

City of
SACRAMENTO

Final Environmental Impact Report

City of Sacramento
Groundwater Master
Plan Well Replacement
Program



SCH # 2022030709
February 2024

PREPARED BY:
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**City of
Sacramento**

February 2024

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ACRONYMS AND ABBREVIATIONS

Acronym/Abbreviations	Definition
2070CT	2070 central tendency climate change scenario
2070HD	2070 hot dry climate change scenario
AF	acre-feet
bgs	below ground surface
BMPs	Best Management Practices
CalEEMod	California Emissions Estimator Model
CARB	California Air Resources Board
CFGC	California Fish and Game Code
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CH ₄	methane
CMU	Concrete Masonry Unit
CNPS	California Native Plant Society
CO _{2c}	Carbon dioxide equivalent
CoSANA	Consumnes, South American and North American groundwater model
CRHR	California Register of Historical Resources
CVFPB	Central Valley Flood Protection Board
dBA	decibel (A-weighted)
DDW	California State Water Resources Control Board Division of Drinking Water
DTSC	California Department of Toxic Substances Control
DWR	California Department of Water Resources
ECOS	Environmental Council of Sacramento
EIR	Environmental Impact Report
GDE	Groundwater Dependent Ecosystem
GHG	Greenhouse Gas
GSA	Groundwater Sustainability Agency
GSP	Groundwater Sustainability Plan
GWMP	Groundwater Management Plan
HMMP	Habitat Mitigation Monitoring Plan

Acronym/Abbreviations	Definition
HSC	California Health and Safety Code
ISW	Interconnected Surface Water
lbs	pounds
MLD	Most Likely Descendant
MMRP	Mitigation Monitoring and Reporting Program
MT	Minimum Threshold
MTCO _{2e}	Metric tons of carbon dioxide equivalent
MO	Measurable Objective
NAHC	Native American Heritage Commission
NASb	North American Subbasin
NBHCP	Natomas Basin Habitation Conservation Plan
NHPA	National Historic Preservation Act
NOA	Notice of Availability
NOD	Notice of Determination
NOP	Notice of Preparation
NO _x	Nitrogen Oxides
NPDES	National Pollutant Discharge Elimination System
O&M	operations and maintenance
OHWM	ordinary high water mark
OSHA	Occupational Safety and Health Administration
PCBL	Projected Conditions Baseline
PM	particulate matter
POU	Places of Use
PRC	Public Resources Code
RWQCB	Regional Water Quality Control Board
SAsb	South American Subbasin
SCH	State Clearinghouse
SGMA	Sustainable Groundwater Management Act
SMAQMD	Sacramento Metropolitan Air Quality Management District
SMUD	Sacramento Municipal Utility District
SWHA	Swainson's Hawk

Acronym/Abbreviations	Definition
SWRCB	State Water Resources Control Board
UAIC	United Auburn Indian Community
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
UWMP	Urban Water Management Plan
VELB	valley elderberry longhorn beetle
VPFS	vernal pool fairy shrimp
WDR	Waste Discharge Requirement
WEAP	Work Environmental Awareness Program

1. INTRODUCTION

1.1 Project Summary

This Final Environmental Impact Report (EIR) assesses the potentially significant environmental effects of the City of Sacramento (City) Groundwater Master Plan Well Replacement Program (proposed Project, or Project). The purpose of the proposed Well Replacement Program is to replace City groundwater wells that are at the end of their useful life. Due to climate change, extremely dry years are expected to be more frequent and intense, and maintaining the City's capability to extract groundwater more reliably will allow the City to diversify its water supply portfolio. In addition, the frequency of wildfires within the upstream watershed is causing surface water treatment challenges. Climate and regulatory changes may impact future availability of the City's surface water supply, and thus, a reliable groundwater supply is needed to ensure long-term sustainability of both supplies.

The Groundwater Master Plan is a strategic guide for future planning that describes the role of groundwater in the City's water supply portfolio and presents a plan for managing groundwater in the context of long-term water supply security and implementation of the Sustainable Groundwater Management Act (SGMA) of 2014. The Groundwater Master Plan provides recommendations for changes to existing groundwater operations, new groundwater-related infrastructure, and potential conjunctive use alternatives to allow the City to reliably meet its long-term water supply demands. Based on these recommendations, specific potential groundwater projects are identified and prioritized for the City's consideration. Included in the Groundwater Master Plan is a program to replace the City's existing wells that are found to be at or near the end of their useful life. Replacement planning was found to be necessary because many of the current well locations are too small to accommodate same-site well replacement, and groundwater quality concerns impact or threaten the ability to utilize many of the City's existing wells. As such, new locations are required for most replacement wells.

As described in the Draft EIR, the proposed Project includes exploratory drilling, well drilling and equipping, installation of connections to the below ground drinking water distribution and sanitary sewer systems, and the destruction of up to 38 existing active and inactive wells that are being replaced.

The 38 replacement well sites are located throughout the City's water service area, which overlies the North American and South American Subbasins of the Sacramento Valley Groundwater Basin. Of the 38 proposed replacement well sites, 20 sites are located within the North American Subbasin and 18 sites are located within the South American Subbasin. This represents 11 new wells in the South American Subbasin total, compared to existing conditions in which there are six active and inactive wells.

The replacement well sites are proposed within residential, commercial, and industrial areas, schools, parks, and existing public facilities, such as existing City well sites, water storage facilities, and water treatment facilities. These well site locations were selected based on siting criteria in

the Groundwater Master Plan and subject to change based on the results of exploratory drilling and site-specific design.

1.2 Anticipated Project Approvals

The City, as well as local and State agencies, will rely on the environmental impact analysis presented in this EIR when issuing discretionary approvals associated with implementing the Project. Approvals from the City, as well as from the following agencies may be required:

- City of Sacramento – Encroachment Permit, Building Permit, Approval for Tree Removal¹
- Sacramento Metropolitan Air Quality Management District – Permit to Construct, Permit to Operate for emergency generators
- Sacramento County Environmental Management Department – Hazardous Materials Business Permit for storage of chemicals at well sites, California Accidental Release Prevention Program registration (if required for storage of treatment chemicals at well sites)
- Sacramento County Flood Control Agency – Encroachment Permit
- Sacramento County Regional Sanitation District – Discharges of groundwater to sanitary sewer or combined sewer system during construction; Discharges of backwash water to sanitary sewer during operation
- Central Valley Flood Protection Board (CVFPB) - Encroachment Permit, if any well, its associated facilities and/or construction staging areas are located within the CVFPB jurisdictional areas, including any encroachments onto the toe of a levee; also CVFPB approval if well construction and operation could be injurious to or interfere with the successful execution, functioning, or operation of levee
- Central Valley Regional Water Quality Control Board – NPDES Permit/ Waste Discharge Requirements (WDRs) for groundwater and/or test water discharges during construction (or coverage under General Permit)
- California Division of Drinking Water of State Water Resources Control Board – Amended Water Supply Permit

¹ Sacramento City Code 13.04.670 exempts the City from having to obtain a permit from Sacramento County, Environmental Management Department in order to drill or destroy a well so long as the well or pump is owned or operated by or on behalf of the City for municipal purposes.

- State Water Resources Control Board – National Pollutant Discharge Elimination System (NPDES) Construction General Permit for Storm Water Discharges associated with Construction Activities
- California Department of Toxic Substances Control – United States Environmental Protection Agency ID for any hazardous waste hauled from well sites
- United States Environmental Protection Agency – Risk Management Program registration for regulated substances exceeding reportable quantity threshold (20 Code of Federal Regulations Part 68 [68.130])

Because of their potential need to issue permits or approvals, the agencies listed above are considered responsible agencies in this EIR, pursuant to Section 21069 of the California Public Resources Code.

1.3 Requirements of Final EIR

As described in the California Environmental Quality Act (CEQA) and the CEQA Guidelines, public agencies are charged with the duty to avoid or substantially lessen significant environmental effects, with consideration of other conditions, including economic, social, technological, legal, and other benefits. As required by CEQA, this Final EIR assesses the significant direct and indirect environmental effects of the proposed Project, as well as the significant cumulative impacts that could occur from implementation of the Project. This Final EIR is an informational document only, the purpose of which is to identify the significant effects of the Project on the environment; to indicate how those significant effects could be avoided or significantly lessened, including feasible mitigation measures; to identify any significant and unavoidable adverse impacts that cannot be mitigated to less than significant; and to identify reasonable and feasible alternatives to the Project that would avoid or substantially lessen any significant adverse environmental effects associated with the Project and achieve the fundamental Project objectives.

Before approving a project, CEQA requires the lead agency to prepare and certify a Final EIR. The contents of a Final EIR are specified in Section 15132 of the CEQA Guidelines, as follows:

The Final EIR shall consist of:

- (a) The Draft EIR or a revision of the Draft.
- (b) Comments and recommendations received on the Draft EIR either verbatim or in summary.
- (c) A list of persons, organizations, and public agencies commenting on the Draft EIR.
- (d) The responses of the lead agency to significant environmental points raised in the review and consultation process.
- (e) Any other information added by the lead agency.

The lead agency must provide each agency that commented on the Draft EIR with a copy of the lead agency's proposed response at least 10 days before certifying the Final EIR.

1.4 Contents and Organization of Final EIR

This Final EIR will be used by the City as an informational document for the proposed Well Replacement Program. The Final EIR, in compliance with Section 15132 of the CEQA Guidelines, is organized as follows:

Chapter 1, Introduction. This chapter provides general information on, and the procedural compliance of, the proposed Project and the Final EIR.

Chapter 2, Responses to Comments. This chapter includes a list of those who provided comments on the Draft EIR during the public review period. This chapter also includes the comments received on environmental issues raised during the public review process for the Draft EIR, and the City's responses to these comments. Each comment is assigned a comment number that corresponds to the numbered response.

Chapter 3, Changes to the Draft Program Environmental Impact Report. This chapter contains a summary of changes made to the document since publication of the Draft EIR as a result of comments received. Revisions were made to clarify information presented in the Draft EIR; only minor technical changes or additions have been made. These changes and additions to the Draft EIR do not raise important new issues related to significant effects on the environment, and are insignificant as the term is used in Section 15088.5(b) of the CEQA Guidelines. This chapter describes the changes that were made and presents the textual changes made since public review of the Draft EIR. Changes are signified by ~~strikeout text~~ (i.e., ~~strikeout~~) where text was removed, and by underlined text (i.e., underline) where text was added.

Chapter 4, Mitigation Monitoring and Reporting Program. This chapter of the Final EIR provides the Mitigation Monitoring and Reporting Program (MMRP) for the Project. The MMRP is presented in table format and identifies Project mitigation measures as specified in the Draft EIR, the party responsible for implementing each mitigation measure, the timing for implementing each mitigation measure, and the monitoring and reporting procedures for each mitigation measure.

1.5 California Environmental Quality Act Review

Pursuant to Section 15082 of the CEQA Guidelines, a Notice of Preparation (NOP) dated March 25, 2022, was circulated to interested agencies, organizations, and individuals. The NOP was distributed to residents within a 500-foot buffer of each well replacement site, as well as published in the Sacramento Bee, and posted on the City's website. The NOP was uploaded to the State Clearinghouse (SCH) at the California Governor's Office of Planning and Research website. The SCH assigned a state identification number (SCH No. 2022030709) to this EIR.

The City held one public scoping meeting during the Notice of Preparation (NOP) review period to gather additional public input on the scope of the environmental document. The public scoping meeting was held virtually via Zoom on April 13, 2022. The meeting was open to web-based participation or by phone.

The 30-day public scoping period ended on May 25, 2022. Comments received during the 30-day public scoping period were considered during preparation of the Draft EIR. Comment letters were received from the following entities and were provided in Appendix A of the Draft EIR.

- Central Valley Regional Water Quality Control Board
- Department of Toxic Substances Control
- Native American Heritage Commission
- State of California – Natural Resources Agency, Department of Fish and Wildlife
- Tribal Historical Preservation Department, United Auburn Indian Community

Comments included requests to evaluate potential project impacts to biological resources, groundwater subbasins, hazards and hazardous materials, noise, and water quality. The environmental concerns and potential impacts raised in comment letters received during the public scoping period were discussed and addressed in the Draft EIR.

Pursuant to CEQA Guidelines Section 15105, the Draft EIR was circulated for a 45-day public review period, starting on April 20, 2023 and concluding on June 5, 2023. In accordance with Section 15087 of the CEQA Guidelines, a Notice of Availability (NOA) of the Draft EIR was distributed to interested agencies, organizations, and individuals, as well as residents within a 500-foot buffer of each well replacement site. The NOA was also published in the Sacramento Bee, posted on the City's Department of Utilities webpage and the Community Development Department webpage, and uploaded to the State Clearinghouse at the California Governor's Office of Planning and Research website. Comment letters were received from six entities. These comments are provided in Section 2.0 of this Final EIR along with responses to the comments.

2. RESPONSE TO COMMENTS

This chapter of the Final EIR includes a copy of all comment letters that were submitted to the City during the Draft EIR public review period and responses to those comments prepared in accordance with CEQA Guidelines Section 15088.

Table 1 lists the entities that submitted comments, and each comment letter has been coded with a number to facilitate identification and tracking. Individual comments and the responses to them were assigned corresponding numbers (e.g., 1-1, 1-2, 1-3). To aid readers and commenters, electronically bracketed comment letters have been reproduced in this document, with the corresponding responses provided immediately following each comment letter.

Table 2-1: Comments Received on the Draft EIR

Comment Letter Designation	Commenter	Date
1	State Water Resources Control Board	6/5/23
2	Environmental Council of Sacramento	5/25/23
3	Jim Walker, Resident	4/24/23
4	Central Valley Flood Protection Board	5/12/23
5	Sacramento Metropolitan Air Quality Management District	5/31/23
6	Sacramento Municipal Utility District	5/31/23



State Water Resources Control Board

June 5, 2023

Attn: Mr. Scott Johnson
City of Sacramento Community Development Department
300 Richards Blvd., Third Floor
Sacramento, CA 95811

CITY OF SACRAMENTO (CITY), ENVIRONMENTAL IMPACT REPORT (EIR) FOR THE GROUNDWATER MASTER PLAN WELL REPLACEMENT PROGRAM PROJECT (PROJECT); STATE CLEARINGHOUSE # 2022030709

Dear Mr. Scott Johnson:

Thank you for the opportunity to review the EIR for the proposed Project. The State Water Resources Control Board, Division of Drinking Water (State Water Board, DDW) is responsible for issuing water supply permits pursuant to the Safe Drinking Water Act. The Project is within the jurisdiction of the State Water Board, DDW’s Sacramento District (District). DDW Sacramento District issues a domestic water supply permit amendment to the public water systems serviced with a new or modified source of domestic water supply or new domestic water system components pursuant to Waterworks Standards (Title 22 CCR chapter 16 et. seq.). A public water system requires a new water supply permit amendment for changes to a water supply source, storage, or treatment and for the operation of new water system components including new distribution tanks equal to or over 100,000 gallons, new wells, and treatment systems. The City will need to apply for water supply permit amendments resulting from the implementation of this Project.

Comment
1-1

The State Water Board, DDW, as a responsible agency under CEQA, has the following comments on the City’s EIR:

- Table 2.5.1 Existing Municipal Production Well Inventory (PDF page 38-41) includes some discrepancies from the DDW Sacramento District record. Please work with the District to include the most updated information on the following:
 - The District has no record of use and permitting of Well 146. This well also appears to be listed for replacement as Well 5 (Well 146B) in Table 2.6-1. Please update the well to be replaced to reflect a well that was once used and permitted; provide information to the District office to show this well was once permitted for use and so may be used as a well to be replaced; or if Well 146 was used for other purposes besides domestic water supply, please indicate for what purpose.

Comment
1-2

E. JOAQUIN ESQUIVEL, CHAIR | EILEEN SOBECK, EXECUTIVE DIRECTOR

- The current number of wells stated in the document does not match the District’s record (PDF page 10-IS,77-IS, 36-EIR, 265-EIR). DDW records indicate the City’s current domestic water system is listed as having a total of 28 active wells, 17 inactive wells, and two pending wells. Please work with the District to come to agreement on the current number of domestic wells. Update the document to reflect, as needed. If the wells are used for other purposes besides domestic water supply wells, please indicate this.
- The City’s current well status and DDW’s current well status are not the same for some wells. DDW District records indicate no domestic water supply well’s status has changed since January 2023:
 - The following domestic water supply wells are considered to be active by DDW: 83, 123, 127, 144, 154
 - The following domestic water supply wells, not listed in the document, are not considered to be active by DDW and are not considered a ground water source: 117, 119, 132, 136, 150.
 - Please come to an agreement with the District on the current numbers and update the document, as needed, to reflect the current status.
 - Please also indicate any future plans to apply for or complete an application process for a change in the current well status of any of these wells, as needed.
- The EIR states “Destruction of up to 38 existing active and inactive groundwater extraction wells nearing the end of their useful life is not tied to the construction of proposed replacement wells, except where replacement wells are located at the same site (PDF page 58). Will the associated wells continue to be used? Will other older wells (117, 119, 132, 136, and 150) be decommissioned as part of the 4 per year target over the next 25 years (PDF page 58)? Will some of the wells be turned into monitoring wells? How will the well decommissioning be tracked to ensure wells are decommissioned within a reasonable time to ensure water quality protection?
- Update the Project description and relevant sections of the EIR, as needed based on discussions with DDW.

Comment 1-3

Comment 1-4

Comment 1-5

Comment 1-6

Comment 1-7

Comment 1-8

Comment 1-9

When the CEQA review process is completed, please forward the following items with your permit application to the State Water Board, DDW Sacramento District Office at DWPDIST09@waterboards.ca.gov:

- Copy of the draft and final EIR and Mitigation Monitoring and Reporting Plan (MMRP);
- Copy of any comment letters received and the lead agency responses as appropriate;
- Copy of the Resolution or Board Minutes adopting the EIR and MMRP; and
- Copy of the date stamped Notice of Determination filed at the Sacramento County Clerk’s Office and the Governor’s Office of Planning and Research, State Clearinghouse.

Comment 1-10

Please contact Lori Schmitz of the State Water Board at (916) 449-5285 or Lori.Schmitz@waterboards.ca.gov, if you have any questions regarding this comment letter.

Sincerely,

Lori Schmitz
Environmental Scientist
Division of Financial Assistance
Special Project Review Unit
1001 I Street, 16th floor
Sacramento, CA 95814

Cc:

Office of Planning and Research, State Clearinghouse

Ali Rezvani
District Engineer
Sacramento District

Response to Comment Letter 1

State Water Resources Control Board

Lori Schmitz, Environmental Scientist

June 5, 2023

Response to Comment 1-1: This comment states that City will need to apply for water supply permit amendments resulting from the implementation of this Project. This comment is noted. The City acknowledges the need for water supply permit amendments, which is noted in the Draft EIR, Section 2.0, Table 2.7-1 *Permits and Approvals*

Response to Comment 1-2: This comment notes discrepancies between the well information provided in Table 2.5.1 of the Draft EIR versus the State Water Resources Control Board (SWRCB) Division of Drinking Water (DDW) Sacramento District record, (i.e., no record of Well 146/replacement for Well 5) and requests updated information be provided to the DDW Sacramento District office, including the purpose of these wells. Well 146 is capped and disconnected from the distribution system, and noted as "inactive" in Table 2.5-1. Well 146 was previously operated as a domestic water supply well; the City is currently unable to locate a permit for this well, however it has been disconnected from the distribution system for over 28 years. Well 5 is replacement for Well 146 and will be installed in a new location. The City will submit an application to DDW to permit this new well. Existing Well 146 will be destroyed in accordance with the California Water Well Standards, Bulletin 74-90, and Supplement to Bulletin 74-81 which includes submittal of a plan and schedule to properly destroy the wells.

Response to Comment 1-3: This comment notes that the current number of wells stated in the Draft EIR does not match the DDW Sacramento District's record, and request that the City work with the District to come to agreement on the current number of domestic wells and their purpose. The City proposes to replace 38 active and inactive municipal water supply production wells as part of the Well Replacement Program. The City acknowledges there are additional wells that are not a part of the Well Replacement Program. These include wells 117, 119, 132, 136 and 150 that are no longer used for municipal water supply. Table 2.5-1 in Section 2.5 of the Draft EIR has been updated with the following new footnote:

¹ It is noted that the City has an additional five domestic water supply wells (117, 119, 132, 136, 150) not shown in Table 2.5-1, that are no longer in use and considered by DDW to be inactive.

Additionally, to avoid confusion, text in Draft EIR Section 3.9.1.2, Groundwater, under Groundwater Extraction (page 3.9-13) has been revised as follows:

The City has historically relied on groundwater to meet 15 to 20 percent of its water supply urban demands, making groundwater an important component of the City's water supply

portfolio. The City's remaining urban demand is met by surface water from the Sacramento and American rivers. ~~Currently, the City has 22 active municipal wells permitted by the DDW in the North American Subbasin and two (2) active municipal wells in the South American Subbasin permitted by DDW. Additionally, the City has four (4) active municipal wells permitted by DDW that are currently offline in the North American Subbasin and three (3) municipal wells pending permitting by DDW in the South American Subbasin. The list and the locations of the City's active wells in each subbasin are presented in Section 2 Project Description (Table 2.5-1 and Table 2.6-1). The list and locations of the replacement wells that would be operated under the proposed Project are also presented in Section 2 Project Description (Table 2.6-1 and Figure 2.6-1).~~

~~As of December 2022, eight of the City's municipal wells (Wells 83, 92, 111, 123, 127, 144, 154 and 159) are offline due to various water quality concerns. Wells 92 and 111 are not yet permitted by DDW.~~

These text changes are documented in Final EIR Section 3.1, Changes to the Draft EIR.

Response to Comment 1-4: This comment notes discrepancies between status of wells (active versus inactive) listed in the Draft EIR versus DDW's current records of well status, and requests the City update the EIR as needed, and indicate any future plans to request a change in status of any wells. The City acknowledges the discrepancies between DDW's record of the wells' operational status, versus the City's designated well operational status (as of January 2023) noted in the Draft EIR. Section 2.0 of the Draft EIR states there are 38 active and inactive municipal production wells operated by the City. As of January 2023 eight are considered inactive.

The City acknowledges that DDW's records of permitted wells do not currently coincide with the City's designated operational status (e.g. active versus inactive) of permitted municipal production wells. The City sometimes places municipal production wells on inactive status for further investigations or rehabilitation, but has not yet amended the permit to reflect the changed status. The City will work with DDW on any necessary permit amendments to reflect the City's current operational status of the wells. Accordingly, Table 2.5-1 in Section 2.5 of the Draft EIR has been updated with the following footnote:

² It is acknowledged that Wells 83, 123, 127, 144, 154 are still considered by DDW to be active. The City will submit applications to amend the DDW permits for these wells to reflect their current operational status as inactive.

The addition of this new footnote is documented in Final EIR Section 3.1, Changes to the Draft EIR.

Response to Comment 1-5: This comment asks if wells to be replaced will continue to be used. The older wells that will be replaced will not continue to be used. Once the replacement well is constructed and operational, the older well will be destroyed. Also, see Response to Comment 1-7 below.

Response to Comment 1-6: This comment asks if older wells (117, 119, 132, 136, and 150) will be decommissioned as part of the 4 per year target over the next 25 years. The City does plan to decommission and destroy wells that are no longer usable including Wells 117, 119, 132, 136 and 150. See also Response to Comment 1-7 below.

Response to Comment 1-7: This comment asks if wells to be replaced will be turned into monitoring wells. Following replacement, each existing well will either be destroyed or converted to a monitoring well. The City's decision to convert an existing well to a monitoring well would be made by the City on a case-by-case basis depending on a number of factors such as: 1) the condition of the well; 2) the location of the well relative to others in the Groundwater Sustainability Plan (GSP) Representative Monitoring Network(s); and 3) identified data gaps and/or the usefulness to support collection of additional data in support of GSP implementation.

Response to Comment 1-8: This comment asks how well decommissioning will be tracked to ensure wells are decommissioned within a reasonable time to ensure water quality protection. Well decommissioning (also referred to as well destruction) seals up old wells so that they cannot become a conduit for contamination, either from contaminated surface water entering the well and/or by cross-contamination from a contaminated upper zone into a lower zone. Existing wells will be destroyed per California Well Standards and the Sacramento County well ordinance once the replacement wells have been constructed and are operational. All existing well destruction will be permitted and conducted per County code requirements. County requirements include using only County-approved annular sealing materials and a County inspection of sealing material placement to ensure proper sealing and prevent the wells from becoming a conduit for contamination of groundwater and surface water. Additionally, both the County and the State Department of Water Resources (DWR) will require submittal of a well work completion report within 60 days of completion and will provide documentation of the well decommissioning process and timing.

Response to Comment 1-9: This comment request the Draft EIR Project Description and other relevant EIR sections be updated, as needed, based on resolving well information discrepancies with DDW. Based on DDW comments, footnotes have been added to Table 2.5-1 in the Draft EIR to reflect the permit status of existing wells, and also identifies wells that are no longer usable and not a part of the Well Replacement Program. The City will coordinate with DDW on amending permits to reflect current operational status of wells (see Responses to Comments 1-3 and 1-4).

