the treatment system require expansion, in the event the Winding Way well pumping affects containment of the plume. CWD's Winding Way property is also large enough that should the detached portion of the plume migrate to the well and result in concentrations above the maximum contaminant level for drinking water, a well head treatment plant could be installed. The treatment does not use any chemicals other than UV light.

Multiple existing monitoring wells owned by Aerojet are present between the Winding Way well site and the extent of the NDMA plumes to allow for detection of the migration and treatment extraction to control the plume or to start planning efforts to treat the groundwater at the Winding Way well.

Timing: Before construction.

Responsibility: CWD

Mitigation Measure HYDRO-2: Notice of Intent for Coverage under Water Quality Order 2012-0010

Prior to the operation of an ASR component to the Winding Way Well, the CWD will submit a Notice of Intent for coverage under Water Quality Order 2012-0010 to the Central Valley Regional Water Control Board together with all information required under Section D of the Order and obtain a Notice of Acceptance.

Timing: Before construction.

Responsibility: CWD

Mitigation Measure HYDRO-3: Best Management Practices for Operation of the Winding Way Well

Operation of the Winding Way Well ASR component shall meet the following standards:

- Injected water shall be of the quality, in accordance with General Waste Discharge Requirements (WDRs) for Aquifer Storage and Recovery Projects that Inject Drinking Water into Groundwater (WQO 2012-0010-DWQ), that will not result in exceedance of a water quality objective in compliance with the requirements of the Antidegradation Policy
- The Winding Way Well ASR project shall not negatively impact a groundwater cleanup project
- Injected water shall be treated and delivered to the injection well consistent with the requirements of all applicable CWD domestic water supply permits
- At a minimum, the following treatment and control measures shall be required:
    - Treatment (typically flocculation, filtration, and disinfection to remove suspended solids and pathogenic microorganisms) so that all injected water is potable.
    - Adequate characterization of source water quality. If source water quality is variable through the year, operate the ASR project to optimize use of better-quality water during injection cycles.
    - Design and operation of the Winding Way Well ASR component to minimize adverse aquifer conditions and geochemistry.
    - Additional treatment when necessary to fully protect all beneficial uses.
    - Perform groundwater monitoring of the injection/extraction well and any groundwater monitoring wells to evaluate the potential for groundwater quality changes.
    - Implementation of an Operation & Maintenance Plan.

Timing: Before and during construction.

Responsibility: CWD

Implementation of Mitigation Measures HYDRO-1 through HYDRO-3 would reduce impacts to less-than-significant by implementing alternative management practices in the event that the Winding Way well begins to allow NDMA to migrate, requiring the CWD to submit a Notice of Intent for coverage under Water Quality Order 2012-0010, and implement BMPs during operation to meet the CWD standards. Therefore, this impact is considered **less-than-significant with mitigation**.

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

CWD's 2020 Urban Water Master Plan states that water demand during drought years will need to be met through a conjunctive approach utilizing both surface and groundwater supplies. The proposed well would extract untreated groundwater, which would then be disinfected onsite and pumped into CWD's existing distribution system to augment existing surface water allotments and to provide for water emergency and fire flow purposes. The facilities constructed under the proposed project would directly serve to operate and maintain groundwater levels and storage in the groundwater subbasin for use in drought years through conjunctive use and water efficiency/conservation programs. The proposed project would have an overall **beneficial impact** on groundwater recharge.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

i, ii, iii, iv) Result in substantial erosion or siltation on- or off-site; Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite; Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or Impede or redirect flood flows?

Development of the proposed project would not substantially alter the existing drainage patterns of the site or surrounding vicinity or redirect flood flows.

The proposed project would create small areas of additional impervious surfaces on the wellsite. Implementation of the proposed project would act to replace the existing overland flow drainage pattern with surface and subsurface stormwater collection and routing. The new piping from the well will be placed into a trench dug within the property and connected to the existing onsite storm water drainage system. New piping will be installed to convey initial water pumped from the well, water from routine controlled testing and rehabilitation of the well, and stormwater runoff from the property to the existing County municipal storm drain system. No uncontrolled runoff would

discharge from the site that could result in erosion and siltation along adjacent surface drainageways.

