

Mitigation Monitoring and Reporting Program

La Sierra Aquifer Storage and Recovery Well Project

Prepared for:
Carmichael Water District

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December 2021

Prepared by:



Mitigation Monitoring and Reporting Program

Carmichael Water District

La Sierra Aquifer Storage and Recovery Well Project

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Table of Contents

Mitigation Monitoring and Reporting Program.....2

Table

Table 1. Mitigation Monitoring and Reporting Program for the La Sierra Aquifer Storage and Recovery Well Project3

Mitigation Monitoring and Reporting Program

In accordance with the California Environmental Quality Act (CEQA), the Carmichael Water District (CWA) prepared an initial study/proposed mitigated negative declaration (IS/MND) in December 2021 to provide the public and responsible and trustee agencies with information about the potential environmental impacts associated with implementation of the La Sierra Aquifer Storage and Recovery Well Project (hereafter referred to as the “project”).

The IS/MND concludes that implementation of the proposed project could generate potentially significant adverse effects on the environment. The IS/MND identifies feasible mitigation measures that avoid, mitigate, or reduce these impacts to a less-than-significant level.

Section 21081.6(a)(1) of the California Public Resources Code (PRC) and Section 15097 of the State CEQA Guidelines require a public agency to adopt a reporting and monitoring program on the revisions which it has required in the project and the measures it has imposed to mitigate or avoid significant environmental impacts on the physical environment.

This Mitigation Monitoring and Reporting Program (MMRP) will be used by CWD to ensure that mitigation measures identified in the MND are implemented as described in the MND and that their implementation is documented.

The MMRP is presented in tabular format. The table columns contain the following information:

Mitigation Number: Lists the mitigation measures by number, as designated in the MND.

Mitigation Measure: Provides the text of the mitigation measures, each of which has been adopted and incorporated into the project.

Timing/Schedule: Lists the time frame in which the mitigation measure is expected to take place.

Implementation Responsibility: Identifies the entity responsible for implementing the mitigation measure.

Completion of Implementation: CWD is responsible for reporting on implementation of the mitigation measures. The “Completion of Implementation” column is to be used by CWD to indicate when implementation of a mitigation measure has been completed. CWD, at its discretion, may delegate implementation responsibility or portions thereof to qualified consultants or contractors.

Table 1. Mitigation Monitoring and Reporting Program for the La Sierra Aquifer Storage and Recovery Well Project

Mitigation Number	Mitigation Measure	Timing/Schedule	Implementation Responsibility	Completion of Implementation
AQ-1	<p>SMAQMD Basic Construction Emission Control Practices</p> <p>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:</p> <ul style="list-style-type: none"> ▪ 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. 	Before and during construction	CWD or construction contractor(s)	
BIO-1	<p>Mitigation Measure BIO-1. Conduct Pre-construction Surveys for Active Raptor and Migratory Bird Nests and Implement Avoidance and Minimization Measures</p> <p>Vegetation removal, particularly tree removal, will be conducted between August 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–August 15), surveys to identify active raptor and migratory bird nests, including ground-nesting birds, shall be conducted by a qualified biologist within 14 days of construction initiation.</p> <p>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</p>	Before and during construction	CWD and construction contractor(s)	

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	<p>a qualified biologist. Activities permitted within and the size (i.e., 100 feet) of the exclusionary buffer may be adjusted through consultation with the California Department of Fish and Wildlife (CDFW).</p> <p>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.</p>			
BIO-2	<p>Mitigation Measure BIO-2. Implement Measures to Minimize Impacts to Roosting Bats.</p> <p>Any tree limbs and/or entire trees to be removed within the Project site shall be left grounded for one night following being cut, in order to allow any bats roosting in exfoliated bark and/or other crevices within the tree to escape before the trees or limbs are removed from the Project site (Bat Conservation Trust 2018).</p>	Before and during construction	CWD and construction contractor(s)	
BIO-3	<p>Mitigation Measure BIO-3: Comply with County of Sacramento’s Tree Ordinance</p> <p>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.</p>	Before and during project construction activities	CWD and construction contractor(s)	

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CR-1	<p>Address Previously Undiscovered Historic Properties, Archaeological Resources, and Tribal Cultural Resources.</p> <p>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.</p> <p>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.</p> <p>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.</p>	During construction	CWD and construction contractor(s)	
HYDRO-1	<p>Expansion of Treatment Facility or Construction of Well Head Treatment Plant</p> <p>In the event that the La Sierra 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 La Sierra well pumping affects containment of the plume. CWD's La Sierra 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, just UV light.</p> <p>Multiple existing monitoring wells owned by Aerojet are present between the La Sierra well site and the extent of the NDMA plumes to allow for detection of the migration and modification of the GET L-A treatment extraction to control the plume or to start planning efforts to treat the groundwater at the La Sierra well.</p>	Before construction	CWD	
HYDRO-2	<p>Notice of Intent for Coverage under Water Quality Order 2012-0010</p> <p>Prior to the operation of an ASR component to the La Sierra Well, the CWD will submit a Notice of Intent for coverage under Water Quality Order 2012-0010 to the Central Valley</p>	Before construction	CWD	

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	Regional Water Control Board together with all information required under Section D of the Order and obtain a Notice of Acceptance.			
HYDRO-3	<p>Best Management Practices for Operation of the La Sierra Well</p> <p>Operation of the La Sierra Well ASR component shall meet the following standards:</p> <ul style="list-style-type: none"> ▪ Injected water shall be of the quality in accordance with WQO 2012-0010-DWQ issued by the CVRWQCB ▪ The La Sierra 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: <ul style="list-style-type: none"> ○ 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 La Sierra 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. ▪ 	Before and during construction	CWD	

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NOS-1	<p>Implement Feasible Measures to Reduce Construction Noise Effects.</p> <p>To reduce the effects of construction noise on affected residents, CWD shall implement the following measures:</p> <ul style="list-style-type: none"> ▪ 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. ▪ If further mitigations are needed to mitigate noise impacts to residents during drilling, the CWD may consider providing alternate nighttime accommodations to impacted residents whose residences directly face the site and are within close proximity. 	Before construction	CWD	
NOS-2	<p>Noise Attenuation Measures</p> <p>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.</p>	During operation	CWD	