Response to Comment 1-10: This comment requests that the MMRP, Draft EIR comments/responses, City resolution adopting the EIR and MMRP, and the clerk-stamped Notice of Determination (NOD) be forwarded to DDW. The City will forward the requested documents to DDW when they are completed.



Post Office Box 1526 | Sacramento, CA 95812-1526

May 25, 2023

Mr. Scott Johnson, Senior Planner
Community Development Department
300 Richards Blvd. Third Floor
Sacramento, CA 95811
Sent via email to srjohnson@cityofsacramento.org

Subject: Comments on Draft Environmental Impact Report, City of Sacramento Groundwater Master Plan Well Replacement Program (DEIR)

Dear Mr. Johnson:

We appreciate the opportunity to provide both specific comments and suggestions for improvement on the subject DEIR. The Environmental Council of Sacramento (ECOS) has participated in the development of the region's Groundwater Sustainability Plans and is currently participating with the City of Sacramento (City) and other Water Forum members in discussions to update the current Water Forum Agreement. As such we are cognizant of the region's efforts to address future water demands and the impacts of climate change.

ECOS's supports the City's efforts to modernize and improve its water system. However, we believe the DEIR document may not fully present the possible conditions the region and the City may face because of our changing climate. We suggest that the final EIR address the questions we provide below.

The DEIR's modeling in support of the impacts of the Well Replacement Program appears to rely upon the sustainability of the two impacted Subbasins – North American Subbasin (NASb) and South American Subbasin (SASb) – as reflected in each Subbasin's 2022 Groundwater Sustainability Plan (GSP). However, these GSP findings on future sustainability do not expressly evaluate a hot dry climate scenario. Both the American River Basin study and recent work done by the Water Forum have considered the impacts of this set of climate change conditions. Since the hot dry scenario is reasonably a bounding condition, we believe the City should treat this scenario as a planning boundary for the Project and address any impacts that may result if this scenario is experienced in the coming years. As such, it is appropriate to consider this climate change scenario in the potential impact's sections of the DEIR.

Comment
2-1

The Draft makes the statement that the groundwater Impact assessment is consistent with findings made by the potentially affected Groundwater Sustainability Agencies (GSA) in their 2022 GSPs. The technical modeling that accompanied the referenced GSPs was largely completed in the 2019-21 timeframe and conditions may well have changed since that time. For example, other new wells may have been permitted or are under consideration. This may especially be true in the SASb where, according to the DEIR, the amount of pumping is anticipated to increase substantially. We believe it is both appropriate and necessary that both Subbasin coordinating GSAs be formally queried regarding their current

Comment
2-2

assessment of subbasin impacts resulting from the City's well replacement project and that their assessments be included in the final document.

The DEIR makes use of certain modeling data that is tied to the GSP development work of the potentially affected GSAs. It is important to note that in the current annual reports from both GSAs there are significant differences between the modeling results and the actual monitoring data for several the monitoring wells. These differences lead to different conclusions regarding each Subbasin's status regarding groundwater levels and storage condition. The need to improve groundwater modeling/monitoring continues to be a priority in both Subbasin's GSP Projects and Management Actions. We believe this points to a need to continue to rely on actual monitored results. We suggest that reliance on the initial GSP modeling data without fully discussing its potential variability/shortcomings is a potential shortcoming of the DEIR. Additionally, monitoring results for the wells utilized in the modeling work are available through the fall of 2022 in each Subbasin's annual report to the state, and potentially the spring of 2023 monitoring results may be available as well. It would improve the DEIR if this information was presented to substantiate the groundwater impact findings.

Comment
2-3

Comment
2-4

Comment
2-5

ECOS has a long history of concern regarding the impacts of groundwater pumping on Groundwater Dependent Ecosystems (GDE) and surface/groundwater interactions. We also remain concerned that the monitoring and modeling used to monitor and manage both subbasins are not fully developed and vetted and require continuous assessment and improvement. The following specific areas within the DEIR punctuate our concerns in this important area.

Comment
2-6

1. Page 3.3-33 of the DEIR discusses operational impacts of pumping on wetlands. The document notes that the new wells will have screened depths similar to the old wells and concludes there is minimal potential for interconnection to surface waters and impacts to GDEs. However, the locations of most of the wells are in new areas. Replacement wells 24, 38, 5, and 6 are located quite close to the American River. Without specific information on the aquifer condition, pumping rates, and well construction, this conclusion is difficult to support.

Comment
2-7

Also, the DEIR's Appendix E attempts to describe impact to existing GDE and ISW monitoring wells, however, the actual project impacts are difficult to discern because the baseline 2021 GSP modeling seems to have included significant aspects of the proposed project. It isn't clear that the model results show the true impact of this project.

Comment
2-8

Page 2-17 indicates that drilling at new wells sites would "include depth specific monitoring wells to access the major aquifers underlying the site. Actual well designs and depths would be based on site-specific hydro-stratigraphy, soil types and location relative to ISW and GDEs". "During the exploratory drilling phase, if any well is identified as infeasible, a new well location would be identified using 2.5.1 Project Siting Criteria". The criteria found in 2.6.1 (not 2.5.1) do not provide additional information as to what would be "infeasible" nor what sort of analysis would be done to ensure no impact to ISW or GDEs, nor how that would be communicated to the public and the GSAs who are responsible for preventing unacceptable impacts.

Comment
2-9

In addition, the GSA approved GDE and ISW monitoring networks should be reexamined in light of the significant new pumping locations. New monitoring wells may be needed to observe the city's new impact. This can add significant costs to the GSA implementation programs. CDFW's letter on the initial scoping document requested that modeling of GDE impacts be verified by physical monitoring of GDEs. Any new monitoring well resulting from this significant shift in pumping locations should be included in the City's mitigation commitments, rather than placing the burden on the GSAs.

Comment
2-10

Comment
2-11

2. HYD-2 "Substantially decrease groundwater supplies or interfere with groundwater recharge such that the Project may impede groundwater management of the basin" is shown as Less than Significant and no mitigation is proposed. (ES-14) The document and analysis do not clearly support this statement. See specific comments below.

Comment
2-12

a. The Project will shift approximately half of the City's groundwater pumping from NASb to SASb. The document offers a confusing array of water years and pumping amount (this information would be much clearer in a tabular form of comparable amounts and years, as suggested by CDFW), but Appendix E shows SASb pumping of 1,761 Acre-feet (AF) in wet years which would increase with this Project to 43,029 AF in drier and critical water years. Appendix E shows an estimated average pumping increase in SASb from 4,217 AF to 19,661 AF. This is a significant increase in groundwater extraction from the SASb. Increased City pumping in the SASb reduces the GSAs ability to manage other existing and future demands on the basin. While included in the GSP analysis, it does not mean there is no impact. Increased pumping of over 40,000 AF in dry years is significant. This is especially evident in a hot dry climate scenario. We believe this reinforces the need for the City to closely consult with the GSAs on pumping impacts once aquifer information is obtained at the specific well drilling sites to determine if the City should institute additional measures to provide new monitoring wells or monitoring programs in support of the GSA sustainability needs.

Comment
2-13

Comment
2-14

b. There is no data provided in the DEIR showing existing wells in the areas where the 15 new SASb wells are planned to be located. This lack of data makes it impossible to discern if these new pumping centers will impact existing agricultural, industrial or domestic wells. Under SGMA these are beneficial users to be considered in the GSA definition of Sustainability. The GSPs were adopted under one set of pumping conditions, the changing well locations and pumping rates alter those assumptions. The DEIR should provide this information.

Comment
2-15

c. The DEIR text offers a confusing series of statements concerning GSP impacts. Page 2-10 states that the new well depths will be "much deeper than the Minimum Thresholds". Similarly, Page 3.9-9 states that existing and replacement wells are screened below the root zones of GDEs. The writers then imply that there will be no effect on existing GSP monitoring wells or GDEs. This is not necessarily the case. Wells with lower screened intervals in unconfined aquifer conditions can affect water levels in wells within the cone of depression. As stated above no analysis of new well cones of depression presented. Section 3.9 provides distances to known GDEs and potential GDEs, but there is no information on how far the well pumping influence zone is to understand the relationship. This information is necessary to determine impacts on local wells (agricultural, industrial, domestic and monitoring) as well as GDEs and Interconnected Surface Water (ISW).

Comment
2-16

Comment
2-17

Comment
2-18

d. Appendix E attempts to determine overall future well impact through modeling, however a confusing mix of future condition parameters and modeling assumptions appear to obscure the immediate and local effects of the project as well as those that can occur, should future supply projects not materialize. Wells could be drilled at 1-4 times per year, so SASb wells could be installed and operable in less than 4 years, if those areas are drilled first. The Appendix E modeling discussion appears to include new recharge projects and assumptions that would not accurately predict the near-term impacts. It is not clear what projects are included in the modeling and how likely they are to be realized.

Comment
2-19

3. The DEIR modeling assumed that any needed water not supplied by the existing well field in the no project alternative would be made up from surface water supplies. This "filling in" with new surface water supplies leads to the conclusion that there would be increased beneficial surface water flows and infiltration from surface water bodies in the proposed project alternative. It is not clear that these supplies are available to the City under their water rights and Water Forum agreements. Recent work by the Water Forum staff implies that climate change will impact the availability of surface water supplies. The DEIR

Comment
2-20

should be clear on the source of the modeled surface water. The technical memorandum discussion makes the modeling assumptions very difficult to discern.

4. The DEIR does not reflect current information developed for the Sustainable Groundwater Management Act (SGMA). The NASb and SASb 2022 GSP findings should be represented in the document (see page 2-3). Similarly, it is unclear why the document references the 2015 Urban Water Management Plan (UWMP) and not the 2020 UWMP.

Comment
2-21

Comment
2-22

5. The Governor’s Executive Order relating to SGMA requires that permitting agencies get verification from the GSAs that new or modified wells will not decrease the likelihood of achieving sustainability and that the proposal wells will not interfere with the production and functioning of nearby wells. It exempts those wells that are being used to provide public water supply systems. The Executive Order highlights the concerns of the GSAs. While not required in the current Order, the City should commit to the same type of coordination and analysis that other well owners are required to do. The DEIR provides the City’s analysis of future impact. The City should provide the analysis to the NASb and SASb and ask for their concurrence. They should also commit to working with the GSAs to ensure that individual well owners, other beneficial users of water and the GSA monitoring systems are not negatively impacted by the project.

Comment
2-23

Comment
2-24

As outlined above, the City’s Well Replacement Project has the potential to impact critical environmental resources, other well owners, and the tools relied upon to manage both basins – especially SASb. We suggest that the Draft include more field analysis and consultation with the GSAs to augment the current reliance on computer modeling. ECOS looks forward to continuing to work with the City on its efforts to modernize and improve its water system. We also appreciate and join with the City in efforts to support and move the development of the Water Forum 2.0 agreement forward to a successful conclusion.

Comment
2-25

Sincerely,



Ted Rauh, Chair
ECOS Water Committee

Response to Comment Letter 2

Environmental Council of Sacramento (ECOS)

Ted Rauh, Chair, ECOS Water Committee

May 25, 2023

Response to Comment 2-1: This comment states that the Draft EIR's groundwater modeling should consider the hot-dry climate change scenario in the evaluation of future sustainability. In the North American Subbasin (NASb) and the South American Subbasin (SASb) groundwater sustainability planning, a projected future scenario, referred to as the Projected Conditions Baseline (PCBL), with climate change was developed and analyzed in the sustainability assessment and the definition of the minimum thresholds. The PCBL with climate change includes the City of Sacramento Well Replacement Program in addition to other future projects and management actions. The PCBL with climate change incorporated adjustments to precipitation, stream flow, and potential evapotranspiration inputs based upon the American River Basin Study's 2070 central tendency (2070CT) climate scenario. Upon evaluations of various climate scenarios, the GSPs selected the 2070CT climate change conditions as the representative climate change scenario for groundwater sustainability planning because it has the highest probability and likelihood to be experienced.

The DWR released the assessments of the NASb and SASb GSPs and approved both GSPs on July 27, 2023. The DWR's determination concluded that the projected water budgets included in the GSPs, including the PCBL with the 2070CT climate change scenario, substantially comply with the requirements outlined in the GSP regulations. The Draft EIR's modeling analysis in support of the City's Well Replacement Program is consistent with the approved NASb and SASb groundwater sustainability planning for the future projected climate change conditions.

While the 2070CT scenario was selected in the GSP planning, a 2070 hot dry climate scenario (2070HD) was also simulated and analyzed under the approved GSPs as part of a sensitivity analysis to address uncertainty and the effects of a possible extreme condition and compared to the 2070CT scenario. Similar to the PCBL with the 2070CT, the 2070HD scenario also includes the City of Sacramento Well Replacement Program. The 2070HD scenario results showed an overall increase in pumping of approximately 2 percent above the 2070CT that is largely due to an increase in agricultural demand that is largely met from additional groundwater pumping.

For example, in the SASb, groundwater pumping increased by 4,700 acre-feet (AF) on an annual basis under the PCBL with the 2070HD relative to the PCBL with the 2070CT. The average annual change in groundwater storage is a deficit of 6,200 AF under the PCBL with the 2070CT climate change compared to a deficit of 9,400 AF under the PCBL with the 2070HD. The additional annual deficit of 3,200 AF estimated under the 2070HD is largely attributed to the increase in the SASb pumping due to the increase in agricultural demand. Since the City's service area is largely

urbanized, the City's groundwater pumping under the 2070HD is not significantly more than under the 2070CT and the majority of the pumping increase under the 2070HD is anticipated to be in the agricultural areas. Therefore, the effect of the 2070HD scenario on groundwater basin conditions is not anticipated to change the overall outcome of the City's modeling analysis in support of the Draft EIR modeling.

Response to Comment 2-2: The Draft EIR assesses conditions as of the date of the Notice of Preparation (NOP) which is March 25, 2022. The existing and projected conditions as evaluated in the Draft EIR modeling analysis rely on the data reported in the GSPs in order to be consistent with the groundwater sustainability planning efforts because the GSP implementation to achieve sustainability will be tracked based on the GSPs that were approved by the DWR as of July 27, 2023. The DWR assessment concluded that the historical, current, and projected water budgets included in the GSPs substantially comply with the requirements outlined in the GSP regulations.

For this Final EIR, the City has documented basin conditions after the GSP development to supplement the analysis in the Draft EIR. Specifically, the most recent data from the 2022 Annual Reports and 2023 Spring data were reviewed and assessed with respect to groundwater levels in the GSP representative monitoring network wells. As of Spring 2023, both the NASb and SASb GSP monitoring network in the vicinity of the City shows sustainable conditions without minimum threshold exceedances. This assessment of the recent data is now included as Attachment 1 to Appendix E of the Draft EIR and provided in Section 3.3.1 of this Final EIR.

Coordination with the Groundwater Sustainability Agencies (GSAs) took place as part of the GSP efforts both during the model development as well as the modeling analysis. The City's future pumping projections in the SASb and NASb were already included in the GSP PCBL scenario. Therefore, the effects of the City's pumping projections on the subbasin conditions were already incorporated in the GSP analysis. The PCBL scenario modeling approach and assumptions used in the two GSPs were presented to the GSAs and stakeholders in the GSP coordination and working group meetings. For example, the SASb GSP Working Group Meetings on October 16, 2020 and November 12, 2020 presented the projected conditions baseline assumptions, future urban demand and supply assumptions and projections, including the range of the City's projected pumping in the SASb by water year types. Comments from the GSAs were requested and incorporated into the baseline scenario analysis before the modeling assumptions were finalized.

In addition, the GSP baseline scenario results with the City's Program were presented to the GSAs during the SASb GSP Working Group Meetings on May 14, 2021 and June 18, 2021 and the NASb Coordination Committee Meetings on October 5, 2020, January 11, 2021, and March 10, 2021. These presentations included comparisons of the baseline scenario results with groundwater budgets, groundwater hydrographs, and/or groundwater contour maps to share the outcome of the baseline scenario analyses and receive feedback from the GSAs before the baseline scenarios were finalized.

Response to Comment 2-3: As the City's Well Replacement Program is implemented, the GSPs will monitor the basin conditions based on the actual monitoring data that are reported in the

GSP Annual Report updates to stay on track with the basin sustainability, consistent with the GSP implementation that includes annual monitoring, 5-year assessment and GSP updates.

The CoSANA model that was developed under the GSP effort and used in the determination of the GSP sustainability and minimum thresholds was calibrated to long records of observed data (for water years 1995 to 2018) prior to the applications of the existing and future conditions scenarios. While differences between the actual monitoring data and CoSANA model simulations are anticipated in the historical CoSANA model due to the assumptions inherent in the numerical models, the CoSANA model is the best modeling tool available with the latest data and technology for analyzing future projected conditions including the City's Well Replacement Program along with other future projects and management actions. As stated in the DWR assessment of the NASb and SASb approval determination, both GSPs are based on the best available science and information for analyzing the historical, current, and projected conditions that are generally consistent and substantially compliant with the GSP regulations.

In light of the City's Draft EIR assessment that is consistent with the CoSANA modeling conducted under the GSP combined with the continued monitoring efforts under the GSP implementation, the outcome of the Draft EIR analysis is not anticipated to change as the approach and findings are consistent with the NASb and SASb GSPs that were reviewed and approved by DWR.

Response to Comment 2-4: The GSP identified the need for a comprehensive model update as part of the 5-year assessment while groundwater levels are being monitored continuously and reported in the GSP Annual Report updates that are required in accordance with the GSP implementation plan. Therefore, the City recognizes the importance of the actual monitoring data to achieve the sustainability goal on an ongoing basis during the City's Well Replacement Program implementation.

In addition, as noted earlier, to supplement the City's Draft EIR groundwater assessment, the actual monitoring data for groundwater levels based on the 2022 Annual Report and Spring 2023 conditions have been included in the Final EIR from the GSP monitoring network in the vicinity of the City to assess most recent conditions after the initial GSP reporting (see Section 3.3.1 of this Final EIR). Based on the Spring 2023 conditions, following the three recent and consecutive dry years, the GSP monitoring wells show groundwater levels well above the minimum thresholds and do not show majority wells showing above the minimum thresholds without undesirable results per the NASb and SASb GSPs sustainability indicators.

In the NASb and SASb GSP implementation plans, continuous monitoring, data analysis and future model updates are important actions identified in both GSPs. DWR, in the determination of the GSP approvals, noted that the Plans adequately describe the proposed projects and management actions that are generally consistent and substantially compliant with the GSP regulations. The City will continue to coordinate with the GSAs in addressing the recommended corrective actions identified by DWR for continuing to fill data gaps and collecting additional monitoring data, and coordinating with resource agencies and interested parties to understand beneficial uses and

users that may be impacted by groundwater pumping, and potentially refine sustainable management criteria.

Response to Comment 2-5: As noted above, the actual monitoring data from the representative GSP monitoring network in the vicinity of the City has been included in this Final EIR based on the Annual Report 2022 findings and additional data from Spring 2023 water levels. (This information is included as Attachment 1 to Appendix E of the Draft EIR and is found in Section 3.3.1 of this Final EIR). As of Spring 2023 conditions, both the NASb and SASb GSP monitoring network in the vicinity of the City are on track with the sustainability goals without minimum threshold exceedances.

Response to Comment 2-6: The City appreciates ECOS' history and concern about groundwater impacts on GDEs and ISWs. As noted in the Draft EIR Section 3.9 and in various responses below, the GSPs will be implemented with annual monitoring and 5-year assessment and updates. Also, the City's wells will be replaced over a 15-year period in parallel with the continued GSP implementation and updates.

The City is also aware that DWR is developing guidelines for assessment of Interconnected Surface Waters (ISWs) in the GSP updates and implementation. The City will coordinate with the GSAs to address implications of the ISWs and Groundwater Dependent Ecosystems (GDEs) as additional updates to the GSPs take place.

Response to Comment 2-7: The well construction data and the proposed pumping rates for the City's proposed replacement wells were provided in Section 2.6 of the Draft EIR. The modeling analysis conducted under the GSP and in the Draft EIR takes into account the well construction data and pumping rates for the City's replacement wells.

As noted in the City's Groundwater Master Plan (GWMP), the conceptual well design for the intermediate replacement wells (wells with depths of 360 feet) will include conductor casing to a depth of 60 feet and annual seals to a depth of 200 feet. (The conceptual design for deep wells will also have conductor casing to 60 feet but will have much deeper annular seals). Both the impermeable conductor casing and annular seal will limit interactions between the well and shallower groundwater zones (less than 200 feet) resulting in minimal potential for impacts to ISW as well as GDEs (which typically root to 30 feet below the ground surface).

Furthermore, the City will monitor the basin conditions during the implementation of the City's Program in coordination with the GSAs according to the GSP requirements including the potential impacts to the GDEs.

Response to Comment 2-8: While the GSP analyzed the PCBL with the City's Well Replacement Program incorporated, for the purpose of the Draft EIR analysis, No Project Scenario representing the future conditions without the City's Program was also developed. The City's Program was evaluated and compared both against the No Project and the PCBL scenario under the GSP. As part of the Draft EIR analysis, (presented in Draft EIR Appendix E Figures 13, 14a, and 14b), average groundwater levels under the City's Program at the GSP monitoring network wells in the vicinity

of the City were compared against the No Project and GSP PCBL. The results show average groundwater levels were above the minimum thresholds established under the GSP.

Response to Comment 2-9: The City acknowledges that the Well Replacement Program siting criteria are found in Section 2.6.1 (not 2.5.1) of the Draft EIR and this correction has been noted in Final EIR Section 3.2, Changes to the Draft EIR.

New wells would be infeasible based on a number of criteria including if there were not transmissive strata (i.e., sands and/or gravels) of sufficient thickness at depths below 200 feet to produce the desired production rate for the well; the groundwater quality in the location required treatment for constituents such as arsenic, manganese, and such; and/or if the well, screened at the targeted location, would have the potential to impact the operation of nearby existing wells, ISWs or GDEs. The potential to impact nearby existing wells, ISWs or GDEs would be assessed using standard hydrogeologic analyses including estimation of the zone of influence the new well would generate at the targeted production rate.

The analysis to ensure no impacts to ISWs or GDEs would be conducted in coordination with the GSAs as part of the updates to the GSPs. Additionally, the monitoring and various other management measures required as part of the GSP and reported in an annual report to the GSAs are available to the public. Furthermore, there are required annual public meetings on GSP implementation

Response to Comment 2-10: The ISW representative monitoring networks in both the NASb and SASb have been approved by DWR as part of the July 2023 GSP approvals and were used for the modeling analysis in the Draft EIR. These networks will be monitored regularly with the data reported as part of the SGMA-mandated annual reporting process. This same annual reporting process will also be used to modify the representative monitoring networks as needed to address data gaps and improve coverage. Additionally, both the GSPs and the representative monitoring networks contained within them will be reassessed and revised, if necessary, as part of the 5-year GSP assessment process. Updates and/or additions to the representative monitoring networks are part of the GSP implementation process for which the GSAs have accepted the responsibility for funding.

Response to Comment 2-11: The City's proposed Program was already incorporated in the GSP modeling analysis. Therefore, the modeling findings of the Draft EIR and the shift in pumping in the SASb were already incorporated in the GSP modeling and sustainability assessment. As a result, the anticipated groundwater basin response in the SASb with the City's Program is consistent with the GSP findings and the sustainable management of the basin.

The SASb GSP has established a number of monitoring network wells within the City's service area where groundwater conditions are monitored continuously and reported in the Annual Reports under the GSP implementation. While DWR recommended corrective actions to clarify some aspects of the SASb monitoring network, DWR concluded that the description of the monitoring network included in the Plan substantially complies with the requirements outlined in the GSP

Regulations as the Plan describes sufficient detail about the monitoring network that promotes the collection of data of sufficient quality, frequency, and distribution to characterize groundwater and related surface water conditions both in the SASb and evaluate changing conditions that occur through Plan implementation.

Furthermore, as the GSP implementation moves forward, the effectiveness of the GSP monitoring network will be evaluated proactively as additional data and information is collected. With the NASb and SASb GSP monitoring networks in place and no additional monitoring is warranted at this time within the City, in the event additional monitoring wells are required to assess the sustainable management criteria within the City, the City will take responsibility to design and install future monitoring wells within the City of Sacramento service area, in coordination with the GSAs.

Response to Comment 2-12: The City's Well Replacement Program was already included in the GSP analysis for the sustainability determination and setting the minimum thresholds. Therefore, the Program is consistent with the GSP findings and does not impose additional pumping beyond what was already analyzed under the GSP.

While the City's Draft EIR analysis demonstrated "Less than Significant and no mitigation", in the event that future GSP monitoring efforts demonstrate the City's Well Replacement Program would cause significant and unreasonable impacts to other beneficial uses and users of groundwater during the Program implementation, the City will monitor and adaptively manage groundwater pumping and operations to sustainably manage groundwater basin within its jurisdictional areas in compliance with the sustainability goals set forth in the NASb and SASb GSPs. The City and GSAs would implement management actions necessary to prevent significant and undesirable results.

Response to Comment 2-13: The City's Well Replacement Program proposed pumping amounts as analyzed in the GSP and Draft EIR reflect variations in the conjunctive use of surface water and groundwater by hydrological water year types, essentially providing more surface water during wet years and reliance on groundwater during dry periods. These variations of groundwater pumping by hydrological conditions and the conjunctive use of surface water and groundwater were already incorporated into the GSP modeling analysis and were considered in the determination of the GSP sustainability goals.