Added impervious surfaces on the Winding Way Well site would be small in area (up to 22,000 square feet) but could increase the volume and peak flow of runoff generated on-site. The small acreage and the location of the proposed project site would reduce the potential for a substantial influence on flood volumes or routing. In addition, the project site drainage facilities and the existing off-site stormwater drainage system are designed to address existing and anticipated drainage and flooding. There would be **less-than-significant** impacts and no mitigation would be necessary.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

Because the proposed project is not located in a coastal area or near large reservoirs, the project area is not subject to flooding, tsunami, or seiche events. There would be **no impact** and no mitigation would be necessary.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Please refer to the discussion above under (a) and (b). The project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. There would be **no impact** and no mitigation would be required.

4.11 Land Use and Planning

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XI. LAND USE AND PLANNING. Would the project:					
a) Physically divide an established community?	☐	☐	☐	☒	☐
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒	☐

4.11.1 Environmental Setting

The County's General Plan Land Use Designation and Zoning Ordinance Designation are consistent with each other and designate the project site as residential or RD-2 (Very Low Density Residential) (Sacramento County 2021a). The project is surrounded by residential homes and the O'Donnell Heritage Park.

4.11.2 Discussion

a) Physically divide an established the community?

The project site will be located on APN 247-0010-005 in Sacramento C in an established community characterized by low-density residential development. The project site is surrounded by single-family homes and an adjacent Park. The proposed project would not disturb the residential environment and would not divide an established community. There would be **no impact** and mitigation would not be necessary.

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

The Sacramento County General Plan Land Use Designation and Zoning Designation, residential and RD-2, would remain unchanged. The RD-2 designation applies to areas appropriate for detached single dwellings, public and quasi-public uses, and similar and compatible uses. The onsite utility building is an allowed use as stated in the County's General Plan and Zoning Ordinance (Sacramento County 2020 and 2021c). Because the proposed project would not require any rezoning and is consistent with both the County's General Plan and Zoning Code, the project would have **no impact** and no mitigation would be necessary.

4.12 Mineral Resources

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XII. MINERAL RESOURCES. Would the project:					
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?	☐	☐	☐	☒	☐
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒	☐

4.12.1 Environmental Setting

The Project site is located within a Surface Mining and Reclamation Act of 1975 (SMARA) study area for Portland cement concrete-grade aggregate and kaolin clay resources in Sacramento County, California (DOC 1999). Based on information provided in the General Plan, the Project site is not located within a Mineral Resource Area (Sacramento County 2017).

4.12.2 Discussion

a, b) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State? Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

No active mining operations are present in, or near, the project area. Implementation of the proposed project would not result in the loss of availability of a known mineral resource or local important mineral resources recovery site. Thus, **no impact** would result, and no mitigation would be necessary.

4.13 Noise

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XIII. NOISE. **Would the project:**					
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or in other applicable standards of other agencies?	☐	☒	☐	☐	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☒	☐	☐	☐
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒	☐

4.13.1 Environmental Setting

The proposed project is located in a low-density residential neighborhood that currently experiences urban noise sources. There are no transit or on-street bicycle/pedestrian facilities near the project. Other than traffic noise, the predominate source of noise is from surrounding residences. The nearest sensitive receptors are residences located approximately 0.03 miles from the project site.

The Sacramento County Code states that construction noise is exempt from the County Noise Ordinance given that activates take place between 6 a.m. to 8 p.m. Monday through Friday, and 7 a.m. to 8 p.m. on Saturdays and Sundays. However, when an unforeseen or unavoidable condition occurs during a construction project and the nature of the project necessitates that work in process be continued until a specific phase is completed, the contractor or owner shall be allowed to continue work after 8 p.m. and to operate machinery and equipment necessary until completion of the specific work in progress can be brought to conclusion under conditions which will not jeopardize inspection acceptance or create undue financial hardships for the contractor or owner (Sacramento County 2021c).

4.13.2 Discussion

a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or in other applicable standards of other agencies?

Construction Noise

Construction of the proposed project would temporarily increase the ambient noise levels within the vicinity of the project site from the use of heavy machinery during construction activities. Before construction activities start, the project site would be secured with perimeter and interior fencing. Temporary sound barriers (minimum of 16 feet in height) would be erected around the perimeter of the property to reduce noise effects on neighbors. During operations, noise would be generated predominately from the production well motor. Construction noise would be short-term and temporary, while operation noise would continue periodically throughout the lifetime of the project.