In addition, the CoSANA GSP future scenario (PCBL) and the Preferred Project Scenario analyzed in the Draft EIR are essentially the same, both incorporating other existing and future demands combined with the City's projected future demands and supply projections, including the City's pumping projections in the SASb. Therefore, the City's proposed pumping in the SASb is consistent with the GSP findings for the sustainability determination and does not impose any additional pumping stress on the SASb beyond what was already analyzed under the GSP assessment.

The Draft EIR presents a summary of the City's pumping amounts in the NASb and SASb and total pumping for the Existing Conditions, No Project and Preferred Scenarios (Appendix E, Tables 4, 5, and 6). These summary tables are intended to provide the ranges of pumping by water year types. In addition to the summary tables with the pumping ranges, the Draft EIR presents detailed information about the City's pumping projections with the annual pumping in the NASb and SASb and total annual pumping over the entire 50-year hydrological period (Appendix E, Figures 6, 7, and 8, and 9). Similar to the summary tables, the annual pumping amounts are also presented for the Existing Conditions, No Project and Preferred Scenarios. The figures with the annual pumping amounts show details for the upper and lower ranges of pumping and the frequency of pumping ranges over the 50-year model simulation period. As stated above, the City's pumping volumes in the SASb and the pumping variations by hydrological conditions (i.e., water years) are consistent with the City's pumping amounts incorporated into the GSP modeling analysis that was used in the determination of the GSP sustainability goals.

Furthermore, as stated above, the DWR approved both the SASb and NASb GSPs and concluded that both the existing and future projected water budgets substantially comply with the GSP regulations. DWR also stated that the SASb GSP's approach to the sustainable management criteria is commensurate with the level of understanding of the Subbasin and includes adequate information to understand the GSAs' process and rationale.

Response to Comment 2-14: The City's pumping projections were already included in the determination of the sustainability criteria and the minimum thresholds under the NASb and SASb GSPs. As stated above, the DWR approved both GSPs and concluded the projected water budgets as presented in the GSPs are in compliance with the GSP regulations. In addition, the GWMP was provided to the preparers of the GSP in both NASb and SASb, which included the City's future projected groundwater pumping.

Furthermore, in the event that the City's Well Replacement Program would cause undesirable results during the future Program implementation, the City will take proactive adaptive measures in managing groundwater pumping and will have additional monitoring in support of the GSP to ensure the Program will operate within the GSP requirements.

Response to Comment 2-15: The SASb GSP defined the sustainability goal "to protect and ensure the long-term viability of groundwater resources for urban, domestic, agricultural, industrial, and environmental beneficial users of groundwater". In the determination of the DWR's approval of the SASb GSP, DWR concluded that the Plan substantially complies with the GSP regulations for the sustainability goal for protecting groundwater for all potential uses and users. As the City's Program was already included in the sustainability goal and the minimum thresholds under the SASb GSP analysis, the GSP findings and the Draft EIR assessment are essentially the same for protecting groundwater resources for all other beneficial users in the subbasin.

In addition, the CoSANA model that was used both for the GSP analysis and City's groundwater assessment incorporates other groundwater users in the vicinity of the City utilizing the latest and

best available data. DWR's review and approval of the SASb GSP also included the CoSANA model approach, assumptions, and results.

Response to Comment 2-16: To clarify, the text in the Draft EIR provides the depths for the deep replacement wells relative to the minimum thresholds in depths below ground surface at the GSP monitoring well locations in the Project vicinity to highlight that the replacement wells would be targeting deeper portions of the aquifer system. The replacement well depths specified in the Draft EIR will be much deeper than shallow portions of the aquifer system where any direct connections to GDEs and ISWs would be expected. Text in the Draft EIR on page 2-10 has been revised accordingly to provide this clarification, and reads as follows:

All of the proposed wells both in the North and South American Subbasins have depths substantially deeper than the ~~Minimum Thresholds established at the GSP well locations~~ shallow portions of the aquifer system where direct connections to Groundwater Dependent Ecosystems (GDEs) and interconnected surface waters (ISWs) would be expected. The proposed wells in the North American Subbasin have depths ranging from 255 feet to 1,000 feet below ground surface (bgs). ~~These depths are much deeper than the Minimum Thresholds at the GPS well locations in the Project vicinity which range from 31 to 85 feet bgs.~~ Similarly, the proposed City of Sacramento wells in the South American Subbasin have depths ranging from 314 to 1,200 feet bgs. ~~These depths are much deeper than the Minimum Thresholds at the GSP well locations in the Project vicinity which range from 44-55 feet bgs.~~ The depths of the GSP monitoring wells in the Project vicinity range from 45 to 220 feet bgs in the NASb and from 72 to 382 feet bgs in the SASb. Design of each well would be based on site-specific hydro-stratigraphy, soil types, and location relative to ISW and GDEs to ensure the wells will be operated consistent with the GSP requirements without impacts to ISWs or GDEs.

These text revisions are documented in Final EIR Section 3.1, Changes to the Draft EIR.

Response to Comment 2-17: The modeling analysis takes into account the effects of all of the proposed wells collectively with respect to the well depths and simulates the anticipated drawdown from the new wells. This information can be compared to the location and design of existing wells to determine if there would be any impacts to the existing wells from the new wells. Any analysis required by the GSAs and Sacramento County to obtain the required well construction permits will be conducted using standard hydrogeologic analyses, such as estimating the zone of influence of the new well at the targeted production rate, to confirm no anticipated impacts to existing wells.

Response to Comment 2-18: As noted in Response to Comment 2-7 (above), the GWMP specifies that the conceptual well design for the intermediate replacement wells (wells with depths of 360 feet) will include conductor casing to a depth of 60 feet and annular seals to a depth of 200 feet. (The conceptual design for deep wells will also have conductor casing to 60 feet but will have much deeper annular seals). Both the impermeable conductor casing and annular seal will limit interactions between the well and shallower groundwater zones (less than 200 feet) resulting in

minimal potential for impacts to ISWs as well as GDEs (which typically root to 30 feet below the ground surface).

Additionally, the modeling analysis takes into account the effects of all of the proposed wells collectively with respect to the well depths, and simulates the anticipated drawdown from the new wells. This information can be compared to the location and design of existing wells to determine if there would be any impacts to the existing wells from the new wells. Any analysis required by the GSAs and Sacramento County to obtain the required well construction permits will be conducted using standard hydrogeologic analyses, such as estimating the zone of influence of the new well at the targeted production rate, to confirm no anticipated impacts to existing wells.

Response to Comment 2-19: The GSP analysis and the Draft EIR evaluated the same future projects and near and long-term potential impacts as a result of those projects using the CoSANA model as the basis. As such, the modeling approach and assumptions used for the future conditions are similar between the GSP efforts and the Draft EIR. More specifically, the City's Preferred Project evaluated under the Draft EIR and the GSP's PCBL scenario are similar as demonstrated by similar model estimates of the change in storages in the SASb (Draft EIR Appendix E, Figures 10 and 11) and similar average groundwater levels at the GSP monitoring network wells in the vicinity of the City (Appendix E, Figures 14a and 14b). The future projects included in the CoSANA model in the GSP PCBL are documented under the GSP, and the PCBL key assumptions are summarized in the Draft EIR (Appendix E, Table 1).

Furthermore, the Draft EIR analysis evaluated the City's Program both relative to the existing conditions baseline (without future projects) and No Project Scenario with other future projects but without the City's program. The groundwater assessment of the City's Program in support of the Draft EIR was consistent with the GSP baseline scenarios and the minimum thresholds established under the two GSPs.

Response to Comment 2-20: Surface water sources assumed in the Draft EIR modeling analysis are consistent with the City's supply sources as reported in the City's UWMP, consistent with supply projections under the GSP efforts, and consistent with the City's water rights.

The City has extensive existing surface water entitlements, consisting of five appropriative water right permits issued by the SWRCB, pre-1914 rights, and a water rights settlement contract with the United States Bureau of Reclamation (USBR). These water rights allow the City to divert water from the Sacramento and American Rivers. The City's current authorized Places of Use (POU) for the Sacramento River includes all the land within the City limits. Based on these water rights and entitlements, the City has ample existing surface water supplies to meet existing and projected needs. The City's proposed Well Replacement Program offers additional opportunities by using surface water and groundwater in a conjunctive use context that would result in more efficient use of both resources.

In the absence of the City's Program, the City would operate as it was, based on the historical and current use of surface water. The Draft EIR analysis demonstrated the City's proposed Well

Replacement Program is anticipated to provide significant benefits to the streams with more surface water remaining in the streams under the Project compared to current conditions.

Response to Comment 2-21: As noted earlier, to supplement the City's Draft EIR groundwater assessment, the actual monitoring data for groundwater levels based on the 2022 Annual Report and Spring 2023 conditions have been included in the Final EIR from the GSP monitoring network in the vicinity of the City to assess most recent conditions after the initial GSP reporting (see Section 3.3.1 of this Final EIR).

Response to Comment 2-22: At the time of the GSP development, 2020 Urban Water Management Plans (UWMPs) were not yet available. Therefore, 2015 UWMPs and other local general plans were considered to reflect the existing and future projections (2035 or 2045). However, during the development of the demand and supply data collections for the CoSANA model development, data compiled were shared with individual urban water suppliers and revisions were made in coordination with agencies. The Draft EIR analysis is consistent with the GSP approach; thus, references were made to the 2015 UWMP as the source of information.

In the determination of the DWR's approval of the NASb and SASb GSPs, the DWR concluded that the historical, existing, and future projected water budgets substantially comply with the GSP regulations.

Response to Comment 2-23: The City's replacement wells would be exempted from the written verification requirement from the GSAs as the City's replacement wells will provide groundwater in the public water system. The Executive Order (N-3-23), effective as of February 13, 2023, notes that these requirements do not apply to permit wells that will exclusively provide groundwater to public water supply systems as defined in section 116275 of the Health and Safety Code.

The City will follow the necessary permitting procedure and also coordinate with GSAs to ensure the replacement wells will be operated consistently based on the requirements set forth under the NASb and SASb GSPs for sustainable management of the subbasins.

Response to Comment 2-24: As described above in response to the comment 2-2, the City's pumping projections in the NASb and SASb and the effects of those pumping projections on the subbasin conditions were already incorporated in the GSP PCBL scenario. Therefore, the City's Program was accounted for in the determinations of the minimum thresholds set forth under the GSP. As stated above, the PCBL scenario modeling approach and assumptions and the scenario results were presented to the GSAs and stakeholders in several GSP coordination meetings and workshops that took place between October 2020 and June 2021. The scenario results were presented and comments from the GSAs were requested and incorporated into the modeling analysis before the baseline scenarios were finalized.

Response to Comment 2-25: As stated above, the City's Well Replacement Program was already included in the NASb and SASb GSP determinations of the sustainability and minimum thresholds and the Program does not impose potential impacts beyond what was already evaluated,

especially in the SASb. In addition, DWR approved both the GSPs as part of the July 27, 2023 determination.

Furthermore, as noted earlier, the actual monitoring data for groundwater levels based on the 2022 Annual Report and Spring 2023 conditions have been included in the Final EIR from the GSP monitoring network in the vicinity of the City to assess most recent conditions after the initial GSP reporting (see Section 3.3.1 of this Final EIR). In light of the most recent data showing sustainable subbasin conditions near the City, the outcome of the Draft EIR groundwater assessment that is consistent with the GSP findings remains the same.

The City will continue to monitor surface water and groundwater resources in coordination with the GSAs and continue to perform field investigations and exploratory drillings as part of the program implementation as the individual replacement wells are designed.

From: [Jim Walker](#)
To: [Scott Johnson](#)
Subject: deir master well project comment
Date: Monday, April 24, 2023 4:36:17 PM

I support the project. I own property in Sacramento that my daughter lives in.

May I suggest the city look into the possibilities of engineering aquifer restoration, and increased groundwater storage. The neighboring city of Roseville has had aquifer recharging for many years now. Perhaps they could share some lessons learned.

Comment
3-1

James Walker
3301 Green Park Lane
Carmichael, CA 95608

Jim Walker, Realtor
DRE# 00881401
Ist American Realty
916.772.1212 call or text
916-797-6794 (Jeni)
5740 Windmill Way Suite 1
Carmichael, CA 95608
jim.sells.houses@gmail.com

<http://jimwalker.metrolistpro.com>

Response to Comment Letter 3

Jim Walker, Resident

April 24, 2023

Response to Comment 3-1: This comment suggests the City look into the possibilities of engineering aquifer restoration, and increased groundwater storage, such as the neighboring city of Roseville. There are generally two types of aquifer recharge and recovery programs:

- 1) Direct method by using a well or a recharge pond, where water is directly recharged to the aquifer system during times when surface water is available (wet periods) and withdrawn during period that groundwater is needed (dry periods).
- 2) Indirect method, often called in-lieu recharge, where available surface water is used for water supply and groundwater use is reduced, thereby leaving groundwater in aquifer storage.

While municipalities such as Roseville have opted to invest in facilities for direct recharge and recovery, the City of Sacramento has historically operated its surface water entitlement in a manner which yielded less use of groundwater, resulting in recharge of the aquifer in an indirect method. However, the City is planning to implement a conjunctive use operation of groundwater and surface water as part of the Sacramento Regional Water Bank, that will include among other facilities, an ASR program for direct recharge of the groundwater basin. (See North American Subbasin GSP Section 9.2, Projects and Management Actions Table 9-2, Supplemental Projects). The North American Subbasin GSP can be found at the following link: <https://portal.nasbgroundwater.org/service/document/download/133>.

CENTRAL VALLEY FLOOD PROTECTION BOARD

3310 El Camino Ave., Ste. 170
SACRAMENTO, CA 95821
(916) 574-0609 FAX: (916) 574-0682



12 May 2023

Scott Johnson
300 Richards Blvd., Third Floor
Sacramento, CA 95811

Subject: Comments on the City of Sacramento Groundwater Master Plan Well Replacement Program (SCH No. 2022030709)

Dear Mr. Johnson,

The Central Valley Flood Protection Board (Board) appreciates the opportunity to comment on the Draft Environmental Impact Report (DEIR) for the proposed City of Sacramento Groundwater Master Plan Well Replacement Program (proposed project). The DEIR was prepared to disclose and address potential environmental impacts associated with the proposed project. The proposed project is located in Sacramento County and involves the replacement of 38 municipal groundwater wells throughout the City of Sacramento

Responsibility of the Central Valley Flood Protection Board

The Board is the State's regulatory agency responsible for ensuring appropriate standards are met for the construction, maintenance, and operation of the flood control system that protects life, property, and habitat in California's Central Valley. The Board serves as the State coordinator between local flood management agencies and the federal government, with the goal of providing the highest level of flood protection possible to California's Central Valley.

The Board operates under authorities as described in California Water Code (Water Code), which requires the Board to oversee future modifications or additions to facilities of the State Plan of Flood Control (SPFC). In addition, pursuant to assurances provided to the United States Army Corps of Engineers (USACE) by the Board on behalf of the State, the USACE Operation and Maintenance Manuals, Code of Federal Regulations, Title 33, § 208.10, and United States Code, Title 33, § 408, the Board is responsible for the operation and maintenance of the SPFC facilities. The USACE requires the Board to serve as the lead non-Federal sponsor for projects to improve or alter facilities of the SPFC pursuant to Code of Federal Regulations, Title 33, § 408. The State's objectives include fulfilling the USACE's expectations pursuant to the assurances provided to the USACE.

Comment
4-1

Mr. Johnson

Page 2 of 2

Encroachment Permit

Per California Code of Regulations, Title 23, Waters, Division 1 (Title 23), Section 6, approval by the Board is required for all proposed work or uses, including the alteration of levees within any area for which there is an Adopted Plan of Flood Control within the Board's jurisdiction. In addition, Board approval is required for all proposed encroachments within a floodway, on adjacent levees, and within any Regulated Stream identified in Title 23, Table 8.1. Specifically, Board jurisdiction includes the levee section, the waterward area between project levees, a minimum 10-foot-wide strip adjacent to the landward levee toe, the area within 30 feet from the top of bank(s) of Regulated Streams, and inside Board's Designated Floodways. Activities outside of these limits which could adversely affect Federal-State flood control facilities, as determined by Board staff, are also under the Board's jurisdiction. Permits may also be required for existing unpermitted encroachments or where it is necessary to establish the conditions normally imposed by permitting, including where responsibility for the encroachment has not been clearly established or ownership or uses have been changed. This proposed project is located within the Board's permitting authority, thereby requiring an encroachment permit.

Comment
4-2

Federal permits, including USACE Section 404 and Section 10 regulatory permits and Section 408 Permission, in conjunction with a Board permit, may be required for the proposed project. In addition to federal permits, state and local agency permits, certification, or approvals may also be required. State approvals may include, but are not limited to, California Department of Fish and Wildlife's Lake and Streamed Alteration Agreement and Regional Water Quality Control Board's Section 401 Water Quality Certification. The Applicant must obtain all authorizations that the proposed project may require.

Comment
4-3

Comment
4-4

Flood Impacts Analysis

Pursuant to Section 15 of Title 23, the Board may deny an encroachment permit if the proposed project could:

- Jeopardize directly or indirectly the physical integrity of levees or other works;
- Obstruct, divert, redirect, or raise the surface level of design floods or flows, or the lesser flows for which protection is provided;
- Cause significant adverse changes in water velocity or flow regimen;
- Impair the inspection of floodways or project works;
- Interfere with the maintenance of floodways or project works;
- Interfere with the ability to engage in flood fighting, patrolling, or other flood emergency activities;
- Increase the damaging effects of flood flows;
- Be injurious to, or interfere with, the successful execution, functioning, or operation of any adopted plan of flood control; or
- Adversely affect the State Plan of Flood Control, as defined in the California Water Code.

Comment
4-5

Mr. Johnson
Page 2 of 2

The Board, as a Responsible Agency under the California Environmental Quality Act (CEQA), will review and consider the environmental effects of the proposed project identified in the DEIR, and will reach its own conclusions on whether and how to approve the project involved (14 CCR 15096, subd. (a)). This includes direct impacts to facilities under construction, as well as indirect impacts from the proposed project to surrounding facilities. Accordingly, the comments herein are intended to assist in the development of a robust CEQA document capable of supporting the Board's permitting process. Board staff provides the following comments regarding potential environmental effects within the Board's jurisdiction.

Comment
4-6

Closing

The potential risks to public safety, including increased flood risks, need to be considered when developing proposed projects that seek to modify flood control works or the hydrology of the water ways. Board staff is available to discuss any questions you have regarding the above comments. Please contact Gregory Hendricks at (916) 837-3763, or via email at gregory.hendricks@CVFlood.ca.gov if you have any questions.

Comment
4-7

Sincerely,

Andrea Buckley

Andrea Buckley
Environmental Services and Land Management Branch Chief

ec: Office of Planning and Research
State.Clearinghouse@opr.ca.gov

Steven Lamb
Steven.Lamb@cvflood.ca.gov

Gregory Hendricks
Gregory.Hendricks@cvflood.ca.gov

Response to Comment Letter 4

Central Valley Flood Protection Board

Andrea Buckley, Environmental Services and Land Management Branch Chief

May 12, 2023

Response to Comment 4-1: This comment states the regulatory authorities and roles of the Central Valley Flood Protection Board (CVFPB). The City acknowledges this comment.

Response to Comment 4-2: This comment states the circumstances under which a CVFPB encroachment permit may be required for project work activities that may alter a levee or encroach on an adjacent levee within CVFPB jurisdiction. The City appreciates CVFPB providing information regarding approvals and permits that would be needed for project work activities that may alter a levee or encroach on an adjacent levee within CVFPB jurisdiction.

Appendix B of the Draft EIR shows conceptual site layouts for the 38 replacement wells in the City's Well Replacement Program. Section 2.6 of the Draft EIR notes that well siting is preliminary. Replacement wells 19 and 39, as shown in Appendix B, are situated within existing City-owned properties containing water supply tanks and other municipal facilities. These two well sites are in proximity to levees of the East Drainage Canal under jurisdiction of the CVFPB. Locations shown for wells 19 and 39 are preliminary and subject to change based on additional study, including in consideration of CVFPB jurisdictional areas. Final locations will be determined during engineering design of each well.

The City intends to locate replacement wells 19 and 39, their associated facilities and construction staging areas outside jurisdictional areas of CVFPB, and thus is not expected to require an encroachment permit. However, the City understands that per Title 23, Division 1, Article 3, Section 6, "every proposal or plan of work located outside an area over which there is an adopted plan of flood control, must be submitted to the CVFPB for approval prior to commencement of work if it is foreseeable that the plan of work could be injurious to or interfere with the successful execution, functioning, or operation of any facilities of an adopted plan of flood control or of a plan under study." Thus, the City will coordinate with CVFPB in the early phases of engineering design of wells 19 and 39 to avoid encroachments into CVFPB jurisdiction and ensure no adverse effects to levees under CVFPB jurisdiction. This also includes avoiding interference with levee operation, inspection, and maintenance activities. The City will also seek appropriate encroachment permits from the Sacramento County Flood Control Agency as noted in Draft EIR Table 2.8-1.

Based on this information, Draft EIR Section 2.6.2.3, Well Equipping (page 2-18 of the Draft EIR) has been revised to include the following statement:

..... For wells located at existing utility facilities, such as above-ground reservoirs, the well facilities would be installed within existing fenced or walled areas with bollards installed around the pump and controls to prevent potential damage by on-site utility vehicles. Additionally, wells located in proximity to existing flood control facilities, such as the levees of the East Drainage Canal (e.g., well sites 19 and 39) would be sited to avoid encroachment onto the toe of the levee and to avoid interference with levee operation, inspection and maintenance activities. If encroachment into jurisdictional areas of the CVFPB cannot be avoided, the City would apply for an encroachment permit from the CVFPB.

Additionally, Draft EIR Table 1.3-1, Responsible and Trustee Agencies and Coordination, and Table 2.8-1, Permits and Approvals, on page 1-5 of the Draft EIR has been revised to include the following new row:

Agency	Type of Permit or Approval
<u>Central Valley Flood Protection Board (CVFPB)</u>	<u>Encroachment Permit if any well, its associated facilities and/or construction staging areas are located within the CVFPB jurisdictional areas, including any encroachments onto the toe of a levee.</u> <u>Approval prior to commencement of work if well construction and operation could be injurious to or interfere with the successful execution, functioning, or operation of levee.</u>

Lastly, the City will investigate the need for any encroachment permits for any existing wells that are located in proximity to existing levees. If needed, the City will obtain encroachment permits from the CVFBP.

Response to Comment 4-3: This comment states that federal permits, including United States Army Corps of Engineers (USACE) Section 404 and Section 10 regulatory permits and Section 408 Permission, in conjunction with a Board permit, may be required for the proposed project. A Section 10 permit will not be required because the project does not involve construction of any structure in or over any navigable water of the United States. Similarly, no Section 408 permission will be required because the project will not modify, alter, or occupy any existing USACE-constructed public works project.

The Draft EIR, Section 3.3 Biological Resources, identified the potential need for a Section 404 permit from the USACE, a Section 401 Water Quality Certification from the Regional Water Quality Control Board (RWQCB) and a California Department of Fish and Wildlife (CDFW) Streambed Alteration Agreement if project activities impact seasonal wetlands that are found at replacement well sites 2, 12, 13, 28, 29, 30, and 37. However, the seasonal wetlands at these well sites do not display direct connectivity to intermittent or perennial streams, indicating that they likely will not be considered jurisdictional wetlands by the USACE, RWQCB and the CDFW. Mitigation Measures BIO-5a, BIO-7a, BIO-7b in the Draft EIR will be implemented to complete delineation of these resources, guide avoidance, and, if needed, provide specific procedures such as obtaining Section 404 permit, Section 401 Water Quality Certification, and Lake and Streambed Alteration

Agreement, and purchasing compensatory mitigation as needed to reduce potential impacts to seasonal wetlands.

Response to Comment 4-4: This comment lists State approvals that may be required for the proposed project. See Response to Comment 4-2.

Response to Comment 4-5: This comment lists the various circumstances under which the CVFPB may deny an encroachment permit, pursuant to Section 15 of Title 23. The City acknowledges the circumstances that could result in the CVFPB denying an encroachment permit. As stated in Response to Comment 4-1, the City does not expect the Project to require an encroachment permit from CVFPB for construction and operation of replacement wells 19 and 39 under the Well Replacement Program. However, the City will coordinate with CVFPB in the design of wells 19 and 39 and obtain any necessary permits and approvals if needed to avoid impacts to CVFPB facilities.

Response to Comment 4-6: This comment states that the CVFPB has offered its comments on the Draft EIR to provide robust environmental review of the proposed project, and thus allow the CVFPB, as a Responsible Agency under CEQA to reach its own conclusions on whether and how to approve the project. The City understands the CVFPB's role as a Responsible Agency under CEQA. Based on the information provided in the Response to Comment 4-1, above, the City does not expect that the development and operation of replacement wells under the Well Replacement Program will create direct or indirect impacts to surrounding facilities under the jurisdiction of the CVFPB. See also Response to Comments 4-1 and 4-4.

Response to Comment 4-7: This comment states that potential risks to public safety need to be considered when developing proposed projects that seek to modify flood control works or the hydrology of the water ways. The Draft EIR, beginning on page 3.9-35, evaluates the potential for the project to 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 that would: substantially increase the rate or amount of surface run-off in a manner that would result in flooding on or off site, or impede or redirect flood flows. The Draft EIR concluded that the project would not have significant adverse effects regarding increased flood risk.



May 31, 2023

Scott Johnson, Senior Planner
City of Sacramento Community Development Department
300 Richards Boulevard, 3rd Floor, Sacramento, CA 95811

**Subject: Groundwater Master Plan Well Replacement Program
Environmental Impact Report
State Clearinghouse # 2022030709**

Dear Scott Johnson:

Thank you for providing the Sacramento Metropolitan Air Quality Management District (Sac Metro Air District) with the opportunity to review the Draft Environmental Impact Report (EIR) under the California Environmental Quality Act (CEQA) for the [Groundwater Master Plan Well Replacement Program](#). This project consists of the long-term (approximately 15 years) replacement of up to 38 groundwater extraction wells that are at or near the end of their useful life. It includes the construction and operation of the extraction wells, including wells and wellhead facilities, and sanitary sewer connections and drinking water distribution system connections. Existing wells would be demolished after replacement wells are fully operational. We offer the comments below on EIR air quality and climate analyses, consistent with the Sac Metro Air District guidance on reviewing projects under CEQA, [The Guide to Air Quality Assessment in Sacramento County](#) (CEQA Guide), available on our website.

Permitting

The project would include emergency generators for the wells, which are required to obtain an Authority to Construct and Permit to Operate from the Sac Metro Air District. For application instructions and forms visit: <https://www.airquality.org/businesses/permits-registration-programs/permit-applications-recordkeeping-advisories/internal-combustion-engines>. If you have questions on generator permitting, please contact Steve Mosunic, Program Supervisor with Sac Metro Air District’s Permitting Section, at 279-207-1137 or smosunic@airquality.org. Please note that, pursuant to California Health and Safety Code §42301.6, a school notice will be required if any compression ignited engines are located with 1,000 feet of a K-12 school.

Comment 5-1

Comment 5-2

Construction Emissions

Construction emissions projections in EIR Tables 3.2-8, 3.2-9, 3.2-11, and 3.7-2 do not appear to correspond to [CalEEMod](#) runs in EIR [Appendix B](#). If additional modeling was done beyond CalEEMod, please discuss and disclose. Otherwise, please ensure emission tables match EIR [Appendix B](#).

Comment 5-3

- Sac Metro Air District recommends that the emissions calculations used to determine significant project impacts in the EIR be supplemented with corresponding model runs, so that the EIR significance determinations are clearly documented.

Comment 5-4

Construction Mitigation

Sac Metro Air District commends mitigation measures AIR-4 and GHG-1, to limit construction of multiple wells at once. This measure will help ensure that construction emissions remain less than significant.

Comment 5-5

Construction Rules

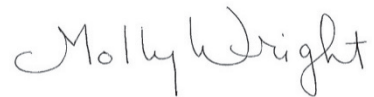
All projects are subject to Sac Metro Air District rules and regulations in effect at the time of construction. Please visit our website to [find a list of the most common rules that apply at the construction phase of projects](#).

Comment 5-6

Conclusion

Thank you for your attention to our comments. If you have questions about them, please contact me at mwright@airquality.org or (279) 207-1157.

Sincerely,



Molly Wright
Air Quality Planner / Analyst

c: Paul Philley, AICP, Program Supervisor, Sac Metro Air District

Response to Comment Letter 5

Sacramento Metropolitan Air Quality Management District

Molly Wright, Air Quality Planner / Analyst

May 31, 2023

Response to Comment 5-1: This comment states that the Project would include emergency generators for the wells, which are required to obtain an Authority to Construct and Permit to Operate from the Sacramento Metropolitan Air Quality Management District (SMAQMD). Page 3.2-23 of the Draft EIR states that each emergency generator would comply with Rule 201 in obtaining a permit to construct/ permit to operate prior to installation. This text has been refined as follows:

For example, each emergency generator would comply with Rule 201 in obtaining an Authority ~~permit~~ to Construct and/ ~~Permit~~ to Operate prior to installation and comply with the applicable fees described in Rule 301.

In addition, the text on page 3.2-10 of the Draft EIR has been refined to state:

The construction phase of the proposed Project would be subject to the applicable SMAQMD rules and regulations with regard to construction and operation equipment, particulate matter generation, architectural coatings, and paving materials. Equipment used during construction and operation would be subject to the following applicable requirements of SMAQMD.....

Response to Comment 5-2: This comment states that pursuant to California Health and Safety Code §42301.6, a school notice will be required if any compression ignited engines are located within 1,000 feet of a K-12 school. The following information has been added to the Draft EIR Air Quality Section under Section 3.2.2.3 Local Policies and Regulations:

Rule 201: General Permit Requirements. Rule 201 requires review of new sources of air pollution and permits for stationary sources (such as emergency generators, boilers, and heaters). Any project that includes the use of equipment capable of releasing emissions to the atmosphere may be required to obtain permit(s) from SMAQMD before equipment operation. Certain sources are exempt such as vehicles, internal combustion engines with 50 horsepower or less, and natural gas-powered equipment. Construction equipment such as generators, compressors, and lighting equipment with an internal combustion engine greater than 50 horsepower must have a SMAQMD permit or California Air Resources Board (CARB) portable equipment registration. If the internal combustion engine will be located within 1,000 feet of a school, a notice must be distributed at least 30 days before the permit application is approved to each address within 1,000 feet and to each student

of the school within one-quarter mile of the internal combustion engine (California Health and Safety Code §42301.6).

Response to Comment 5-3: This comment notes that construction emissions projections in the Draft EIR Tables 3.2-8, 3.2-9, 3.2-11, and 3.7-2 do not correspond to the CalEEMod runs in the Draft EIR appendix. As stated in the Sections titled, Methodology for Analysis, in the Air Quality and the Greenhouse Gas chapters of the Draft EIR, emissions of criteria air pollutants and GHG were estimated using California Emissions Estimator Model (CalEEMod) version 2022.1. The modeling was provided as Appendix C to the Draft EIR and corresponds to Draft EIR Tables 3.2-8, 3.2-9, 3.2-11, and 3.7-2. No changes to the Draft EIR are required.

Response to Comment 5-4: This comment recommends that the emissions calculations used to determine significant project impacts in the EIR be supplemented with corresponding model runs, so that the EIR significance determinations are clearly documented. As stated in the Sections titled, Methodology for Analysis, in the Air Quality and the Greenhouse Gas chapters of the Draft EIR, emissions of criteria air pollutants and GHG were estimated using California Emissions Estimator Model (CalEEMod) version 2022.1. The modeling was provided as Appendix C to the EIR and corresponds to the emissions calculations used to determine impact significance. No changes to the Draft EIR are required.

Response to Comment 5-5: This comment commends mitigation measures AIR-4 and GHG-1, to limit construction of multiple wells at once to help ensure construction emissions remain less than significant. The City appreciates the feedback. No changes to the EIR are necessary.

Response to Comment 5-6: This comment notes that all projects are subject to SMAQMD rules and regulations in effect at the time of construction. The City understands and acknowledges the SMAQMD rules and regulations that will be in effect at the time of construction and will ensure the applicable regulations are included in construction bid documents.



Sent Via E-Mail

May 31, 2023

Scott Johnson, Senior Planner
City of Sacramento Community Development Department
300 Richards Boulevard, 3rd Floor
Sacramento, CA 95811
srjohnson@cityofsacramento.org

Subject: **City of Sacramento Groundwater Master Plan Well Replacement Program / EIR / 2022030709**

Dear Mr. Johnson:

The Sacramento Municipal Utility District (SMUD) appreciates the opportunity to provide comments on the Draft Environmental Impact Report (EIR) for the City of Sacramento Groundwater Master Plan Well Replacement Program (Project, SCH 2022030709). SMUD is the primary energy provider for Sacramento County and the proposed Project area. SMUD's vision is to empower our customers with solutions and options that increase energy efficiency, protect the environment, reduce global warming, and lower the cost to serve our region. As a Responsible Agency, SMUD aims to ensure that the proposed Project limits the potential for significant environmental effects on SMUD facilities, employees, and customers.

Comment 6-1

It is our desire that the Project will acknowledge any impacts related to the following:

- Overhead and or underground transmission and distribution line easements. Please view the following links on smud.org for more information regarding transmission encroachment:
 - <https://www.smud.org/en/Business-Solutions-and-Rebates/Design-and-Construction-Services>
 - <https://www.smud.org/en/Corporate/Do-Business-with-SMUD/Land-Use/Transmission-Right-of-Way>
- Utility line routing
- Electrical load needs/requirements
- Energy Efficiency
- Climate Change
- Cumulative impacts related to the need for increased electrical delivery
- The potential need to relocate and or remove any SMUD infrastructure that may be affected in or around the project area

Comment 6-2

Comment 6-3

Comment 6-4

Comment 6-5

Comment 6-6

Comment 6-7

Comment 6-8

SMUD would like to be involved with discussing the above areas of interest as well as discussing any other potential issues. We aim to be partners in the efficient and sustainable delivery of the proposed Project. Please ensure that the information included in this response is conveyed to the Project planners and the appropriate Project proponents.

Comment 6-9

Comment 6-10

Environmental leadership is a core value of SMUD, and we look forward to collaborating with you on this Project. Again, we appreciate the opportunity to provide input on this Project. If you have any questions regarding this letter, please do not hesitate to contact me at 916.732.6676, or by email at rob.ferrera@smud.org.

Sincerely,

A handwritten signature in black ink, appearing to read 'Rob Ferrera', with a long horizontal line extending to the right.

Rob Ferrera
Environmental Services Specialist
Sacramento Municipal Utility District
6201 S Street
Sacramento, CA 95817

cc: Entitlements

Response to Comment Letter 6

Sacramento Municipal Utility District

Rob Ferrera, Environmental Services Specialist

May 31, 2023

Response to Comment 6-1: This comment notes that as a Responsible Agency, SMUD aims to ensure that the proposed Project limits the potential for significant environmental effects on Sacramento Municipal Utility District (SMUD) facilities, employees, and customers. The comment is noted. The City understands and acknowledges the aims of SMUD to ensure limited potential for significant impacts on SMUD facilities, employees and customers.

Response to Comment 6-2: This comment requests the Project acknowledge any impacts related to overhead and/or underground transmission and distribution line easements. The City understands and acknowledges the aims of SMUD to ensure limited potential for significant impacts on SMUD facilities, employees and customers.

Response to Comment 6-3: This comment requests the Project acknowledge any impacts related utility line routing. The City acknowledges that routing of new sewer and water laterals from the replacement wells has the potential to create impacts if existing utilities are not avoided. However, during engineering design of each replacement well and their associated lateral connections to existing water and sewer pipelines, existing below ground utilities will be identified and design specifications will include avoidance of such utility lines during construction.

Response to Comment 6-4: This comment requests the Project acknowledge any impacts related electrical load needs/requirements. When the City begins engineering design for individual replacement wells, the City will coordinate with SMUD regarding electrical load needs/requirements. As discussed in the Draft EIR, Section 3.5.3.5, energy for Project operation is not expected to exceed SMUD's capacity for power generation, and because energy demand from the wells would be continuous, and not subject to peaking, energy use is not projected to exceed SMUD's ability to meet peak demands.

Response to Comment 6-5: This comment requests the Project acknowledge any impacts related to energy efficiency. Energy efficiency is addressed in Section 3.5 of the Draft EIR. The Draft EIR provides energy consumption estimates for operation of all replacement wells, including variations that could occur by water year type, with more groundwater pumping and more associated electricity use occurring in dry hydrologic years, and acknowledging less energy consumption for treatment of surface water supply in the dry years. The City Department of Utilities adopted an Energy Management Policy in January 2020 and implements it on an ongoing basis. The City would incorporate feasible applicable strategies from the Energy Management Policy into well design and operations and maintenance (O&M) procedures as discussed in

Section 3.5.3.3 of the Draft EIR. The Draft EIR concluded that the Project would not result in a significant impact due to energy inefficiency.

Response to Comment 6-6: This comment requests the Project acknowledge any impacts related to climate change. The Project's potential to impact climate change is related to the amount of greenhouse gas (GHG) emissions that are generated by the Project. Section 3.7 of the Draft EIR, evaluates the project's potential to generate GHG emissions during construction and long-term operation. The Draft EIR concluded that the Project's construction and operational GHG emissions could create a significant impact, but the impacts would be reduced to less than significant with implementation of mitigation measures.

Response to Comment 6-7: This comment requests the Project acknowledge any cumulative impacts related to the need for increased electrical delivery. Section 3.5.3.5 addresses cumulative impacts of the project related potential increase in energy use. Project construction and operation would not be inefficient, wasteful, or unnecessary in nature. Therefore, the contribution of the proposed Project to cumulative impacts on energy resources in the study area would be minimal. Energy for Project operation is not expected to exceed SMUD's capacity for power generation, and because energy demand from the wells would be continuous, and not subject to peaking, energy use is not projected to exceed SMUD's ability to meet peak demands. The cumulative impact is less than significant.

Response to Comment 6-8: This comment requests the potential need to relocate and or remove any SMUD infrastructure that may be affected in or around the project area. See Responses to Comments 6-2, 6-3 and 6-4.

Response to Comment 6-9: This comment states that SMUD would like to be involved in discussing the above issues and any other potential issues. When the City begins engineering design for individual replacement wells, the City will coordinate with SMUD, as needed, regarding overhead and or underground transmission and distribution line easements, utility line routing, electrical load needs and requirements; and the need, if any, for relocating or removing any SMUD infrastructure.

Response to Comment 6-10: This comment requests the information in the comment letter be conveyed to the appropriate City staff involved in the project.: The information in this response has been conveyed to the staff in the City's Department of Utilities (Project proponent) and the City's Planning Department.

3. CHANGES TO THE DRAFT EIR

3.1 Introduction

As provided in Section 15088(d) of the CEQA Guidelines, responses to comments may take the form of a revision to a Draft EIR or may be a separate section in a Final EIR. This chapter of the Final EIR complies with the latter option and provides changes to the Draft EIR in strikethrough text (i.e., ~~strikethrough~~) signifying deletions, and underlined text (i.e., underline) signifying additions. These notations are meant to provide clarification, corrections, or minor revisions identified during the review period or as a result of public comments received for the proposed City of Sacramento Groundwater Master Plan Well Replacement Program since the release of the Draft EIR, as required by Section 15132 of the CEQA Guidelines. Additionally, as a result of tribal consultation under Assembly Bill 52, this section identifies an addition to Cultural Resource and Tribal Cultural Resource mitigation measures, specifically CUL-1 and TCR-1. None of the corrections or additions to the Draft EIR constitutes significant new information or substantial project changes requiring recirculation of the EIR, as defined by Section 15088.5 of the CEQA Guidelines.

3.2 Changes to the Draft EIR

Changes to the Draft EIR are provided in the following subsections.

3.2.1 Changes to Section 1.0 Introduction

Table 1.3-1 Responsible and Trustee Agencies and Coordination, included on page 1-5 in Section 1.3 of the Draft EIR, has been revised to include Central Valley Flood Protection Board as a Responsible Agency for the potential approvals shown below.

Table 1.3-1: Responsible and Trustee Agencies and Coordination

Agency	Type of Permit or Approval
City of Sacramento (Lead Agency)	Encroachment Permit, Building Permit, Approval for Tree Removal
Sacramento Metropolitan Air Quality Management District	Permit to Construct, Permit to Operate for emergency generators
Sacramento County Environmental Management Department	Hazardous Materials Business Permit for storage of chemicals at well sites California Accidental Release Prevention Program registration (if required for storage of treatment chemicals at well sites)
Sacramento County Flood Control Agency	Encroachment Permit
Sacramento County Regional Sanitation District	Discharges of groundwater to sanitary sewer or combined sewer system during construction Discharges of backwash water to sanitary sewer during operation

Agency	Type of Permit or Approval
<u>Central Valley Flood Protection Board</u>	<u>Encroachment Permit if any well, its associated facilities and/or construction staging areas are located within the CVFPB jurisdictional areas, including any encroachments onto the toe of a levee.</u> <u>Approval prior to commencement of work if well construction and operation could be injurious to or interfere with the successful execution, functioning, or operation of levee.</u>
California Division of Drinking Water of State Water Resources Control Board	Amended Water Supply Permit
State Water Resources Control Board	NPDES Construction General Permit for Storm Water Discharges associated with Construction Activities
Central Valley Regional Water Quality Control Board	NPDES Permit/ Waste Discharge Requirements (WDRs) for groundwater and/or test water discharges during construction (or coverage under General Permit)
California Department of Toxic Substances Control	USEPA ID for any hazardous waste hauled from well sites
United States Environmental Protection Agency	Risk Management Program registration for regulated substances exceeding reportable quantity threshold (20 Code of Federal Regulations Part 68 [68.130])

3.2.2 Changes to Section 2.0 Project Description

Table 2.5-1: Existing Municipal Production Well Inventory, included in Section 2.5 of the Draft EIR, starting on page 2-5, has been updated with the following new footnotes:

¹ It is noted that the City has an additional five domestic water supply wells (117, 119, 132, 136, 150) not shown in Table 2.5-1, that are no longer in use and considered by DDW to be inactive.

² It is acknowledged that Wells 83, 123, 127, 144, 154 are still considered by DDW to be active. The City will submit applications to amend the DDW permits for these wells to reflect their current operational status as inactive.

Section 2.6 Proposed Project, on page 2-10 of the Draft EIR, has been revised as follows to provide clarification on well depths in relation to GDEs and ISWs:

As previously stated, the City's Well Replacement Program includes the replacement of up to 38 municipal wells within the City's service area, as well as distribution system improvements to accommodate new well locations. Of the 38 proposed replacement groundwater extraction well sites, 20 sites are located within the North American Subbasin and 18 sites are located within the South American Subbasin. This represents 11 new wells in the South American Subbasin total, compared to existing conditions in which there are six active and inactive wells. **Table 2.6-1**

describes the attributes of the 38 proposed replacement wells and **Figure 2.6-1** shows the locations of the 38 replacement wells relative to the existing municipal production wells. All wells except two would produce approximately 1,250 gallons per minute (gpm) of groundwater. The two exceptions are Well 23 and Well 38. These replacement wells would produce the same capacity as existing wells with Well 23 constructed in the North American Subbasin and capable of producing approximately 750 gpm, and Well 38 constructed in the South American Subbasin and capable of producing approximately 3,000 gpm. Preliminary siting of well facilities for all 38 proposed groundwater extraction well sites can be found in Appendix B. The useful life for each replacement well would be between 30 and 60 years, depending on construction materials, water quality, maintenance, and other related parameters.

All of the proposed wells both in the North and South American Subbasins have depths substantially deeper than the ~~Minimum Thresholds established at the GSP well locations shallow portions of the aquifer system where direct connections to Groundwater Dependent Ecosystems (GDEs) and interconnected surface waters (ISWs) would be expected.~~ The proposed wells in the North American Subbasin have depths ranging from 255 feet to 1,000 feet below ground surface (bgs). ~~These depths are much deeper than the Minimum Thresholds at the GPS well locations in the Project vicinity which range from 31 to 85 feet bgs. Similarly, the proposed City of Sacramento wells in the South American Subbasin have depths ranging from 314 to 1,200 feet bgs. These depths are much deeper than the Minimum Thresholds at the GSP well locations in the Project vicinity which range from 44-55 feet bgs. The depths of the GSP monitoring wells in the Project vicinity range from 45 to 220 feet bgs in the NASb and from 72 to 382 feet bgs in the SASb.~~ Design of each well would be based on site-specific hydro-stratigraphy, soil types, and location relative to ISW and GDEs to ensure the wells will be operated consistent with the GSP requirements without impacts to ISWs or GDEs.

Section 2.6.2.3 Well Equipping, beginning on page 2-18 of the Draft EIR, has been revised to include additional information regarding wells located near flood control facilities:

The well site layout and security features would vary based on the surrounding land use of the well location. For wells located at schools and parks, a control building (with associated appurtenances) with a detachable roof would house the well pump to secure the pump and reduce noise as the well is operating while providing appropriate access for maintenance (**Figure 2.6-2**). Block wall (CMU) buildings would be designed and constructed around well facilities, where needed for noise control and to reduce visual interest, in addition to ornamental fencing and security fencing around the control building and well pump (**Figure 2.6-3**). For wells located at existing utility facilities, such as above-ground reservoirs, the well facilities would be installed within existing fenced or walled areas with bollards installed around the pump and controls to prevent potential damage by on-site utility vehicles. Additionally, wells located in proximity to existing flood control facilities, such as the levees of the East Drainage Canal (e.g., well sites 19 and 39) would be sited to avoid encroachment onto the toe of the levee and to avoid interference with levee operation, inspection and maintenance activities. If encroachment into jurisdictional areas of the Central Valley Flood

Protection Board (CVFPB) cannot be avoided, the City would apply for an encroachment permit from the CVFPB.

Table 2.8-1 in Section 2.8 Anticipated Permits and Approvals (Draft EIR page 2-28) has been revised to include approvals that may be required by the CVFPB.

Table 2.8-1 Permits and Approvals

Agency	Permit/Approval
City of Sacramento	<ul style="list-style-type: none"> - Encroachment Permit, Building Permit, - Approval for Tree Removal
Sacramento Metropolitan Air Quality Management District	<ul style="list-style-type: none"> - Permit to Construct, Permit to Operate for emergency generators
Sacramento County Environmental Management Department	<ul style="list-style-type: none"> - Hazardous Materials Business Permit for storage of chemicals at well sites - California Accidental Release Prevention Program registration (if required for storage of treatment chemicals at well sites)
Sacramento County Flood Control Agency	<ul style="list-style-type: none"> - Encroachment Permit
Sacramento County Regional Sanitation District	<ul style="list-style-type: none"> - Discharges of groundwater to sanitary sewer or combined sewer system during construction - Discharges of backwash water to sanitary sewer during operation
<u>Central Valley Flood Protection Board</u>	<ul style="list-style-type: none"> - <u>Encroachment Permit if any well, its associated facilities and/or construction staging areas are located within the CVFPB jurisdictional areas, including any encroachments onto the toe of a levee.</u> - <u>Approval prior to commencement of work if well construction and operation could be injurious to or interfere with the successful execution, functioning, or operation of levee.</u>
California Division of Drinking Water of State Water Resources Control Board	<ul style="list-style-type: none"> - Amended Water Supply Permit
State Water Resources Control Board	<ul style="list-style-type: none"> - NPDES Construction General Permit for Storm Water Discharges associated with Construction Activities
Central Valley Regional Water Quality Control Board	<ul style="list-style-type: none"> - NPDES Permit/ Waste Discharge Requirements (WDRs) for groundwater and/or test water discharges during construction (or coverage under General Permit)

Agency	Permit/Approval
California Department of Toxic Substances Control	- USEPA ID for any hazardous waste hauled from well sites
United States Environmental Protection Agency	- Risk Management Program registration for regulated substances exceeding reportable quantity threshold (20 Code of Federal Regulations Part 68 [68.130])

3.2.3 Changes to Section 3.2 Air Quality

The following new information is incorporated into the Draft EIR Air Quality Section on page 3.2-10 of the Draft EIR under *Section 3.2.2.3 Local Policies and Regulations*:

The construction phase of the proposed Project would be subject to the applicable SMAQMD rules and regulations with regard to construction and operation equipment, particulate matter generation, architectural coatings, and paving materials. Equipment used during construction and operation would be subject to the following applicable requirements of SMAQMD:

- Rule 201: General Permit Requirements.** Rule 201 requires review of new sources of air pollution and permits for stationary sources (such as emergency generators, boilers, and heaters). Any project that includes the use of equipment capable of releasing emissions to the atmosphere may be required to obtain permit(s) from SMAQMD before equipment operation. Certain sources are exempt such as vehicles, internal combustion engines with 50 horsepower or less, and natural gas-powered equipment. Construction equipment such as generators, compressors, and lighting equipment with an internal combustion engine greater than 50 horsepower must have a SMAQMD permit or CARB portable equipment registration. If the internal combustion engine will be located within 1,000 feet of a school, a notice must be distributed at least 30 days before the permit application is approved to each address within 1,000 feet and to each student of the school within one-quarter mile of the internal combustion engine (California Health and Safety Code §42301.6).

The following minor text refinements are incorporated into the Draft EIR Section 3.2.3.4, Impact Assessment, on page 3.2-22 of the Draft EIR under Impact AIR-2 Analysis, Operation Impacts:

IMPACT AIR-2 ANALYSIS

OPERATION IMPACTS

Criteria pollutant emissions from proposed stationary sources, in this case emergency generators, depends greatly upon the duration of use of the generators. Similar to the impacts described for construction, these activities would result in operational emissions of PM, requiring the incorporation of SMAQMD BMPs to apply the SMAQMD non-zero PM

thresholds of significance. These BMPs, which are not mitigation measures, are generally required by existing regulations. They are described under *State Policies and Regulations* and *SMAQMD Rules and Regulations* (Section 3.2.2.3), above and would apply to the operation of stationary source equipment. For example, each emergency generator would comply with Rule 201 in obtaining an Authority to Construct and Permit to Operate prior to installation and comply with the applicable fees described in Rule 301. Project operations would adhere to prohibitory Rules, including 402 (Nuisance) and 420 (Sulfur Content of Fuels). Any diesel-powered commercial motor vehicles used by the City for O&M would be required to limit idling time to 5 minutes and install technologies on the vehicles that support anti-idling.