All work at the proposed project site would be performed during the hours of 7:00 a.m. to 8:00 p.m. Monday through Friday with the only exception being during the drilling for the well. For this period of construction, continuous work (up to 24 hours per day) would be necessary in order to protect the integrity of the well structure. Drilling will continue for a period of approximately 7 days, with a few days off in between to allow workers to rest. CWD may provide alternate nighttime accommodations for neighbors if needed to mitigate noise impacts during drilling.

Although construction activities would for the most part occur only during daytime hours, uncontrolled construction noise could still be considered disruptive to residents adjacent to the proposed project. The list of construction equipment that may be used for project construction activities is shown in **Table 4-3** with typical noise levels generated at 50 feet from the equipment (reference levels).

Table 4-4. Construction Equipment and Typical Equipment Noise Levels

Type of Equipment	Typical Noise Levels (dBA) Maximum instantaneous sound level at 50 feet
Drill Rig	84
Dump Truck	76
Excavator	81
Pick-up Truck	75

Notes:
dBA = decibels;
Source: Construction equipment list based on Federal Highway Administration 2006, adapted by GEI in 2021

Because the well site is located in close proximity to residential properties and well drilling and construction could temporarily impact nearby sensitive receptors, this would be a **potentially significant** impact. The following mitigation measure has been identified to address this impact.

Mitigation Measure NOS-1: Implement Feasible Measures to Reduce Construction Noise Effects.

To reduce the effects of construction noise on affected residents, CWD shall implement the following measures:

- Except for drilling and constructing the well, all work necessary to implement the project would be performed between the hours of 7 a.m. and 8 p.m. Monday through Friday
- Temporary sound walls (minimum of 16 feet in height) will be installed around the work area to reduce noise impacts during drilling and construction operations.
- All equipment will be equipped with appropriate muffler devices to reduce the noise impacts of the drilling operations.
- The use of impact wrenches would be prohibited between the hours of 8 p.m. and 7 a.m.
- The CWD may provide alternate nighttime accommodations if needed to mitigate noise impacts during drilling.

Timing: Before construction.

Responsibility: CWD

Operational Noise

During operations, minimal noise would be generated from the use of the electric well motor, air conditioning, and backup generator (when on site). Operation of the vertical turbine pump motor would generate a constant noise level of 70 dBA measured at five feet, a **potentially significant** impact. Implementation of the mitigation measure NOS-2 would ensure that adverse noise levels would be reduced to below a level of significance.

Mitigation Measure NOS-2: Noise Attenuation Measures

The noise levels of motors and other facilities at the project site shall not exceed 50 dBA at the property lines. This ensures that Sacramento County Code standards are met for adjacent existing residential uses. At the time of well and equipment installation, adequate noise attenuation measures shall be provided to reduce noise levels to the 50-dBA standard. Motors and other noise producing equipment shall be shielded or enclosed to meet this standard. Compliance with this standard shall be demonstrated with pre- and post-construction noise measurements taken during test operations of project facilities.

The implementation of noise attenuation measures shall be to the satisfaction of the CWD.

Timing: Before construction.

Responsibility: CWD

Implementation of Mitigation Measure NOS-1 and NOS-2 would reduce potential significant impacts to less-than-significant by implementing measures such as shielding and limiting work hours, to reduce noise effects during construction and operation. Based on industry standards, installation of temporary sound walls would be expected to reduce sound levels by 15 decibels (dB), thereby reducing sound levels at the nearest residence to 60 dB equivalent continuous sound level (leq). Closed windows and walls of the residence would provide at least 25 dB of additional noise reduction, reducing sound levels within the home to approximate 35 dB leq. To add a margin of error to reflect varying sensitivities to noise, this analysis assumes that noise levels within the nearest residence would be less than 45 dB leq at night (10pm to 7am).

As set forth above, with implementation of Mitigation Measures NOS-1 and NOS-2, well drilling, construction operations, and long-term operations would meet the standards set forth in the Sacramento County Code. Therefore, impacts would be **less-than-significant with mitigation**.

b) Generation of excessive groundborne vibration or groundborne noise levels?

Ground vibration would only be caused during construction activities and would primarily occur during the well drilling phase. Vibrations would be detectable by nearby sensitive receptors for the approximately 7-day period of drilling. No adverse levels of vibration would be generated during project operations. With the implementation of Mitigation Measures NOS-1 and NOS-2, groundborne impacts would be reduced to **less-than-significant with mitigation**.

c) For a project located within-the vicinity of a private airstrip or-an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

The proposed project will not be located within the vicinity of a private airstrip or an airport land use plan, or within 2 miles of a public airport or public use airport. The nearest airport is the Sacramento McClellan Airport located approximately 3.5 miles northwest of the project site. Therefore, there would be **no impact** and no mitigation would be necessary.