3.2.4 Changes to Section 3.4 Cultural Resources

As a result of Assembly Bill (AB) 52 tribal consultation process between the City and the United Auburn Indian Community (UAIC), the following text changes are incorporated into Draft EIR Section 3.4 Cultural Resources.

Text in Section 3.4.3.4, Impact CUL-1 Analysis has been revised as follows:

Additionally, given the characteristics of the proposed Project activities described in the *Project Description* (Chapter 2) combined with the historical resources review, the potential for intact, significant archaeological deposits that could qualify as historical resources to be present at the Project sites is considered low. However, it is possible that previously unidentified buried prehistoric or historic resources could be encountered during construction of Project facilities, such as pipelines or other below ground features, which could create a significant impact if resources were damaged or destroyed. **Mitigation Measure CUL-1** requires a resource sensitivity and awareness training and tribal coordination, and **CUL-2** requires assessment, avoidance, and minimization requirements that would be implemented to ensure that resources are protected (full mitigation measure text described in Section 3.4.3.5 below). These measures would ensure that construction crews are trained to recognize and respect cultural resources, and that measures to evaluate, avoid, or minimize effects on significant resources would be implemented if any resources are discovered. Thus, construction of the proposed Project would have a less than significant impact.

Text in Section 3.4.3.5 Mitigation Measures has been revised as shown below. (Note, this mitigation measure text change applies to the Executive Summary Table in the Draft EIR (pages ES-10 and ES-11)).

MITIGATION MEASURE CUL-1: CONDUCT CULTURAL RESOURCES SENSITIVITY AND AWARENESS TRAINING PROGRAM AND TRIBAL COORDINATION PRIOR TO GROUND-DISTURBING ACTIVITIES

The City shall require the contractor to provide a cultural resources sensitivity and awareness training program (Worker Environmental Awareness Program [WEAP]) for all personnel involved in Project construction, including field consultants and construction workers. The WEAP will be developed in coordination with an archaeologist meeting the Secretary of the

Interior's Professional Qualifications Standards for Archeology. The WEAP shall be conducted before any Project-related construction activities begin at the Project site. The WEAP will include relevant information regarding sensitive cultural resources and tribal cultural resources, including applicable regulations, protocols for avoidance, and consequences of violating State laws and regulations.

The WEAP will also describe appropriate avoidance and impact minimization measures for cultural resources that could be located at the Project site and will outline what to do and who to contact if any potential cultural resources are encountered.

For well sites 5 and 24, at the time the final location of the well sites are established the City shall coordinate with Tribal Representatives from United Auburn Indian Community on the status of the location and whether a Native American Tribal Monitor (monitor) shall be required. If required, the contractor shall ensure a monitor is present for all ground disturbing activities and the measures described in TCR-2 and TCR-3 shall apply. The monitor shall possess the knowledge, skills, abilities, and experience established by the NAHC's Guidelines for Native American Monitors (See also **Mitigation Measure TCR-1** in Section 3.13).

3.2.5 Changes to Section 3.9 Hydrology/Water Quality

To avoid confusion regarding the current status of well permitting, text in Draft EIR Section 3.9.1.2, Groundwater, under the Groundwater Extraction subsection, has been revised as follows:

The City has historically relied on groundwater to meet 15 to 20 percent of its water supply urban demands, making groundwater an important component of the City's water supply portfolio. The City's remaining urban demand is met by surface water from the Sacramento and American rivers. ~~Currently, the City has 22 active municipal wells permitted by the DDW in the North American Subbasin and two (2) active municipal wells in the South American Subbasin permitted by DDW. Additionally, the City has four (4) active municipal wells permitted by DDW that are currently offline in the North American Subbasin and three (3) municipal wells pending permitting by DDW in the South American Subbasin.~~ The list and the locations of the City's active wells in each subbasin are presented in Section 2 Project Description (Table 2.5 1 and Table 2.6 1). The list and locations of the replacement wells that would be operated under the proposed Project are also presented in Section 2 Project Description (Table 2.6 1 and Figure 2.6 1).

~~As of December 2022, eight of the City's municipal wells (Wells 83, 92, 111, 123, 127, 144, 154 and 159) are offline due to various water quality concerns. Wells 92 and 111 are not yet permitted by DDW.~~

3.2.6 Changes to Section 3.13 Tribal Cultural Resources

As a result AB 52 tribal consultation process between the City and the UAIC, the following text changes are incorporated into Draft EIR Section 3.13 Tribal Cultural Resources.

Text in Section 3.13.3.4, Impact TCR-1 Analysis has been revised as follows:

Construction of the proposed Project would include ground disturbing activities that would be limited to the relatively small Project footprint. Given the proposed Project activities and the tribal cultural resources identified by the UAIC, the potential to encounter human remains is considered high for well sites 5 and 24 and low for all remaining well sites. Implementation of **Mitigation Measures TCR-1** through **TCR-3** would ensure training, tribal coordination procedures, and handling would take place in the event of any tribal cultural resource discovery, including human remains. Thus, construction of the proposed Project would have a less than significant impact.

Text in Section 3.13.3.5 Mitigation Measures has been revised as shown below. (Note, this mitigation measure text change applies to the Executive Summary Table in the Draft EIR (page ES-17).

MITIGATION MEASURE TCR-1: CONDUCT TRIBAL CULTURAL RESOURCES SENSITIVITY AND AWARENESS TRAINING PROGRAM AND TRIBAL COORDINATION PRIOR TO GROUND-DISTURBING ACTIVITIES

The City shall require the applicant/contractor to provide a cultural resources and tribal cultural resources sensitivity and awareness training program (Worker Environmental Awareness Program [WEAP]) for all personnel involved in project construction, including field consultants and construction workers. The WEAP will be developed in coordination with culturally affiliated Native American tribes. The WEAP shall be conducted before any project-related construction activities begin at the project site. The WEAP will include relevant information regarding sensitive cultural resources and tribal cultural resources, including applicable regulations, protocols for avoidance, and consequences of violating state laws and regulations.

The WEAP will also describe appropriate avoidance and impact minimization measures for cultural resources and tribal cultural resources that could be located at the project site and will outline what to do and who to contact if any potential cultural resources or tribal cultural resources are encountered. The WEAP will emphasize the requirement for confidentiality and culturally appropriate treatment of any discovery of significance to Native Americans and will discuss appropriate behaviors and responsive actions, consistent with Native American tribal values.

For well sites 5 and 24, at the time the final location of the well sites are established the City shall coordinate with Tribal Representatives from United Auburn Indian Community on the status of the location and whether a Native American Tribal Monitor (monitor) shall be required. If required, the contractor shall ensure a monitor is present for all ground disturbing activities and the measures described in TCR-2 and TCR-3 shall apply. The monitor shall possess the knowledge, skills, abilities, and experience established by the NAHC's Guidelines for Native American Monitors.

3.3 Changes to the Draft EIR Appendices

3.3.1 Changes to Appendix E City of Sacramento Well Replacement Program Groundwater Modeling Technical Memorandum

To supplement the groundwater modeling assessment in the Draft EIR and document most recent basin conditions, recent groundwater monitoring data from the representative GSP monitoring networks for the NASb and SASb were evaluated based on the Annual Report 2022 findings and additional data from Spring 2023 water levels. The following new information is incorporated into the Final EIR as Attachment 1 to Draft EIR Appendix E City of Sacramento Well Replacement Program Groundwater Modeling Technical Memorandum.

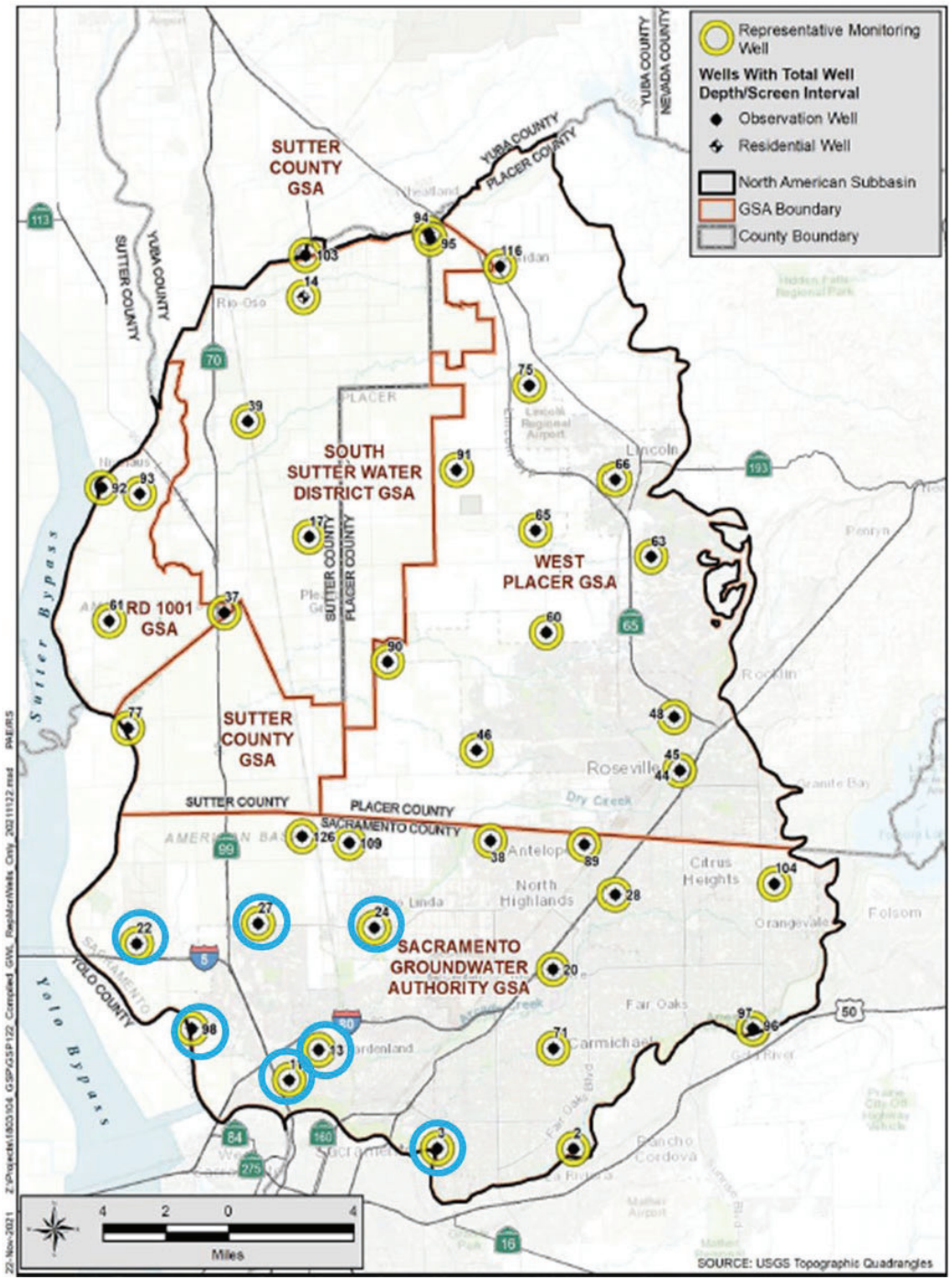
ATTACHMENT 1: SUPPLEMENTAL GROUNDWATER ELEVATION DATA

Attachment 1 presents historical and current groundwater elevations in the vicinity of the City of Sacramento based on the 2022 NASb and SASb GSPs Annual Reports (GEI 2022 and South American Subbasin Groundwater Sustainability Agencies 2023, respectively), and 2023 Spring measurements (DWR 2023). Data were included to assess most recent basin conditions based on the actual measured groundwater levels in the GSP representative monitoring network wells after the GSP reporting. Groundwater elevation data from the NASb and SASb representative monitoring network in the vicinity of the City are provided separately.

North American Subbasin Groundwater Hydrographs

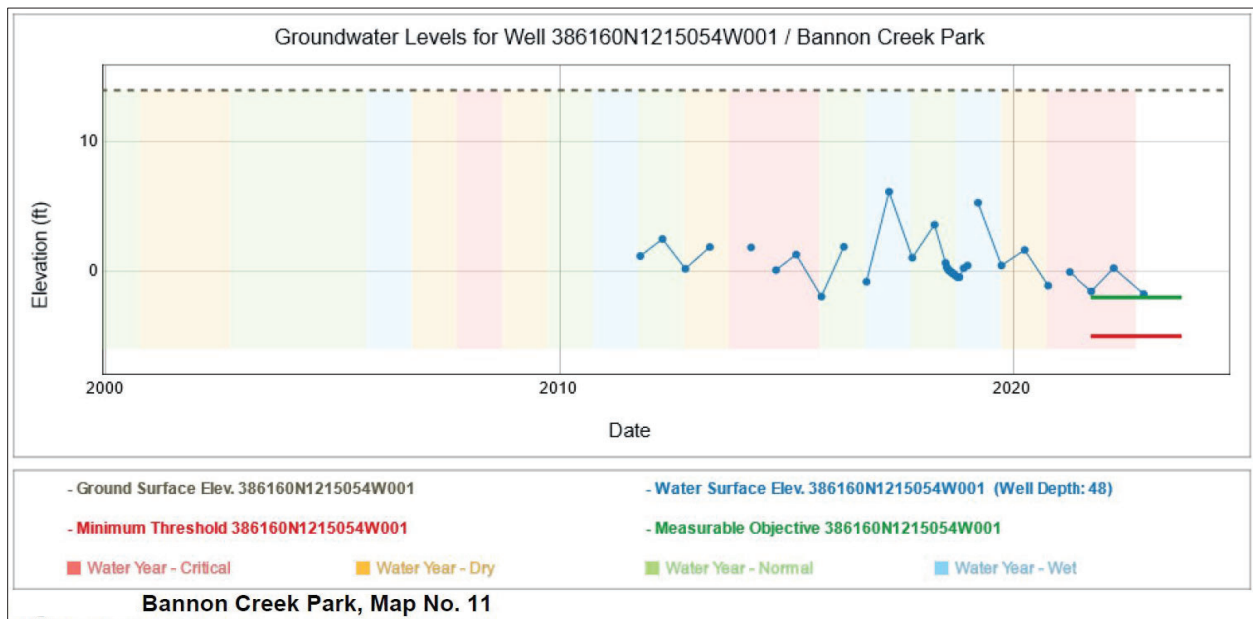
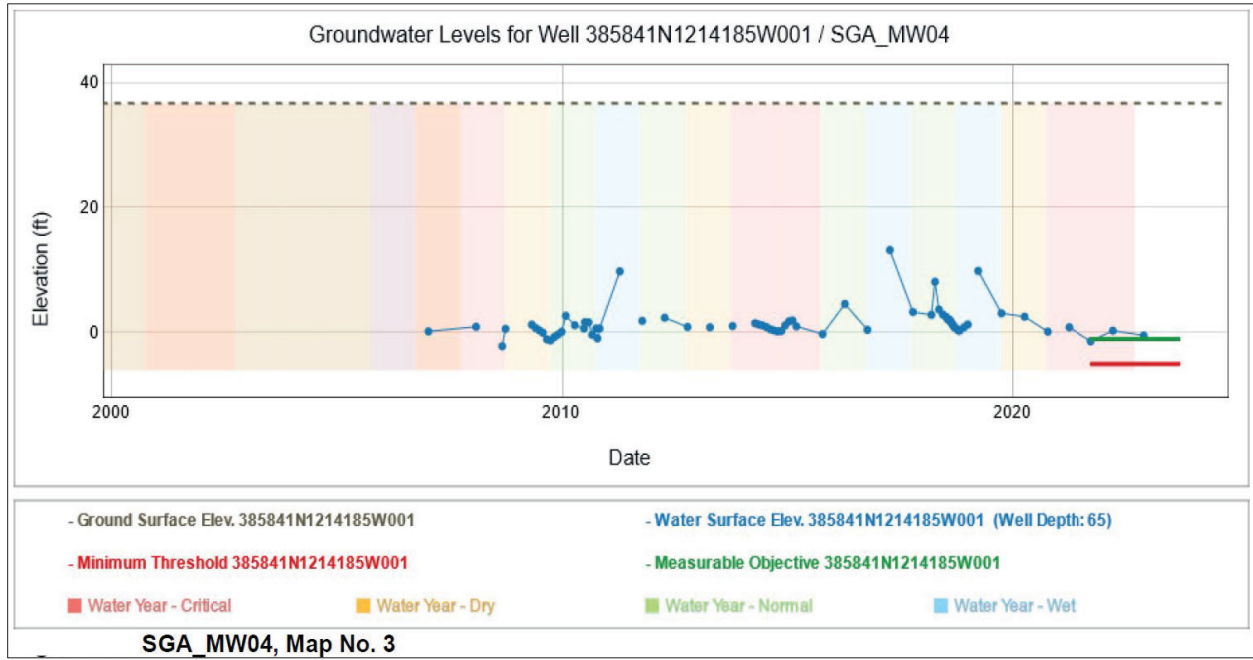
Based on the Spring 2023 conditions, following the three recent and consecutive dry years, the GSP monitoring wells (**Figure A-1**) show groundwater levels well above the minimum thresholds. In light of the Spring 2023 data and recent groundwater hydrographs from the 2022 Annual Report, as presented in **Table A-1** and **Figure A-2 (series)**, respectively, NASb GSP monitoring network in the vicinity of the City shows sustainable conditions without minimum threshold exceedances.

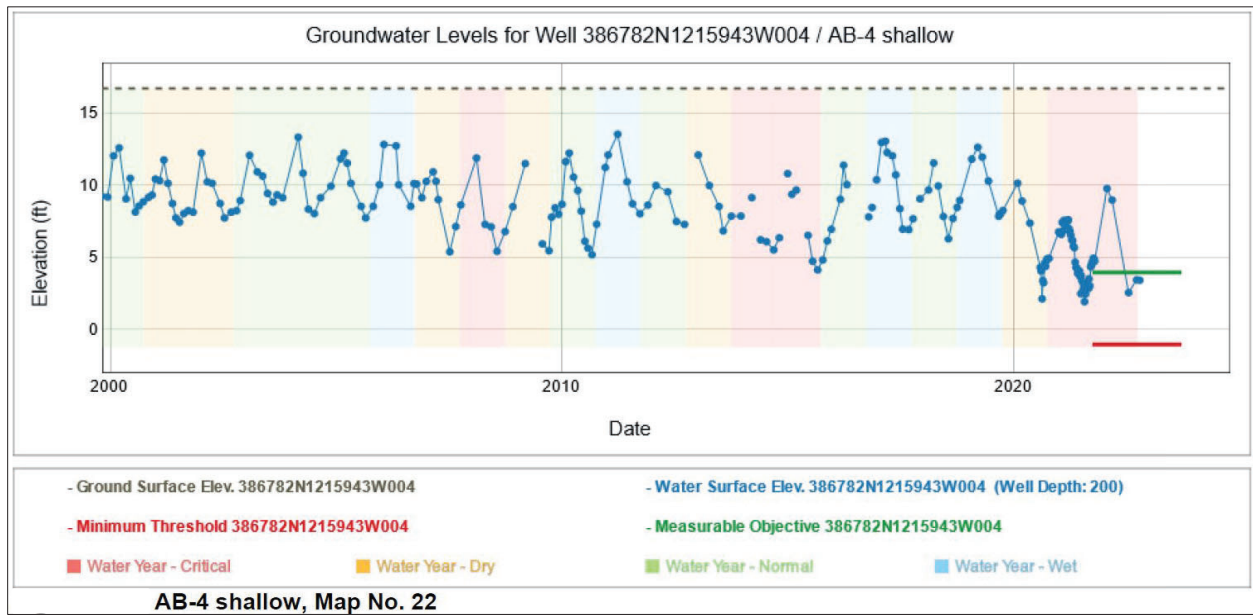
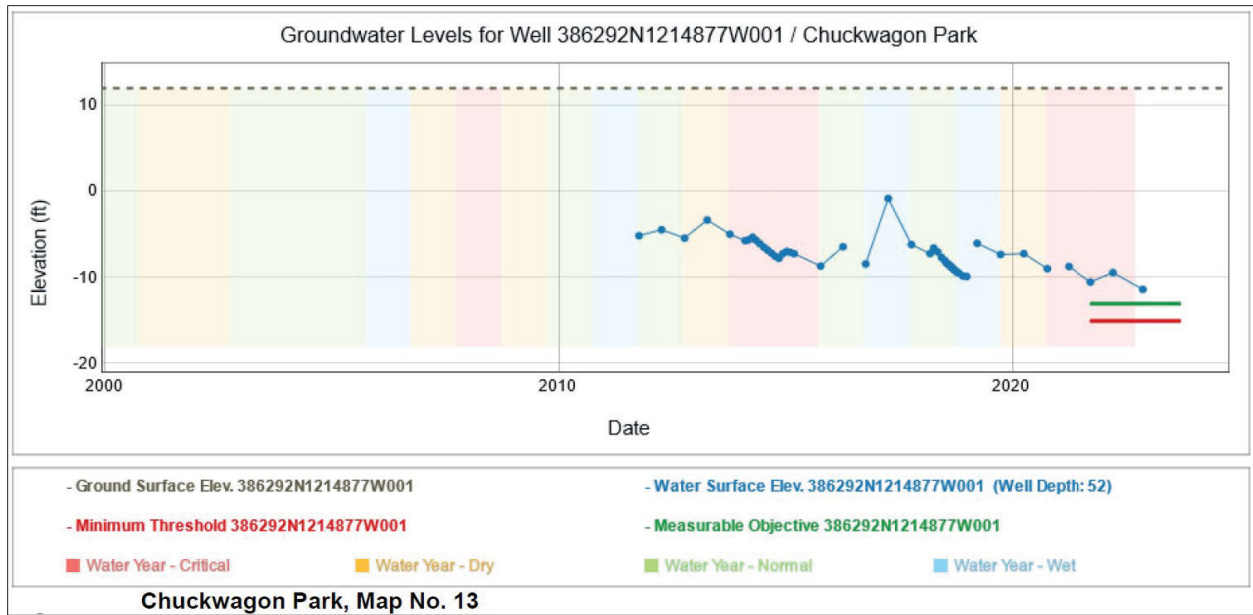
Figure A-1: Representative Groundwater Level Monitoring Well Locations in the Vicinity of the City of Sacramento (shown with blue circles)

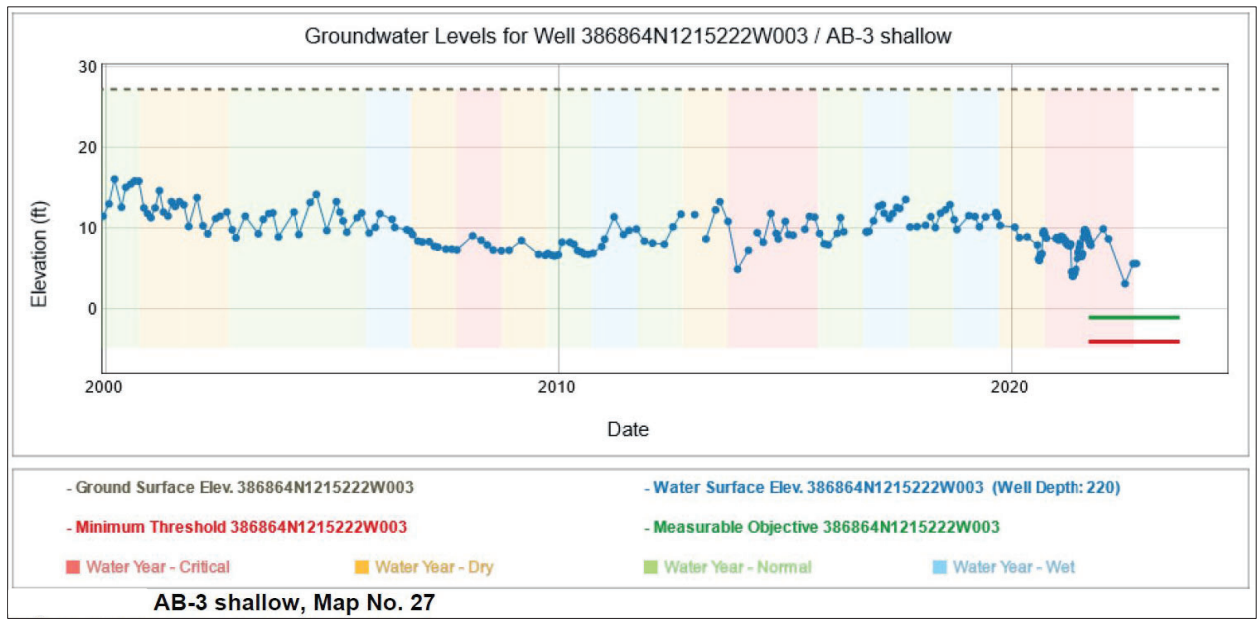
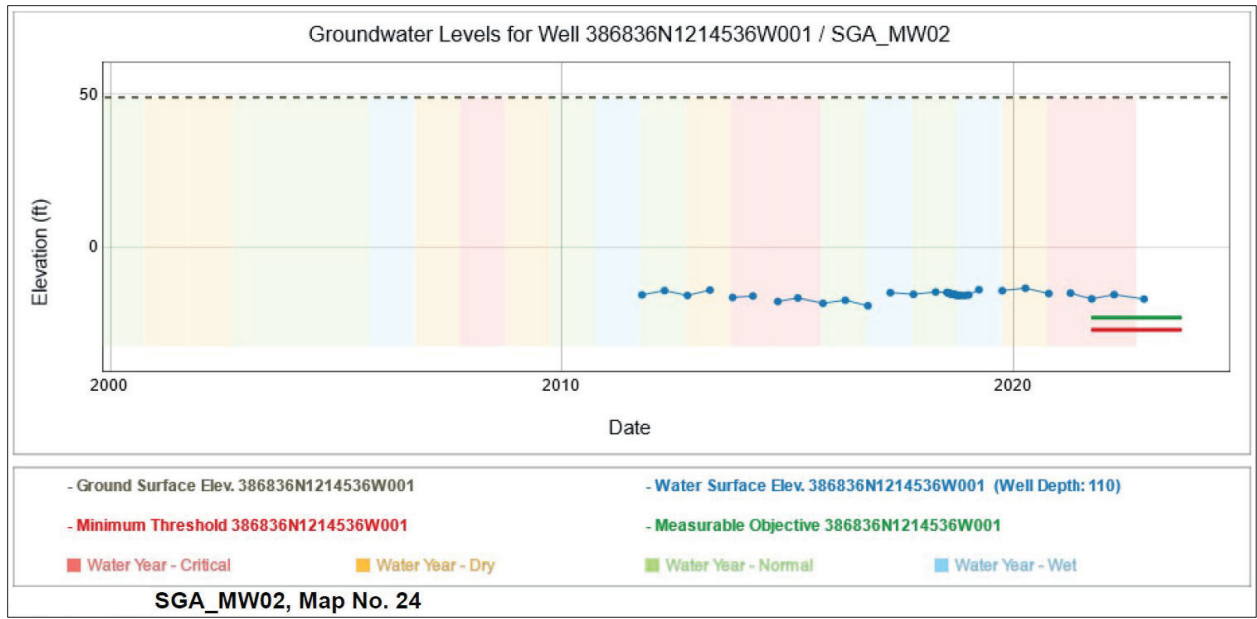


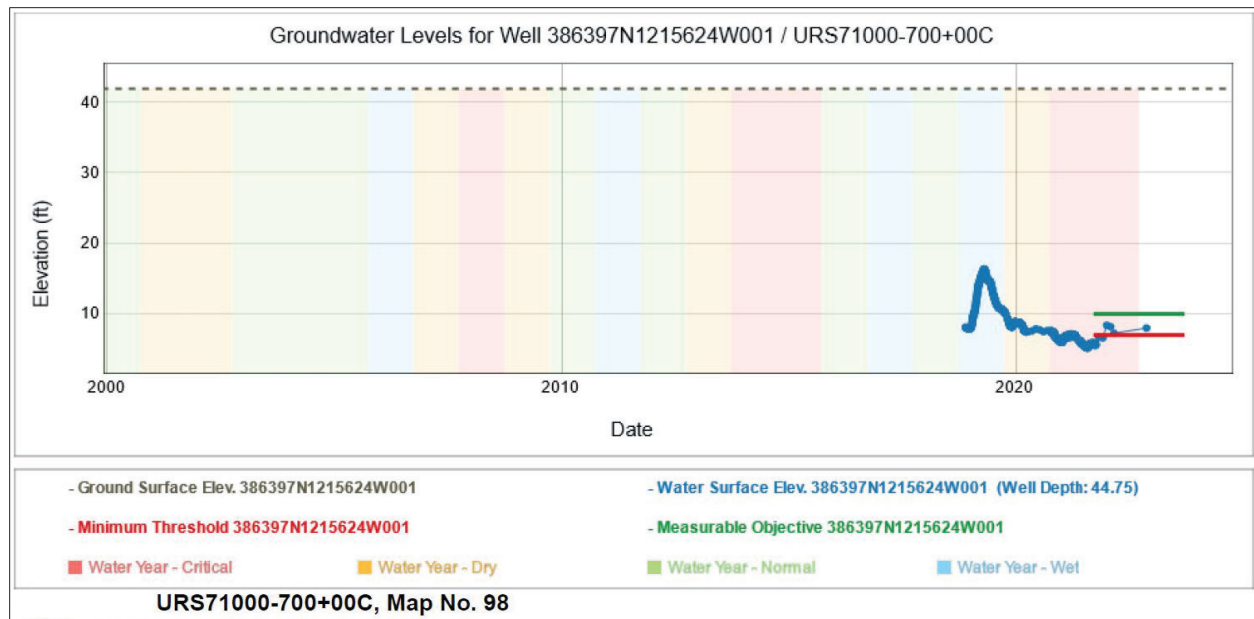
Source: North American Subbasin Water Year 2022 Annual Report

Figure A-2 (series): North American Subbasin Groundwater Hydrographs from Nine Representative Groundwater Level Monitoring Wells in the Vicinity of the City of Sacramento









Source: North American Subbasin Water Year 2022 Annual Report

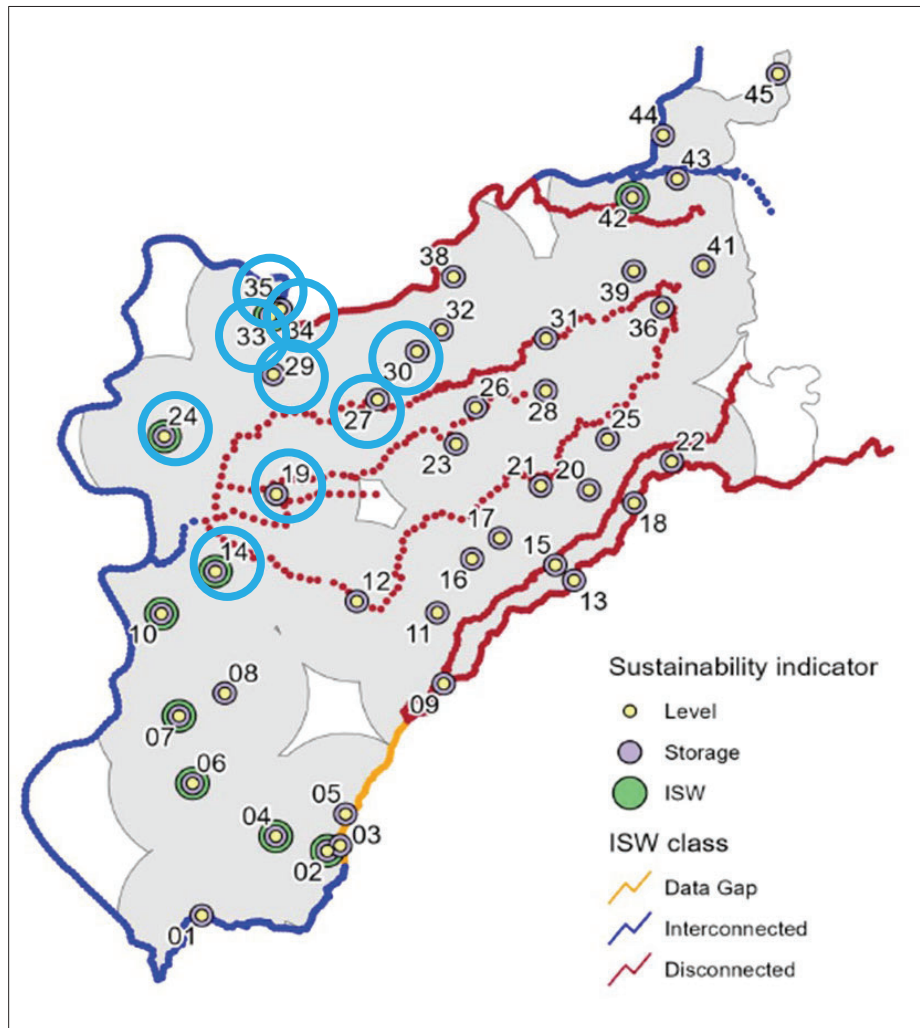
Table A-1: Measured Spring 2023 Groundwater Elevations Compared to Sustainability Criteria for North American Subbasin

Monitoring Site Number	Monitoring Site Local Name	CASGEM ID	Spring 2023 Date Measured	Spring 2023 Measured Groundwater Elevation (ft msl)	MT (ft msl)	MO (ft msl)	Status Compared to MT and MO
3	SGA MW04	385841N1214185W001	4/14/2023	7.58	-5	-1	Above MO
11	Bannon Creek Park	386160N1215054W001	4/14/2023	4.65	-5	-2	Above MO
13	Chuckwagon Park	386292N1214877W001	4/14/2023	-4.54	-15	-13	Above MO
22	AB-4 shallow	386782N1215943W004	3/22/2023	12.95	-1	4	Above MO
24	SGA MW02	386836N1214536W001	4/14/2023	-14.21	-27	-23	Above MO
27	AB-3 shallow	386864N1215222W003	3/22/2023	11.16	-4	-1	Above MO
98	URS71000-700+00C	386397N1215624W001	4/14/2023	16.03	7	10	Above MO

South American Subbasin Groundwater Hydrographs

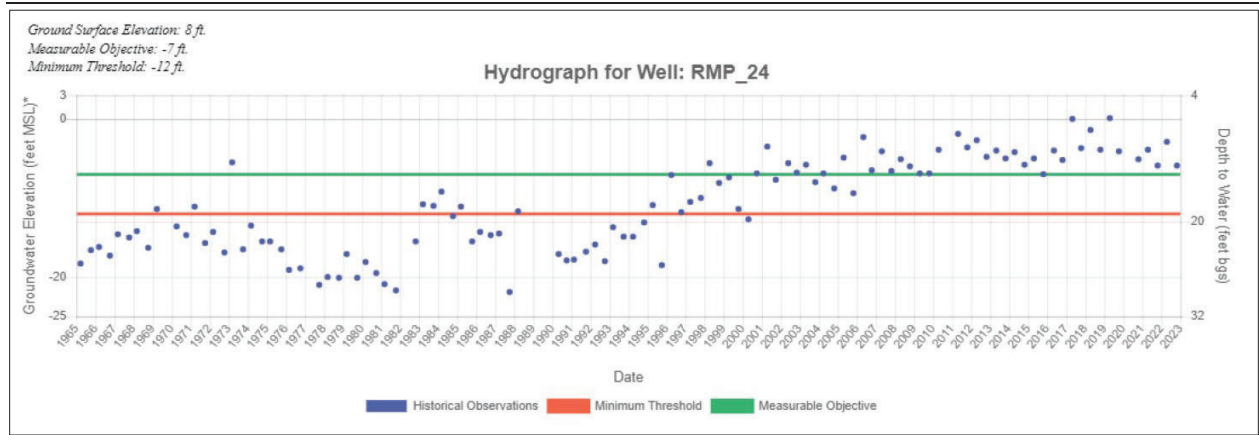
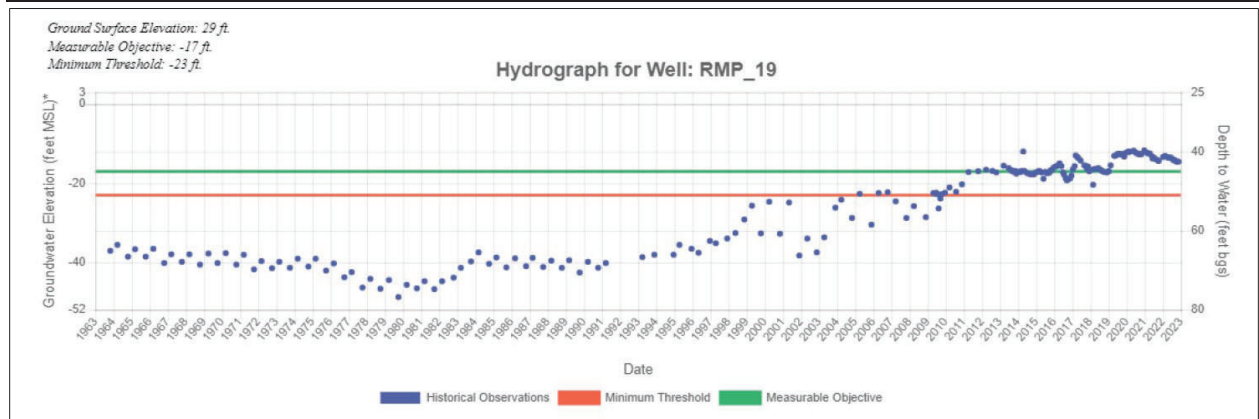
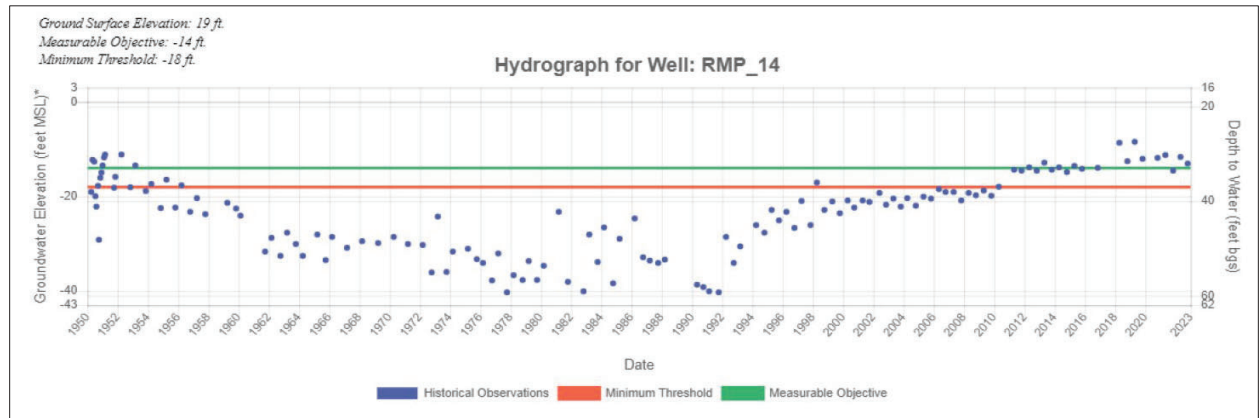
Based on the Spring 2023 conditions, following the three recent and consecutive dry years, the South American Subbasin GSP monitoring wells (**Figure A-3**) show groundwater levels well above the minimum thresholds. In light of the Spring 2023 data and recent groundwater hydrographs from the 2022 Annual Report, as presented in **Table A-2** and **Figure A-4 (series)**, respectively, SASb GSP monitoring network in the vicinity of the City shows sustainable conditions without minimum threshold exceedances.

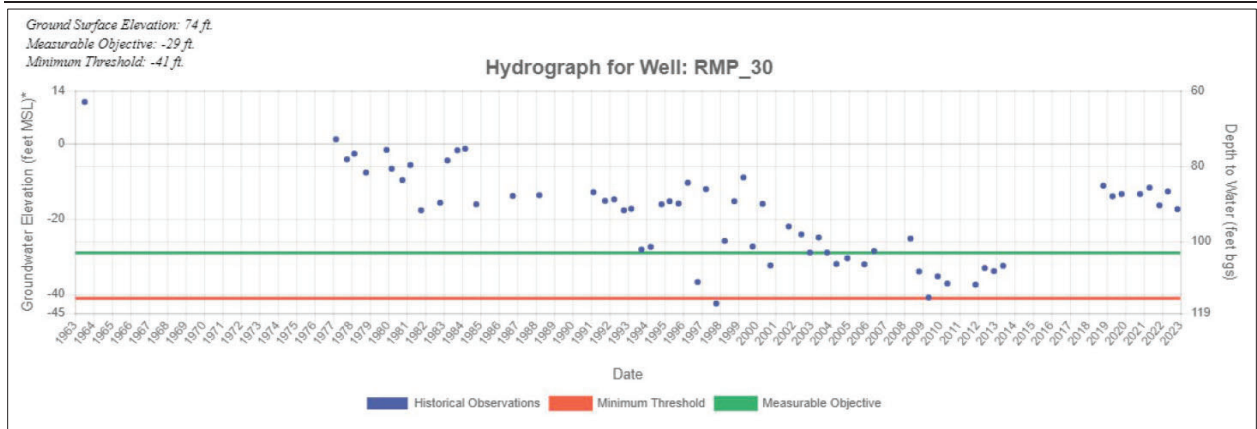
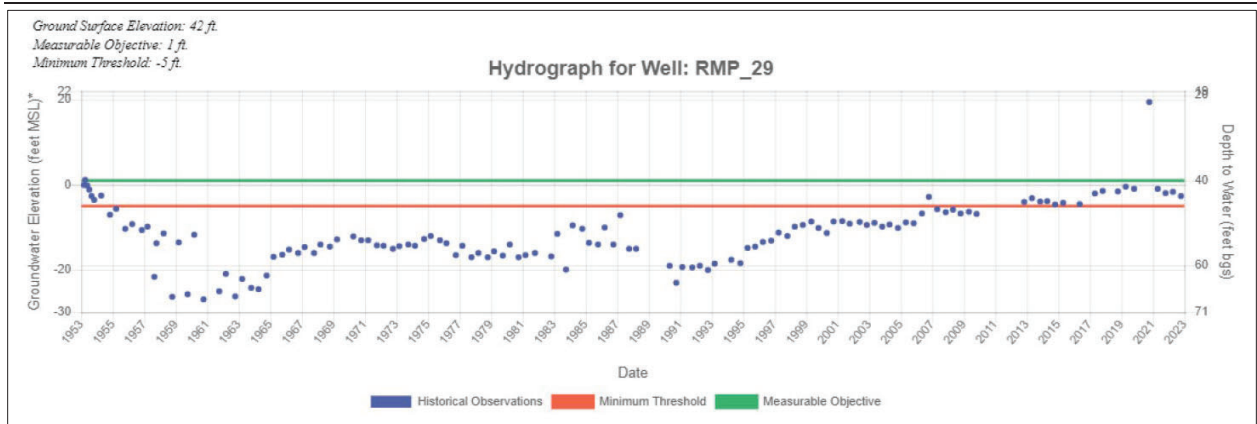
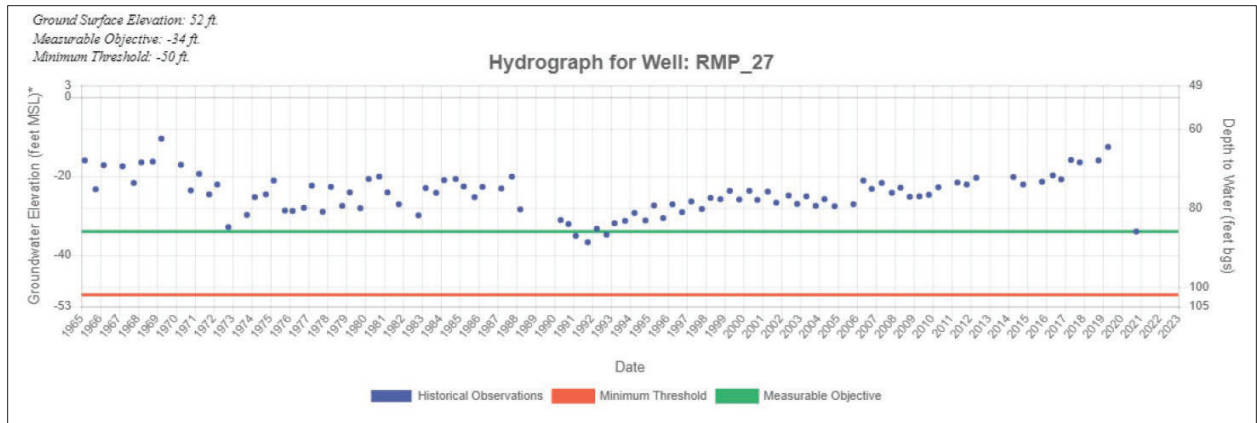
Figure A-3: SASb Representative Groundwater Level Monitoring Well Locations in the Vicinity of the City of Sacramento (shown in blue circles)



Source: South American Subbasin Water Year 2022 Annual Report

Figure A-4 (series): South American Subbasin Groundwater Hydrographs from Ten Representative Groundwater Level Monitoring Wells in the Vicinity of the City of Sacramento





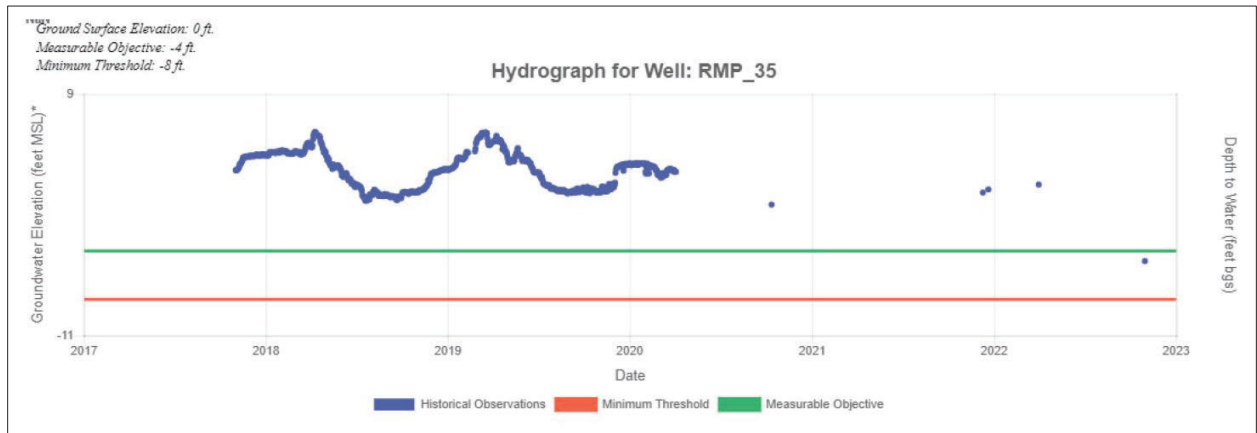
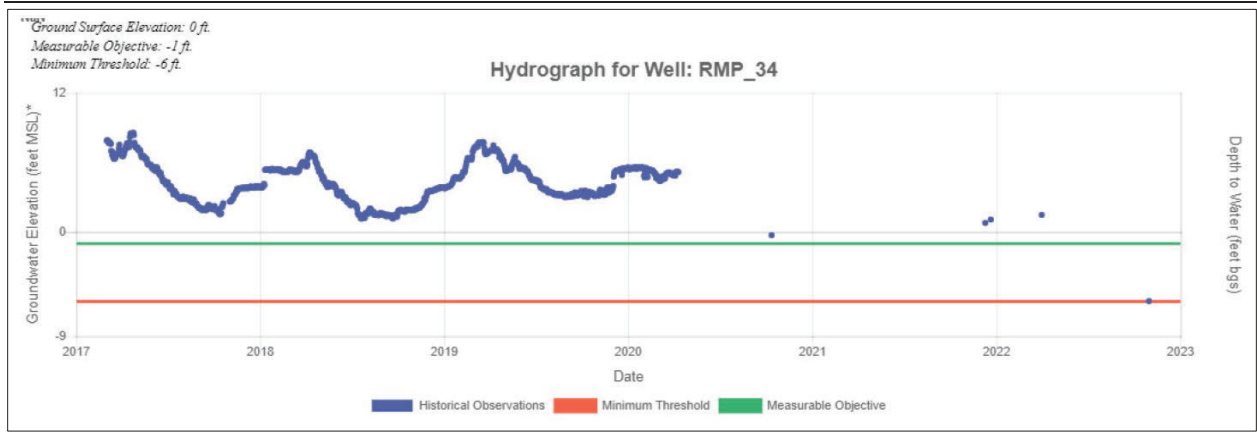
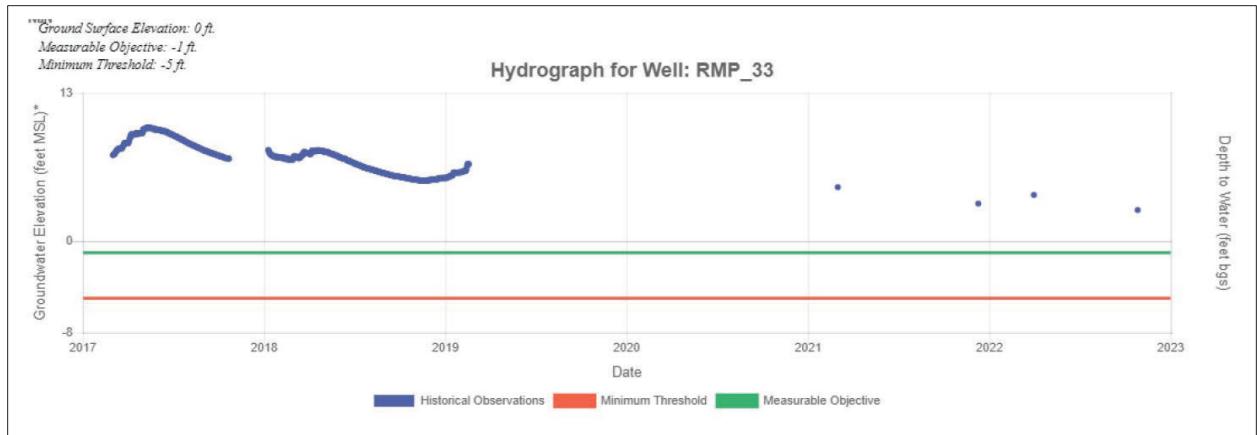


Table A-2: Measured Groundwater Elevations in Spring 2023 Compared to Sustainability Criteria for South American Subbasin

<u>Monitoring Site Number</u>	<u>CASGEM ID</u>	<u>Spring 2023 Date Measured</u>	<u>Spring 2023 Measured Groundwater Elevation (ft msl)</u>	<u>MT (ft msl)</u>	<u>MO (ft msl)</u>	<u>Status Compared to MT and MO</u>
RMP 14	384343N1214615W001	4/25/2023	-7.65	-18	-14	Above MO
RMP 19	384738N1214249W001	4/7/2023	-11.89	-23	-17	Above MO
RMP 24	385021N1214948W001	4/11/2023	0.51	-12	-7	Above MO
RMP 27	385223N1213630W001	4/5/2023	-12.39	-50	-34	Above MO
RMP 29	385343N1214280W001	4/11/2023	-1.95	-5	1	Above MT
RMP 30	385469N1213389W001	4/25/2023	NA	-41	-29	N/A
RMP 33	385637N1214302W001	4/20/2023	9.86	-5	-1	Above MO
RMP 34	385671N1214239W001	4/20/2023	5.02	-6	-1	Above MO
RMP 35	385679N1214258W001	4/20/2023	5.13	-8	-4	Above MO
RMP 37*	385784N1214655W001	2/16/2018	5.13	1	5	Above MO

*RMP 37 is removed from the network due to the RMP being sealed (note from SASb Water Year 2022 Annual Report)

References

GEI Consultants, Inc., 2023. Water Year 2022 Annual Report for the North American Subbasin. Prepared for North American Subbasin Groundwater Sustainability Agencies RD 1001, Sacramento Groundwater Authority, South Sutter Water District, Sutter County, and West Placer, April 2023.