4.14 Population and Housing

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XIV. POPULATION AND HOUSING. Would the project:					
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐	☐
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒	☐

4.14.1 Environmental Setting

The project site is located in the unincorporated community of Carmichael, Sacramento County, in a low-density residential neighborhood. In 2021, Sacramento County population estimates are approximately 1,561,014 (DOF 2021).

4.14.2 Discussion

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

Because the objective of constructing and operating the well is to provide the CWD with additional water resources to supplement surface water entitlements in the event of a drought or water emergency, and to provide additional resources for fire flow requirements, implementation of the proposed project would assist in the provision of planned housing and other urban uses. However, since the proposed project is for intermittent use only, and no increased water supply during normal conditions would result, no direct or indirect population growth beyond that currently anticipated by the County is expected to result from project completion. Thus, there would be a **less-than-significant** impact and no mitigation would be required.

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

There are no housing units on the project site. Because the site has no existing housing units, there would be no displacement of housing units or substantial numbers of people; replacement housing would not be required. There would be **no impact**, and no mitigation would be required.

4.15 Public Services

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XV. PUBLIC SERVICES. Would the project:					
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:					
Fire protection?	☐	☐	☐	☒	☐
Police protection?	☐	☐	☐	☒	☐
Schools?	☐	☐	☐	☒	☐
Parks?	☐	☐	☐	☒	☐
Other public facilities?	☐	☐	☐	☒	☐

4.15.1 Environmental Setting

Fire service is provided in Sacramento County by the Cities of Sacramento and Folsom, and eleven fire districts. The project site is located within the Sacramento Metropolitan Fire District service area. The Sacramento County Sheriff's Department provides local police protection services to the unincorporated area and provides specialized law enforcement services to both the incorporated and unincorporated areas. In Sacramento County, there are 15 public school districts providing K-12 education. Unincorporated Sacramento County is served by thirteen park districts and two County service areas. The Sacramento County Department of Waste Management and Recycling provides solid waste services to the unincorporated portions of Sacramento County.

4.15.2 Discussion

a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services: Fire protection? Police protection? Schools? Parks? Other public facilities?

Because the proposed project does not include any housing units, there would be no increase in population or the need for public services that would require the provision of new or physically altered governmental facilities. The proposed project driveway alternative may replace a portion of the existing parking lot, however, this would not impact the adjacent SJUSD enrollment center. There would **be no impact** and no mitigation would be required.

4.16 Recreation

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

4.16.1 Environmental Setting

The large grass fields at the project site may occasionally be used for youth sports or school activities. There are no other recreation areas located near the project site.

4.16.2 Discussion

a, b) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated or include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?

The proposed project is not growth inducing and would not involve the construction of new housing or facilities that would increase the use of neighborhood or regional parks, or related facilities. The construction of the proposed project would not require the development of new recreational facilities. Project construction would impede the use of the project site for youth sports during construction, this would be a **less-than-significant impact** and no mitigation would be required.

4.17 Transportation

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XVII. TRANSPORTATION. Would the project:					
a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☒	☐	☐
b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?	☐	☐	☒	☐	☐
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒	☐
d) Result in inadequate emergency access?	☐	☐	☐	☒	☐

4.17.1 Environmental Setting

The Sacramento Regional Transit operates bus and light rail transit in Carmichael. Additionally, Sacramento County adopted a Bicycle Master Plan in 2011 which includes recommended bicycle network improvements include developing a continuous bicycle network that includes Class I, II, and III bikeways (Sacramento County 2011).

4.17.2 Discussion

a and b) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?

During construction, all deliveries will be made during non-peak hours. The project site is located in an area designated as low-density residential where vehicle traffic is not significant, and the addition of construction traffic would not be substantial. Therefore, the proposed project would not add significant miles traveled during construction.

During project operations there would be no regular on-site employees. Under normal operations, once per week CWD personnel will visit the site to observe the well and equipment and make any necessary repairs. Upon completion of the project, about once per month, depending on how often the well is used, state required disinfection chemical will be delivered to the site and placed within

the onsite building. No transportation modification will be made or constructed as a result of the Project. Implementation of the project would not conflict with any applicable plans, programs, or policies related to transportation. There would be **less-than-significant** impacts, and no mitigation is necessary.