South American Subbasin Groundwater Sustainability Agencies, 2023. South American Subbasin Groundwater Sustainability Plan, Second Annual Report, Water Year 2022. Prepared by Northern Delta Groundwater Sustainability Agency, Omochumne-Hartnell Water District, Reclamation District 551, Sacramento Central Groundwater Authority, Sacramento County, and Sloughhouse Resource Conservation District, March 2023

California Department of Water Resources, 2023. Water Data Library. Data Accessed July 2023 at:

<https://wdl.water.ca.gov/WaterDataLibrary/GroundwaterBrowseData.aspx?SelectedCounties=&SiteCode=385841N1214185W001&LocalWellNumber=&StationId=48012&SelectedGWBasins=&StateWellNumber=>

4. MITIGATION MONITORING AND REPORTING PROGRAM

4.1 Introduction

Public Resources Code Section 21081.6 and Section 15097 of the CEQA Guidelines require public agencies to establish monitoring or reporting programs for projects approved by a public agency whenever approval involves the adoption of either a mitigated negative declaration or specified environmental findings related to environmental impact reports.

The following is the Mitigation Monitoring and Reporting Program (MMRP) for the City of Sacramento Groundwater Well Replacement Program. The intent of the MMRP is to track and successfully implement the mitigation measures identified within the Draft EIR prepared for this project.

4.2 Mitigation Measures

The mitigation measures are taken from the Groundwater Well Replacement Program Draft EIR and are assigned the same number as in the Draft EIR. No changes to the mitigation measures were required as a result of public and agency comments on the Draft EIR. Revisions to two mitigation measures (CUL-1 and TCR-1) were required as a result of AB 52 tribal consultation, however these revisions did not result in changes to impact findings. Table 4-1, Mitigation Monitoring and Reporting Program, lists each mitigation measure to be implemented to reduce impacts to less than significant.

4.3 MMRP Components

The components of Table 4-1, Mitigation Monitoring and Reporting Program are as follows:

Impact Statement: This column summarizes the impact stated in the Draft EIR. Not all impact statements from the Draft EIR are included in the MMRP table; the table only contains impact statements that required a mitigation measure to reduce impacts to less than significant.

Mitigation Measure: All mitigation measures identified in the Groundwater Well Replacement Program Draft EIR are presented and numbered accordingly.

Implementing Party: This item identifies the entity that will undertake the required action.

Timing: Implementation of the action must occur prior to or during some part of project approval, project design or construction or on an ongoing basis. The timing for each measure is identified.

Monitoring Party: The City of Sacramento Department of Utilities is primarily responsible for ensuring that mitigation measures are successfully implemented.

Verification: Date Completed/Initials: This item provides a space for the monitoring party to verify successful implementation of each mitigation measure upon completion by providing date completed and initials.

Table 4-1: City of Sacramento Groundwater Well Replacement Mitigation Monitoring and Reporting Program

Impact Statement	Mitigation Measures	Implementing Party	Timing	Monitoring Party	Verification: Date Completed Initials
3.1 Aesthetics					
<p>AES-1: In an urbanized area, conflict with applicable zoning and other regulations governing scenic quality.</p>	<p>Mitigation Measure AES-1: Design of Aboveground Structures To avoid conflicts with zoning and other policies related to scenic quality, aboveground structures (such as control buildings, well facilities and any treatment systems) shall be designed to blend into the existing visual character of their surroundings, including building and wall height, color, exterior architectural treatments, lighting, and landscaping.</p>	<p>City Department of Utilities</p>	<p>During design of aboveground structures</p>	<p>City Department of Utilities</p>	
<p>AES-2: Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.</p>	<p>Mitigation Measure AES-2: Low Illumination Nighttime Construction Lighting To minimize impacts from construction nighttime lighting, all nighttime construction lighting shall be of the lowest illumination necessary for Project construction, attached to motion sensors, and shielded and directed downward to avoid light spillage onto neighboring properties. Additionally, where feasible, warm lighting tones shall be selected. If not feasible, shielding or other measures shall be implemented to avoid light spillage onto neighboring properties.</p>	<p>Project contractor</p>	<p>During all construction and demolition activities</p>	<p>City Department of Utilities</p>	

Impact Statement	Mitigation Measures	Implementing Party	Timing	Monitoring Party	Verification: Date Completed Initials
3.2 Air Quality					
AIR-1: Conflict with or obstruct implementation of the applicable air quality plan.	<p>Mitigation Measure AIR-1: Basic Construction Fugitive Dust Emissions Control Practices</p> <p>The following Basic Construction Emissions Control Practices for controlling fugitive dust from a construction site shall be implemented during construction.</p> <ul style="list-style-type: none"> • Water all exposed surfaces two times daily. Exposed surfaces include, but are not limited to soil piles, graded areas, unpaved parking areas, staging areas, and access roads. • Cover or maintain at least two feet of free board space on haul trucks transporting soil, sand, or other loose material on the site. Any haul trucks that would be traveling along freeways or major roadways should be covered. • Use wet power vacuum street sweepers to remove any visible trackout 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. 	Project contractor	During all construction and demolition activities.	City Department of Utilities	

Impact Statement	Mitigation Measures	Implementing Party	Timing	Monitoring Party	Verification: Date Completed Initials
	<ul style="list-style-type: none"> • As required by SMAQMD Rule 403, and enforced by SMAQMD staff, fugitive dust emissions shall not be allowed beyond the property line from which construction originates. Reasonable precautions shall include, but are not limited to: <ul style="list-style-type: none"> ○ Use, where possible, of water or chemicals for control of dust in construction operations. ○ Application of asphalt, oil, water, or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which can give rise to airborne dusts. ○ Other means approved by the Air Pollution Control Officer. <p>Mitigation Measure AIR-2: Construction Diesel Exhaust Emission Control The following practices, which describe exhaust emission control from diesel powered fleets, shall be implemented at the construction site. California regulations limit idling from both on-road and off-road diesel-powered equipment. The California Air Resources Board (CARB) enforces idling limitations and compliance with diesel fleet regulations.</p> <ul style="list-style-type: none"> • Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes [California 	Project contractor	During all construction and during demolition activities	City Department of Utilities	

Impact Statement	Mitigation Measures	Implementing Party	Timing	Monitoring Party	Verification: Date Completed Initials
	<p>of the SMAQMD, that demonstrates the construction phasing schedule will achieve maximum daily NO_x emissions of 85 lbs/day or less. If a plan is not prepared, the City shall limit Project construction activities such that a maximum of three wells are under construction at any one time, or the City shall submit a final report at the end of each construction year to demonstrate compliance. If construction-generated emissions of NO_x as modeled in the final report are not reduced to a level below SMAQMD’s recommended maximum daily level of 85 lbs/day or less, then the City shall pay a mitigation fee into SMAQMD’s off-site mitigation program. By paying the appropriate off-site mitigation fee, construction-generated emissions of NO_x would be reduced to a less-than-significant level. The fee calculation to offset daily NO_x emissions shall be based on the SMAQMD-determined cost to reduce one ton of NO_x applicable at the time (currently \$30,000 per ton but subject to change in future years).</p>				
<p>AIR-2: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an</p>	<p>Mitigation Measure AIR-1: above, shall apply. Mitigation Measure AIR-2: above, shall apply. Mitigation Measure AIR-3: above, shall apply. Mitigation Measure AIR-4: above, shall apply.</p>	<p>Refer to Mitigation Measures AIR-1, AIR-2, AIR-3, and AIR-4, above</p>	<p>Refer to Mitigation Measures AIR-1, AIR-2, AIR-3, and AIR-4, above</p>	<p>Refer to Mitigation Measures AIR-1, AIR-2, AIR-3, and AIR-4, above</p>	

Impact Statement	Mitigation Measures	Implementing Party	Timing	Monitoring Party	Verification: Date Completed Initials
applicable federal or state ambient air quality standard.					
3.4 Biological Resources					
<p>BIO-1: Substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service.</p>	<p>Mitigation Measure BIO-1: Protocol-Level Special-Status Plant Surveys Conduct protocol-level special-status plant surveys in April and May within areas of non-native grassland and suitable wetlands at well sites 7, 11, 12, 13, 15, 20, 21, 24, 28, 31, 32 and 37. The surveys shall be performed in accordance with those described by resource experts and agencies (CNPS, 2001; CDFW, 2018a; USFWS, 1996). If individuals or populations are observed, they shall be mapped and notes regarding size of population, quality of habitat and potential threats taken. Populations shall be avoided to the greatest extent practical, with a recommended minimum 25-foot buffer from the edge of the population. Prior to Project activities within the vicinity of the populations, the population and associated 25-foot buffer shall be flagged or otherwise made visible. No work shall occur within that flagged area and personnel shall avoid entering the area to the greatest extent practical.</p>	<p>City Department of Utilities</p>	<p>Prior to the start of construction at well sites 7, 11, 12, 13, 15, 20, 21, 24, 28, 31, 32 and 37</p>	<p>City Department of Utilities</p>	

Impact Statement	Mitigation Measures	Implementing Party	Timing	Monitoring Party	Verification: Date Completed Initials
	<p>If avoidance of a population or individual is not practical, a Habitat Mitigation and Monitoring Plan (HMMP) shall be drafted for the species being impacted. The HMMP shall provide guidance for restoring, enhancing, and/or creating suitable habitat for the species being impacted, and shall also provide success criteria which will ensure success of mitigation efforts. Mitigation ratios shall be a minimum of 2:1 for either percent cover or number of individuals. The HMMP shall be final upon approval by the City of Sacramento and interested regulatory agencies.</p> <p>Mitigation Measure BIO-2a: Initial Ground Disturbing Activities Outside of Swainson’s Hawk Nesting Season Initial ground disturbing activities will commence outside of the SWHA nesting season (March 1- September 15).</p> <p>Mitigation Measure BIO-2b: Focused Swainson’s Hawk Surveys If initial ground disturbing activities will commence during the SWHA nesting season (March 1- September 15), surveys based on CDFW’s survey protocol shall be conducted. These surveys will include a pre-arrival</p>	<p>City Department of Utilities</p> <p>City Department of Utilities</p>	<p>Prior to the start of construction</p> <p>Prior to the start of construction</p>	<p>City Department of Utilities</p> <p>City Department of Utilities</p>	

Impact Statement	Mitigation Measures	Implementing Party	Timing	Monitoring Party	Verification: Date Completed Initials
	<p>assessment conducted between January 1 and March 1, to identify areas with suitable nesting sites within 0.25 miles of the well sites that will have activity in that year. The survey extent will include areas up to 0.5 miles for well sites located in the NBHCP area (well sites 15, 19, 20, 23 and 39). For well sites determined to have suitable nesting habitat within 0.25 miles or within 0.5 miles in the NBHCP area, surveys will be conducted for SWHA nesting during the nest-building period (April 1-April 30) if work will begin between April 1 and May 30. For activities that will commence after June 1, surveys for active nests will be conducted between June 1 and August 1. Any active nests shall be avoided at a distance sufficient to ensure that nest abandonment will not occur, and this distance shall be determined through observation of the nest by a qualified biologist.</p> <p>Mitigation Measure BIO-3: Focused Burrowing Owl Surveys An assessment survey for burrowing owls shall be conducted at all well sites by a qualified biologist within a week prior to the start of any new Project activities (vegetation removal, grading, or other initial ground-disturbing activities) regardless of time of year. The survey shall be conducted in a sufficient area around the well site to identify the</p>	City Department of Utilities	Within a week prior to the start of any new ground disturbing activities	City Department of Utilities	

Impact Statement	Mitigation Measures	Implementing Party	Timing	Monitoring Party	Verification: Date Completed Initials
	<p>location and status of any nests that could potentially be directly or indirectly affected by vegetation removal, or ground disturbing activities if these activities commence between February 1 and August 31, the timeframe that corresponds to the burrowing owl nesting season. If the results of the surveys indicate that burrowing owl may be impacted by Project activities or if the well site is in the NBHCP area, the following measure shall apply:</p> <ul style="list-style-type: none"> • Preconstruction surveys in accordance with CDFW burrowing owl guidelines shall be conducted, summarized as: The Project Area and surrounding area (up to 500 feet if habitat has potential to support burrowing owl and no barriers preclude burrowing owls) shall be traversed on foot to detect burrowing owls. The survey will be conducted using transects spaced no more than 50 feet apart. For sites determined to have potential to support nesting burrowing owls, at least 3 site visits for burrowing owl shall occur between April 15 and July 15, with at least one site visit after June 15. Visits are to be at least 15 days apart. • If any burrowing owl nest is identified during preconstruction surveys, the applicant shall 				

Impact Statement	Mitigation Measures	Implementing Party	Timing	Monitoring Party	Verification: Date Completed Initials
	<p>comply with all CDFW guidelines regarding the minimization of impacts to the burrowing owl, including not disturbing an occupied nest during nesting season (February 1 through August 31) unless a qualified biologist approved by the Department verifies through noninvasive methods that either:</p> <ol style="list-style-type: none"> 1) the owls have not begun egg-laying and incubation; or 2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival. <p>Any owls identified in the preconstruction surveys shall be relocated to appropriate locations using passive relocation techniques approved by the CDFW [CDFG] and mitigation for impacts to burrowing owl nests shall be provided and funded by the applicant in accordance with CDFG guidelines and requirements.</p> <p>Mitigation Measure BIO-4: Focused Valley Elderberry Longhorn Beetle Surveys Prior to initial ground disturbance, a survey for the valley elderberry longhorn beetle (VELB) host plant, Sambucus, will be conducted at all sites where Sambucus has been detected (well sites 38</p>	City Department of Utilities	Prior to initial ground disturbance at wells sites 38 and 23, and sites within NBHCP	City Department of Utilities	

Impact Statement	Mitigation Measures	Implementing Party	Timing	Monitoring Party	Verification: Date Completed Initials
	<p>and 24) and all sites within the Natomas Basin Habitat Conservation Plan (NBHCP). Sambucus plants, if detected, shall be avoided by at least 20 feet from the dripline of the plant and this avoidance buffer shall be clearly demarcated using lathe and flagging. If Sambucus plants with a stem diameter of greater than 1 inch cannot be avoided, they shall be inspected for evidence of VELB presence and if any evidence of VELB is detected, the plants shall be avoided and consultation with the USFWS shall occur to determine next steps, which may include relocation of the plant. If the well site where the Sambucus is located is in the NBHCP, new consultation would not be required, but removal of Sambucus shall be conducted and mitigated for in accordance with the NBHCP.</p> <p>Mitigation Measure BIO-5a: Ground Disturbance and Work Activities During Dry Season Ground disturbance activities at well sites 2, 24, 28, and 30 shall be conducted in the dry season (May through October) and work at other sites shall be in the dry season to the greatest extent practical. Work within 200 feet of wetlands and ephemeral ditches will occur only in the dry season (June 1-October 31) and only in dry soils. Wetlands will</p>	<p>City Department of Utilities and Project contractor</p>	<p>area: well sites 15, 19, 20, 23 and 39</p> <p>During ground disturbing activities and during all work activities.</p>	<p>City Department of Utilities</p>	

Impact Statement	Mitigation Measures	Implementing Party	Timing	Monitoring Party	Verification: Date Completed Initials
	<p>be avoided by at least 100 feet and best management practices shall be implemented to prevent any potential increased erosion of sediment or turbid water from Project activities into these features. If work is to be conducted from November through April, silt fencing shall be installed prior to ground disturbance around the perimeter and associated 25-foot buffer of avoided wetlands and the top of bank of drainage canals. Silt fencing adjacent to drainage canals shall be installed the greatest distance possible from the top of bank, while still maintaining prevention of runoff into the feature.</p> <p>Mitigation Measure BIO-5b: Focused Vernal Pool Fairy Shrimp Surveys Prior to initial ground disturbance, protocol-level surveys for vernal pool fairy shrimp (VPFS) will be conducted at all sites with potential to support VPFS (well sites 2, 24, 28, and 30). If VPFS are detected, and cannot be avoided, a permit for take coverage of the species, pursuant to the Federal Endangered Species Act will be acquired prior to commencement of Project Activities.</p> <p>Mitigation Measure BIO-6: Nesting Bird Surveys A survey for active bird nests shall be conducted at all well sites by a qualified biologist no more than 14 days prior to the start of Project activities</p>	<p>City Department of Utilities</p> <p>City Department of Utilities</p>	<p>Prior to initial ground disturbance at well sites 2, 24, 28, and 30</p> <p>No more than 14 days prior to the start of Project activities.</p>	<p>City Department of Utilities</p> <p>City Department of Utilities</p>	

Impact Statement	Mitigation Measures	Implementing Party	Timing	Monitoring Party	Verification: Date Completed Initials
	<p>(exploratory drilling, vegetation removal, grading, or other initial ground-disturbing activities) if ground disturbing activities commence during the nesting season (February 1 through August 31). The survey shall be conducted in a sufficient area around the well site to identify the location and status of any nests that could potentially be directly or indirectly affected by vegetation removal, or grading activities. For white-tailed kite, the survey area shall extend at least 0.25 miles from the area of potential disturbance. Based on the results of the pre-construction breeding bird survey, the following measure shall apply:</p> <p>If active nests of protected species are found within the well site, or close enough to the area to affect nesting success, a work exclusion zone shall be established around each nest. Established exclusion zones shall remain in place until all young in the nest have fledged or the nest otherwise becomes inactive (e.g., due to predation). Appropriate exclusion zones shall be established by a qualified biologist; sizes vary dependent upon bird species, nest location, existing visual buffers, ambient sound levels, and other factors; an exclusion zone radius may be as small as 25 feet (for common, disturbance-adapted species) or more than 250 feet for raptors. Listed species are typically provided</p>				

Impact Statement	Mitigation Measures	Implementing Party	Timing	Monitoring Party	Verification: Date Completed Initials
	<p>more extensive exclusion zones, which may be specific to the species and/or follow CDFW guidance. Exclusion zone size may also be reduced from established levels if supported with nest monitoring by a qualified biologist indicating that work activities are not adversely impacting the nest.</p>				
<p>BIO-2: 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 US Fish and Wildlife Service.</p>	<p>Mitigation Measure BIO-5a: above, shall apply.</p> <p>Mitigation Measure BIO-7a: Wetland Delineation A wetland delineation shall be conducted at well sites 2, 12, 13, 28, 29 30 and 37 to confirm previous site evaluations and collect information on the three wetland parameters at each of the potential wetlands, according to the methods described in the USACE Wetlands Delineation Manual (“Corps Manual”; Environmental Laboratory 1987), the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West (“Arid West Supplement”; USACE 2008), and A Field Guide to the</p>	<p>Refer to Mitigation Measure BIO-5a</p> <p>City Department of Utilities</p>	<p>Refer to Mitigation Measure BIO-5a</p> <p>Prior to ground disturbance at well sites 2, 12, 13, 28, 29 30 and 37</p>	<p>Refer to Mitigation Measure BIO-5a</p> <p>City Department of Utilities</p>	

Impact Statement	Mitigation Measures	Implementing Party	Timing	Monitoring Party	Verification: Date Completed Initials
	<p>Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States (Lichvar and McColley, 2008). Arid West data forms shall be filled out and a report on the results will be provided. The report will provide the information and results of the delineation. A final jurisdictional determination shall be obtained from the USACE if deemed necessary.</p> <p>Mitigation Measure BIO-7b: Avoidance of Wetlands Any wetlands within the Study Area shall be avoided. A 25-foot buffer around the perimeter of each wetland shall be included and avoided. Prior to ground disturbance, the 25-foot buffer shall be clearly flagged by a qualified biologist. If wetlands cannot be avoided, appropriate permits shall be obtained from the appropriate regulatory agencies (e.g., CDFW, RWQCB and USACE). Mitigation measures outlined in the permits shall be followed; however, mitigation ratios shall be no less than 1:1 for impacted wetland acreage, which follows the City of Sacramento 2035 General Plan EIR Policy ER 2.1.6, which requires on- or off-site preservation of equal amounts impacted. If impacts to seasonal wetlands shall occur, mitigation may include, but are not limited to on-</p>	<p>City Department of Utilities and Project contractor</p>	<p>Prior to ground disturbing activities</p>	<p>City Department of Utilities</p>	

Impact Statement	Mitigation Measures	Implementing Party	Timing	Monitoring Party	Verification: Date Completed Initials
	<p>site restoration/enhancement/creation, or purchase of credits at an approved mitigation bank. Mitigation Measure BIO-5a as described above shall also be implemented for the protection of wetlands.</p> <p>Mitigation Measure BIO-8: Focused Creeping Ryegrass Flats Surveys Prior to ground disturbance or staging of materials at well site 28, the edge of the creeping ryegrass flats and associated 10-foot buffer shall be flagged by a qualified biologist and shall be avoided. If Project activities cannot avoid the buffered area, then a Habitat Mitigation and Monitoring Plan (HMMP) shall be drafted. The HMMP shall provide guidance for restoring, enhancing, and/or creating suitable habitat for the creeping ryegrass flat, and shall also provide success criteria which will ensure success of mitigation efforts. Mitigation ratios shall be a minimum of 2:1 for percent cover. The HMMP shall be final upon approval by the City of Sacramento and interested regulatory agencies.</p>	City Department of Utilities and Project contractor	Prior to ground disturbing activities or staging of materials at well site 28	City Department of Utilities	
BIO-3: Substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal,	<p>Mitigation Measure BIO-5a: above, shall apply. Mitigation Measure BIO-7a: above, shall apply. Mitigation Measure BIO-7b: above, shall apply.</p>	Refer to Mitigation Measures BIO-5a, BIO-7a, and BIO-7b	Refer to Mitigation Measures BIO-5a, BIO-7a, and BIO-7b	Refer to Mitigation Measures BIO-5a, BIO-7a, and BIO-7b	

Impact Statement	Mitigation Measures	Implementing Party	Timing	Monitoring Party	Verification: Date Completed Initials
filling, hydrological interruption, or other means.					
BIO-5: Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	Mitigation Measure BIO-5a: above, shall apply. Mitigation Measure BIO-7a: above, shall apply. Mitigation Measure BIO-7b: above, shall apply.	Refer to Mitigation Measures BIO-5a, BIO-7a, and BIO-7b	Refer to Mitigation Measures BIO-5a, BIO-7a, and BIO-7b	Refer to Mitigation Measures BIO-5a, BIO-7a, and BIO-7b	
3.4 Cultural Resources					
CUL-1: Substantial adverse change in the significance of a historical resource pursuant to Section 15064.5.	Mitigation Measure CUL-1: Conduct Cultural Resources Sensitivity and Awareness Training Program and Tribal Coordination Prior to Ground-Disturbing Activities Prior to Ground-Disturbing Activities The City shall require the contractor to provide a cultural resources sensitivity and awareness training program (Worker Environmental Awareness Program [WEAP]) for all personnel involved in Project construction, including field consultants and construction workers. The WEAP will be developed in coordination with an archaeologist meeting the Secretary of the Interior’s Professional Qualifications Standards for Archeology. The WEAP shall be conducted before any Project-related construction activities begin at the Project site. The WEAP will include relevant information regarding sensitive cultural resources and tribal cultural resources, including applicable regulations, protocols for avoidance, and	City Department of Utilities and Project contractor	Prior to ground disturbing activities	City Department of Utilities	