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

Implementation of the proposed project would not result in any changes to local roadways. The project site would be accessed via Winding Way, a paved public road. There would be no increase in hazards due to a geometric design feature or incompatible uses. There would be **no impact** and no mitigation would be necessary.

d) Result in inadequate emergency access?

No designated emergency routes are located in the vicinity of the project. The proposed project will remain open during all phases of the project. A site yard/staging area would be established, and a project trailer may be moved onto the construction site. Upon completion of the project, all the equipment and temporary facilities will be removed from the site. Therefore, there would be **no impact** and no mitigation would not be necessary.

4.18 Tribal Cultural Resources

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XVIII. TRIBAL CULTURAL RESOURCES.					
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC 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 cultural value to a California Native American tribe, and that is:					
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC Section 5020.1(k), or	☐	☒	☐	☐	☐
b) 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 PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐	☐

4.18.1 Environmental Setting

Consistent with the requirements of Public Resource Code Section 21080.3.1(b), also referred to as AB 52, the CWD has received a written request from the Wilton Rancheria to be notified of projects in which the CWD is the Lead Agency under CEQA. Therefore, on September 29, 2023, the CWD sent a letter offering project consultation to this tribe. The letter provides a brief description of the project and its location, the lead agency contact information, and a notification that the tribe has 30 days from receipt of the CWD's letter to request consultation. The 30-day response period concludes on October 30, 2023.

Should Wilton Rancheria request consultation on the project, a summary report of the consultation process shall be made an addendum to this IS/MND for review by the CWD Board of Directors prior to their consideration of the project.

4.18.2 Discussion

a, b) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC 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 cultural value to a California Native American tribe, and 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 PRC Section 5020.1(k)? 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 PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

A NCIC records search for cultural resources found no prehistoric archaeological resources on the project site or within a quarter mile radius that have been reported to the NCIC. In making an offering of consultation to registered tribes pursuant to PRC Section 21080.3.1, the CWD has met the initial requirements of AB 52; as of the publication of this document no tribes have responded.

It is possible that undiscovered tribal cultural resources may be encountered during project-related activities and therefore this impact is considered **potentially significant**. The following mitigation measure has been identified to address this impact.

> **Mitigation Measure CR-1: Address Previously Undiscovered Historic Properties, Archaeological Resources, and Tribal Cultural Resources.**
>
> Please see Section 4.5 "Cultural Resources" for a full description of this Mitigation Measure.

Implementation of Mitigation Measure CR-1 would reduce this potentially significant impact to less-than-significant by facilitating actions to reduce potential impacts to unknown prehistoric, historic resources, and archaeological resources in the event of an inadvertent discovery. Therefore, this impact is considered **less-than-significant with mitigation**.

4.19 Utilities and Service Systems

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

4.19.1 Environmental Setting

The SMUD generates, transmits and distributes electric power to Sacramento County. Natural gas service is provided in Sacramento County by PG&E. The Sacramento Regional County Sanitation and Sacramento Area Sewer Districts (SRCSD) provides wastewater collection and treatment in urban areas of the County. Twenty-eight water purveyors supply water to customers within Sacramento County. The CWD provides water services to the unincorporated community of Carmichael. Sacramento County has eight active permitted solid waste facilities, including three material recycling/transfer stations and one landfill that are publicly owned and operated. There

are also three material recycling/transfer stations and two landfills that are privately owned within Sacramento County.

4.19.2 Discussion

a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

The proposed project would include an electrical motor-driven pump, a disinfection system, and associated facilities to pump, treat, and transport water into the CWD potable water district system. During well development and pump testing, clear water produced will be conveyed by temporary piping laid within CWD's easement to a storm drain inlet on Winding Way, the County Road right-of-way, and west of the site. All other water would be contained and disposed of off-site at an appropriate facility in compliance with State law. For use during operations, an underground storm drainpipe will be installed to convey waste pumpage from the well, water from routine controlled testing and rehabilitation of the well, and stormwater runoff from the property to the existing County municipal storm drain system. The project would not result in a significant amount of wastewater as a result of the disinfection system or pumping process and would not require the construction or expansion of wastewater treatment. No utility services would need to be constructed or expanded as a result of the proposed project. Implementation of the proposed project would result in **less-than-significant** impacts, and no mitigation would be necessary.

b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?

The project would not require a water supply. The project is for the construction and operation of a new water well which will provide Carmichael with local, long-term reliable water supply. There would be **no impact** and no mitigation would be necessary.

c) Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

See response to question "a" above. The project would not result in a significant amount of wastewater as a result of the disinfection system or pumping process. The wastewater treatment provider (SRCSD) would be able to serve the project site. There would be **less-than-significant** impacts and no mitigation would be necessary.

d and e) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals? Comply with Federal, State, and local management and reduction statues and regulations related to solid waste?

The Project would not create substantial amounts of solid waste, and as such would not exceed the capacity of local infrastructure. No solid waste collection services would be provided to the project site. Drill cuttings will be generated during the drilling and the development process and will be disposed of at a landfill or reused at other District or developer site where clean-fill dirt is desired. Additional solid waste generated during well operations would be disposed of at the appropriate facility. In preparation for drilling, up to 4 trees would be removed from the property, and after the construction of the new on-site building, the areas surround the new building would be cleared and graded. All vegetation removed from the site would be disposed of at a licensed waste facility. The project would comply with federal, state, and local management and reduction statues and regulations related to solid waste. There would **be less-than-significant** impacts and no mitigation is necessary.

4.20 Wildfire

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

4.20.1 Environmental Setting

The unincorporated community of Carmichael is not located in a very high fire hazard severity zone (CalFire 2007 and 2008). The project area is within the Sacramento Metropolitan Fire District service area.

4.20.2 Discussion

a, b, c, and d) Substantially impair an adopted emergency response plan or emergency evacuation plan? 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? 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? 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?

The project site is not located in a very high fire hazard severity zone. The project site is flat. The proposed project includes the construction of an associated locked on-site building to house the hypochlorite and equipment, a pad to rest electrical equipment and instrumentation controls cabinet, and a small shade structure motor. After construction, there would be no increase in the number of users at the site, during construction there would be a minimal increase of users at the site. The project would not require any infrastructure that would exacerbate fire risk or risk of flooding, slope instability, or drainage changes. There would be **no impact** and mitigation would not be necessary.

4.21 Mandatory Findings of Significance

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XXI. MANDATORY FINDINGS OF SIGNIFICANCE. **Would the project:**					
a) Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐	☐
b) Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☒	☐	☐
c) Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐	☐

4.21.1 Discussion

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

As discussed above, the project has the potential to adversely impact air quality (construction dust, Section 4.3), biological resources (migratory birds, protected trees, Section 4.4), undiscovered

cultural resources (Sections 4.5, 4.18), hazards (Section 4.9 hazardous emissions), hydrology and water quality (pollutant runoff, water quality, Section 4.10) and noise (operations. Section 4.13). With the implementation of mitigation measures identified in this Initial Study (*see* below), all potential impacts would be reduced to a less-than-significant level. No significant or potentially significant impacts would remain. Therefore, the projects impact is considered **less-than-significant with mitigation**.

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

The projects would accommodate CWD, regional, and statewide environmental goals to provide for adequate sources of water. While the project would indirectly contribute to cumulative impacts associated with increased urban development in the CWD service, these impacts have previously been evaluated by the County and considered in the County's approval of the General Plan. The proposed project would not make a cumulatively considerable contribution to these cumulative effects, this would be a **less-than-significant** impact, and no mitigation would be required.

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

Because of existing regulation and monitoring of many potential environmental impacts, and with the implementation of mitigation measures identified in this report, the project would not have the potential to cause substantial adverse effects on human beings. This would be a **less-than-significant** impact, and no mitigation would be required.

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6.0 Report Preparers

Carmichael Water District

Greg Norris…….....Project Introduction, Project Description, Aesthetics, Agriculture and Forestry, Air Quality, Cultural Resources, Energy, Geology and Soils, Greenhouse Gas Emissions, Hazards and Hazardous Materials, Land Use and Planning, Noise, Mineral Resources, Population and Housing, Public Services, Recreation, Transportation, Utilities and Service Systems, Wildfire, and Mandatory Findings of Significance

GEI Consultants, Inc.

Ginger Gillin, CFP…….....Cultural Resources, Biological Resources, Document Review

Amy Wolpert, RPA…….....Cultural Resources

Jesse Martinez, RPA…….....Cultural Resources

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Appendix A – Project Site Photos