Impact Statement	Mitigation Measures	Implementing Party	Timing	Monitoring Party	Verification: Date Completed Initials
	<p>consequences of violating State laws and regulations. The WEAP will also describe appropriate avoidance and impact minimization measures for cultural resources that could be located at the Project site and will outline what to do and who to contact if any potential cultural resources are encountered.</p> <p>For well sites 5 and 24, at the time the final location of the well sites are established the City shall coordinate with Tribal Representatives from United Auburn Indian Community on the status of the location and whether a Native American Tribal Monitor (monitor) shall be required. If required, the contractor shall ensure a monitor is present for all ground disturbing activities and the measures described in CUL-2 and CUL-3 shall apply. The monitor shall possess the knowledge, skills, abilities, and experience established by the NAHC’s Guidelines for Native American Monitors (See also Mitigation Measure TCR-1).</p> <p>Mitigation Measure CUL-2: In the Event that Cultural Resources are Discovered During Construction, Implement Avoidance and Minimization Measures to Avoid Significant Impacts and Procedures to Evaluate Resources If cultural resources (such as structural features, unusual amounts of bone or shell, artifacts, or</p>	<p>City Department of Utilities and Project contractor</p>	<p>During ground disturbing activities in the event cultural resources are discovered</p>	<p>City Department of Utilities</p>	

Impact Statement	Mitigation Measures	Implementing Party	Timing	Monitoring Party	Verification: Date Completed Initials
	<p>human remains) are encountered at the Project site during construction, work shall be suspended within 100 feet of the find (based on the apparent distribution of cultural materials), and the construction contractor shall immediately notify the Project’s City representative. Avoidance and preservation in place are the preferred manner of mitigating impacts to cultural resources and tribal cultural resources. This will be accomplished, if feasible, by several alternative means, including:</p> <ul style="list-style-type: none"> • Planning construction to avoid tribal cultural resources, archaeological sites and/or other cultural resources; incorporating cultural resources within parks, green-space or other open space; covering archaeological resources; deeding a cultural resource to a permanent conservation easement; or other preservation and protection methods agreeable to consulting parties and regulatory authorities with jurisdiction over the activity. • Recommendations for avoidance of cultural resources and tribal cultural resources will be reviewed by the City representative and other appropriate agencies, in light of factors such as costs, logistics, • feasibility, design, technology and social, cultural and environmental considerations, 				

Impact Statement	Mitigation Measures	Implementing Party	Timing	Monitoring Party	Verification: Date Completed Initials
	<p>and the extent to which avoidance is consistent with Project objectives. Avoidance and design alternatives may include realignment within the Project site to avoid cultural resources, modification of the design to eliminate or reduce impacts to cultural resources or modification or realignment to avoid highly significant features within a cultural resource.</p> <ul style="list-style-type: none"> • If the discovered cultural resource can be avoided, the construction contractor(s), will install protective fencing outside the site boundary, including a 100-foot buffer area, before construction restarts. • The construction contractor(s) will maintain the protective fencing throughout construction to avoid the site during all remaining phases of construction. The area will be demarcated as an "Environmentally Sensitive Area". • If a cultural resource cannot be avoided, the following performance standard shall be met prior to continuance of construction and associated activities that may result in damage to or destruction of cultural resources or tribal cultural resources: • Each resource will be evaluated for California Register of Historical Resources- (CRHR) eligibility through application of established 				

Impact Statement	Mitigation Measures	Implementing Party	Timing	Monitoring Party	Verification: Date Completed Initials
	<p>eligibility criteria (California Code of Regulations 15064.636). If a cultural resource is determined to be eligible for listing in the CRHR, the City will avoid damaging effects to the resource in accordance with California PRC Section 21084.3, if feasible. The City shall coordinate the investigation of the find with a qualified archaeologist (meeting the Secretary of the Interior’s Professional Qualifications Standards for Archeology) approved by the City. A written report detailing the site assessment, coordination activities, and management recommendations shall be provided to the City representative by the qualified archaeologist. These recommendations will be documented in the Project record. (See also Mitigation Measure TCR-2)</p>				
<p>CUL-2: Substantial adverse change in the significance of a unique archaeological resource pursuant to Section 15064.5.</p>	<p>Mitigation Measure CUL-1: above, shall apply. Mitigation Measure CUL-2: above, shall apply.</p>	<p>Refer to Mitigation Measures CUL-1 and CUL-2</p>	<p>Refer to Mitigation Measures CUL-1 and CUL-2</p>	<p>Refer to Mitigation Measures CUL-1 and CUL-2</p>	
<p>CUL-3: Disturb any human remains, including those interred outside of dedicated cemeteries.</p>	<p>Mitigation Measure CUL-3: Implement Procedures in the Event of the Inadvertent Discovery of Human Remains If an inadvertent discovery of human remains is made at any time during Project-related construction activities or Project planning, the following performance standards shall be met</p>	<p>City Department of Utilities and Project contractor</p>	<p>During ground disturbing activities in the event of inadvertent discovery of human remains</p>	<p>City Department of Utilities</p>	

Impact Statement	Mitigation Measures	Implementing Party	Timing	Monitoring Party	Verification: Date Completed Initials
	<p>prior to implementing or continuing actions such as construction, which may result in damage to or destruction of human remains. In accordance with the California Health and Safety Code (HSC), if human remains are encountered during ground-disturbing activities, the City shall immediately halt potentially damaging excavation in the area of the remains and notify the Sacramento County Coroner and a professional archaeologist 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 (HSC Section 7050.5[b]).</p> <p>If the human remains are of historic age and are determined to be not of Native American origin, the City will follow the provisions of the HSC Section 7000 (et seq.) regarding the disinterment and removal of non-Native American human remains. (See also Mitigation Measure TCR-3).</p>				
3.6 Geology and Soils					
<p>GEO-5: Directly or indirectly destroy a unique paleontological resource or site or unique geographic feature.</p>	<p>Mitigation Measure GEO-1: Unanticipated Fossil Discovery</p> <p>To reduce the potential for impacts to paleontological resources the following procedures shall be adhered to for all ground disturbing activities.</p> <p>Prior to the start of construction, a qualified paleontologist shall be retained to prepare a</p>	<p>City Department of Utilities and Project contractor</p>	<p>Prior to the start of construction</p>	<p>City Department of Utilities</p>	

Impact Statement	Mitigation Measures	Implementing Party	Timing	Monitoring Party	Verification: Date Completed Initials
	<p>paleontological resources Worker Environmental Awareness Program (WEAP) training. The WEAP training will include the types of fossils that may be encountered, the procedures to be followed if unanticipated paleontological resources are unearthed at the Project site, contact information for the paleontological personnel, and the regulatory requirements for the protection of paleontological resources. All earthmoving personnel and their supervisors shall receive the WEAP training prior to beginning work on the site.</p> <p>In the event of unanticipated paleontological resource discoveries, all activities in the vicinity of the discovery (50-foot buffer) shall be temporarily halted until a qualified paleontologist has documented and evaluated the resource(s), completed the appropriate mitigation and treatment of the resource(s), and authorized work in the discovery area to resume. If determined to be significant, the paleontological resource(s) shall be collected and transferred to a paleontological laboratory for preparation, identification, and analysis, and curated at an accredited fossil repository. If paleontological resources are discovered, and upon conclusion of ground disturbing activities, a paleontological mitigation report shall be prepared that documents the dates of field work, methods,</p>				

Impact Statement	Mitigation Measures	Implementing Party	Timing	Monitoring Party	Verification: Date Completed Initials
	<p>demonstrate that O&M activities will be conducted using a carbon-zero vehicle fleet by 2045, the year in which the City currently seeks to achieve carbon zero.</p> <p>Mitigation Measure GHG-3: SolarShares Participation Prior to the commencement of operations of any Project well, the City shall provide documentation that includes a licensed engineer’s or qualified analyst’s estimate of the average annual CO2e emissions from the well’s electricity consumption in operational years 2030 and 2045. The documentation shall include the number of wells that participate in the SolarShares program in addition to the baseline participation of 124 (well 22), 156 (well 25), and 158 (well 34). If total CO2e from well electricity consumption exceeds 1,100 CO2e/year in operational year 2030, then the City shall enroll 62 percent of the replacement wells in the SolarShares program or provide an equivalent level of the Project’s electricity from renewable power. If total CO2e from well electricity consumption exceeds 0 CO2e/year in operational year 2045, then the City shall enroll all replacement wells in the SolarShares program or provide an equivalent level of the Project’s electricity from renewable power.</p>	<p>City Department of Utilities</p>	<p>Prior to the commencement of operations of any Project well</p>	<p>City Department of Utilities</p>	

Impact Statement	Mitigation Measures	Implementing Party	Timing	Monitoring Party	Verification: Date Completed Initials
	<p>Mitigation Measure GHG-4: Purchase of Carbon Offsets for Methane GHG Emissions Prior to the commencement of operations of any Project well, the City shall provide documentation that includes a licensed engineer’s estimate of the average annual net methane (CH₄) emissions that have been deemed to be unavoidable to operations due to infeasibility of methane capture or reduction technologies. The documentation shall include verification of purchase and retirement of credits to offset the methane emissions to net zero for each year of operations during the 40-year life of the Project, using verified carbon offset credits.</p> <p>The carbon offset credits shall be from a registry approved by CARB, and be quantified and verified using protocols that are consistent with the criteria identified in the California Code of Regulations, title 17, section 95972 – namely that they be real; permanent; quantifiable; verifiable; additional as defined by Health and Safety Code section 38562, subdivisions(d)(1) and (d)(2) and California Code of Regulations, title 17, section 95802, subdivision (a); and enforceable. In addition, any offsets originating outside California must have GHG emissions programs equivalent to, or more stringent than, California's cap and trade program. Within 120 days of City</p>	City Department of Utilities	Prior to the commencement of operations of any Project well	City Department of Utilities	

Impact Statement	Mitigation Measures	Implementing Party	Timing	Monitoring Party	Verification: Date Completed Initials
	approval of the documented emissions estimates, the City shall provide evidence that carbon offset credits have been purchased and retired for the purpose of offsetting the City-approved emissions estimates for the 40-year life of the Project.				
GHG-2: Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.	<p>Mitigation Measure GHG-1: above, shall apply. Mitigation Measure GHG-2: above, shall apply. Mitigation Measure GHG-3: above, shall apply. Mitigation Measure GHG-4: above, shall apply.</p>	Refer to Mitigation Measures GHG-1, GHG-2, GHG-3, and GHG-4	Refer to Mitigation Measures GHG-1, GHG-2, GHG-3, and GHG-4	Refer to Mitigation Measures GHG-1, GHG-2, GHG-3, and GHG-4	
3.8 Hazards and Hazardous Materials					
HAZ-2: 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.	<p>Mitigation Measure HAZ-1: Hazardous Materials Management and Spill Prevention and Control Plan Before construction begins, the City shall prepare a Hazardous Materials Management Spill Prevention and Control Plan that includes a project-specific contingency plan for hazardous materials and water operations. The Plan will be applicable to construction activities and will establish policies and procedures according to applicable codes and regulations, including but not limited to the California Building and Fire Codes, and federal and OSHA regulations. The</p>	City Department of Utilities	Prior to the start of construction	City Department of Utilities	

Impact Statement	Mitigation Measures	Implementing Party	Timing	Monitoring Party	Verification: Date Completed Initials
	<p>Plan will include, but is not limited to the following:</p> <ul style="list-style-type: none"> • A discussion of hazardous materials management, including delineation of hazardous material storage areas, access and egress routes, waterways, emergency assembly areas, and temporary hazardous waste storage areas; • Notification and documentation of procedures; and • Spill control and countermeasures, including employee spill prevention/response training. 				
<p>HAZ-3: Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.</p>	<p>Mitigation Measure HAZ-1: above, shall apply.</p> <p>Mitigation Measure HAZ-2: Well Construction and Chemical Deliveries at Schools The City will coordinate with school officials for proposed well sites located at schools to schedule well construction when school is not in session and schedule chemical deliveries before or after school hours.</p>	<p>Refer to Mitigation Measure HAZ-1</p> <p>City Department of Utilities</p>	<p>Refer to Mitigation Measure HAZ-1</p> <p>Prior to the start of construction at proposed well sites located at schools</p>	<p>Refer to Mitigation Measure HAZ-1</p> <p>City Department of Utilities</p>	

Impact Statement	Mitigation Measures	Implementing Party	Timing	Monitoring Party	Verification: Date Completed Initials
<p>HAZ-4: 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 result, would it create a significant hazard to the public or the environment.</p>	<p>Mitigation Measure HAZ-3: Environmental Site Assessment and Remediation or Well Relocation After exploratory drilling and before construction begins, a Phase 1 Environmental Site Assessment will be conducted for each proposed municipal well site to identify contaminated sites at or near each proposed well site that pose a hazard for construction or to the City’s potable water supply. In the event that a recognized environmental concern exists, additional investigation would be conducted, typically under a Phase II Environmental Site Assessment, to identify the presence and extent of any contamination that would need remediation, or a Well Relocation Plan would be developed to determine if the well location could be moved to a location that is not affected by contaminant releases. Remediation, if needed, would be conducted in accordance with federal and state requirements for remediation of soil and/or groundwater contamination with oversight by the appropriate local and/or state agency, such as the County of Sacramento, RWQCB and/or DTSC.</p>	<p>City Department of Utilities</p>	<p>After exploratory drilling and before construction begins</p>	<p>City Department of Utilities</p>	
<p>HAZ-5: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.</p>	<p>Mitigation Measure TRA-1: below, shall apply</p>	<p>Refer to Mitigation Measure TRA-1</p>	<p>Refer to Mitigation Measure TRA-1</p>	<p>Refer to Mitigation Measure TRA-1</p>	

Impact Statement	Mitigation Measures	Implementing Party	Timing	Monitoring Party	Verification: Date Completed Initials
3.10 Noise and Vibration					
<p>NOI-1: Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.</p>	<p>Mitigation Measure NOI-1: Noise Barriers The City shall require its contractor to install temporary construction noise barriers prior to the start of well construction activities for all activities requiring “nighttime” work outside the hours of 7:00 a.m. to 6:00 p.m. or 9:00 a.m. to 6:00 p.m. on Sundays. These barriers shall follow the Federal Highways Administration Construction Noise Handbook guidance and block the line of sight between the equipment and the noise-sensitive receptor(s). The barriers shall provide enough noise attenuation that noise levels at nearby receptors meet the City’s Noise Control Ordinance. In residential areas this includes a minimum of 15 dBA of noise attenuation at residences 50 feet away from drilling activities. Due to the height of the drill rig, the noise barrier shall be at least 24 feet tall. The construction noise barrier shall be constructed of a material with a minimum weight of one pound per square foot with no gaps or perforations. It shall remain in place until conclusion of the nighttime construction activities. The Project plans and specifications shall include documentation from a noise consultant verifying the appropriate design details for an effective noise barrier.</p>	<p>City Department of Utilities and Project contractor</p>	<p>Prior to the start of well construction activities for wells requiring nighttime work</p>	<p>City Department of Utilities</p>	

Impact Statement	Mitigation Measures	Implementing Party	Timing	Monitoring Party	Verification: Date Completed Initials
	<p>Mitigation Measure NOI-2: Construction Noise Reduction Measures</p> <p>The City shall require its contractor to implement the following actions relative to construction noise:</p> <ul style="list-style-type: none"> The City shall conduct construction activities to between 7:00 a.m. and 6:00 p.m., on Monday through Saturday, and between 9:00 a.m. and 6:00 p.m. on Sunday, in accordance with the City of Sacramento Municipal Code, Section 8.68.080, with the exception of specific well drilling and testing activities, which require 24-hour continuous work. Prior to construction, the City in coordination with the construction contractor, shall provide written notification to all properties within 1,000 feet of the construction site, informing occupants of the type and duration of construction activities. Notification materials shall identify a method to contact the City's program manager with noise concerns. Prior to construction commencement, the City program manager shall establish a noise complaint process to allow for resolution of noise problems. This process shall be clearly described in the notifications. Stationary noise-generating equipment shall be located as far from sensitive receptors as 	<p>City Department of Utilities and Project contractor</p>	<p>Prior to the start of well construction activities</p>	<p>City Department of Utilities</p>	

Impact Statement	Mitigation Measures	Implementing Party	Timing	Monitoring Party	Verification: Date Completed Initials
	<p>possible. Such equipment shall also be oriented to minimize noise that would be directed toward sensitive receptors. Whenever possible, other non-noise generating equipment (e.g., water tanks, roll-off dumpsters) shall be positioned between the noise source and sensitive receptors.</p> <ul style="list-style-type: none"> • Equipment and staging areas shall be located as far from sensitive receptors as possible. At the staging location, equipment and materials shall be kept as far from adjacent sensitive receptors as possible. • Construction vehicles and equipment shall be maintained in the best possible working order; operated by an experienced, trained operator; and shall utilize the best available noise control techniques (including mufflers, use of intake silencers, ducts, engine enclosures and acoustically attenuating shields or shrouds). • Unnecessary idling of internal combustion engines shall be prohibited. In practice, this would require turning off equipment if it would idle for five or more minutes. • Electrically powered equipment shall be used instead of pneumatic or internal combustion powered equipment, where feasible. 				

Impact Statement	Mitigation Measures	Implementing Party	Timing	Monitoring Party	Verification: Date Completed Initials
	<ul style="list-style-type: none"> The use of noise-producing signals, including horns, whistles, alarms, and bells, shall be for safety warning purposes only. 				
3.12 Transportation					

Impact Statement	Mitigation Measures	Implementing Party	Timing	Monitoring Party	Verification: Date Completed Initials
<p>TRA-3: Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)</p>	<p>Mitigation Measure TRA-1: Traffic Control Plan Prior to construction, the City of Sacramento shall require its construction contractor to prepare and implement a Traffic Control Plan, to be approved by the construction inspector and the City Transportation Division. The Traffic Control Plan may be prepared for the entire Project at once so long as enough construction specifics for each individual well are available; otherwise, a new plan or an amendment to the overarching plan shall be prepared for each construction activity. The Traffic Control Plan shall:</p> <ul style="list-style-type: none"> • Identify staging locations to be used during construction • Identify safe ingress and egress points from staging areas • Identify potential road or lane closures • Establish haul routes for construction-related vehicle traffic • Identify alternative safe routes to maintain pedestrian and bicyclist safety during construction <p>The City’s project manager shall coordinate with emergency services (police, fire, and others) to notify these entities regarding construction schedule, Project alignment and siting, and potential delays due to construction. The City shall identify roadways and access points for</p>	<p>City Department of Utilities and Project contractor</p>	<p>Prior to construction</p>	<p>City Department of Utilities</p>	

Impact Statement	Mitigation Measures	Implementing Party	Timing	Monitoring Party	Verification: Date Completed Initials
	<p>emergency services and minimize disruptions to or closures of these locations.</p> <p>The Traffic Control Plan shall include provisions for traffic control measures including barricades, warning signs, cones, lights, and flag persons, to allow safe circulation of vehicle, bicycle, pedestrian, and emergency response traffic. The Traffic Control Plan shall be reviewed and approved by the City’s project manager and the construction inspector prior to Project construction. The City’s construction inspector shall also provide the construction schedule and Traffic Control Plan to the City Transportation Division for review to ensure that construction of the proposed Project does not conflict with other construction projects that may be occurring simultaneously in the Project vicinity.</p>				
<p>TRA-4: Result in inadequate emergency access.</p>	<p>Mitigation Measure TRA-1: above, shall apply.</p>	<p>Refer to Mitigation Measure TRA-1</p>	<p>Refer to Mitigation Measure TRA-1</p>	<p>Refer to Mitigation Measure TRA-1</p>	
<p>3.13 Tribal Cultural Resources</p>					
<p>TCR-1: Cause a substantial adverse change in the significance of a tribal cultural resource as defined in PRC, Section 21074, as</p>	<p>Mitigation Measure TCR-1: Conduct Cultural Resources and Tribal Cultural Resources Sensitivity and Awareness Training Program and Tribal Coordination Prior to Ground-Disturbing Activities</p>	<p>City Department of Utilities and Project contractor</p>	<p>Prior to ground disturbing activities</p>	<p>City Department of Utilities</p>	

Impact Statement	Mitigation Measures	Implementing Party	Timing	Monitoring Party	Verification: Date Completed Initials
<p>either a site, feature, place, or 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:</p> <ul style="list-style-type: none"> i) 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 ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in PRC, Section 5024.1(c). In applying the criteria set forth in PRC, Section 5024.1(c), the lead agency shall consider the significance of the resource to a California Native American tribe. 	<p>The City shall require the applicant/contractor to provide a cultural resources and tribal cultural resources sensitivity and awareness training program (Worker Environmental Awareness Program [WEAP]) for all personnel involved in project construction, including field consultants and construction workers. The WEAP will be developed in coordination with culturally affiliated Native American tribes. The WEAP shall be conducted before any project-related construction activities begin at the project site. The WEAP will include relevant information regarding sensitive cultural resources and tribal cultural resources, including applicable regulations, protocols for avoidance, and consequences of violating state laws and regulations.</p> <p>The WEAP will also describe appropriate avoidance and impact minimization measures for cultural resources and tribal cultural resources that could be located at the project site and will outline what to do and who to contact if any potential cultural resources or tribal cultural resources are encountered. The WEAP will emphasize the requirement for confidentiality and culturally appropriate treatment of any discovery of significance to Native Americans and will discuss appropriate behaviors and responsive</p>				

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	<p>actions, consistent with Native American tribal values.</p> <p>For well sites 5 and 24, at the time the final location of the well sites are established the City shall coordinate with Tribal Representatives from United Auburn Indian Community on the status of the location and whether a Native American Tribal Monitor (monitor) shall be required. If required, the contractor shall ensure a monitor is present for all ground disturbing activities and the measures described in TCR-2 and TCR-3 shall apply. The monitor shall possess the knowledge, skills, abilities, and experience established by the NAHC’s Guidelines for Native American Monitors.</p> <p>Mitigation Measure TCR-2: In the Event that Cultural Resources or Tribal Cultural Resources are Discovered During Construction, Implement Avoidance and Minimization Measures to Avoid Significant Impacts and Procedures to Evaluate Resources</p> <p>If cultural resources or tribal cultural resources (such as structural features, unusual amounts of bone or shell, artifacts, or human remains) are encountered at the project site during construction, work shall be suspended within 100-feet of the find (based on the apparent distribution of cultural materials), and the</p>	<p>City Department of Utilities and Project contractor</p>	<p>During ground disturbing activities if cultural or tribal cultural resources are discovered.</p>	<p>City Department of Utilities</p>	

Impact Statement	Mitigation Measures	Implementing Party	Timing	Monitoring Party	Verification: Date Completed Initials
	<p>construction contractor shall immediately notify the project’s City representative. Avoidance and preservation in place is the preferred manner of mitigating impacts to cultural resources and tribal cultural resources. This will be accomplished, if feasible, by several alternative means, including:</p> <ul style="list-style-type: none"> • Planning construction to avoid tribal cultural resources, archaeological sites and/or other cultural resources; incorporating cultural resources within parks, green-space, or other open space; covering archaeological resources; deeding a cultural resource to a permanent conservation easement; or other preservation and protection methods agreeable to consulting parties and regulatory authorities with jurisdiction over the activity. • Recommendations for avoidance of cultural resources and tribal cultural resources will be reviewed by the City representative, interested culturally affiliated Native American tribes and other appropriate agencies, in light of factors such as costs, logistics, feasibility, design, technology and social, cultural and environmental considerations, and the extent to which avoidance is consistent with project objectives. Avoidance and design alternatives may include realignment within 				

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	<p>the project site to avoid cultural resources or tribal cultural resources, modification of the design to eliminate or reduce impacts to cultural resources or tribal cultural resources or modification or realignment to avoid highly significant features within a cultural resource or tribal cultural resource.</p> <ul style="list-style-type: none"> • Native American representatives from interested culturally affiliated Native American tribes will be consulted on the analyses and shall have the opportunity to meet with the City representative and its representatives who have technical expertise to identify and recommend feasible avoidance and design alternatives, so that appropriate and feasible avoidance and design alternatives can be identified. • If the discovered cultural resource or tribal cultural resource can be avoided, the construction contractor(s), will install protective fencing outside the site boundary, including a 100-foot buffer area, before construction restarts. The boundary of a cultural resource or a tribal cultural resource will be determined in consultation with interested culturally affiliated Native American tribes. Use of temporary and permanent forms of protective fencing will be determined in consultation with Native 				

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	<p>American representatives from interested culturally affiliated Native American tribes.</p> <ul style="list-style-type: none"> The construction contractor(s) will maintain the protective fencing throughout construction to avoid the site during all remaining phases of construction. The area will be demarcated as an "Environmentally Sensitive Area". <p>If a cultural resource or a tribal cultural resource cannot be avoided, the following performance standard shall be met prior to continuance of construction and associated activities that may result in damage to or destruction of cultural resources or tribal cultural resources:</p> <ul style="list-style-type: none"> Each resource will be evaluated for California Register of Historical Resources (CRHR) eligibility through application of established eligibility criteria (California Code of Regulations 15064.636), in consultation with consulting Native American Tribes, as applicable. <p>If a cultural resource or a tribal cultural resource is determined to be eligible for listing in the CRHR, the City will avoid damaging effects to the resource in accordance with California PRC Section 21084.3, if feasible. The City shall coordinate the investigation of the find with a</p>				

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	<p>qualified archaeologist (meeting the Secretary of the Interior’s Professional Qualifications Standards for Archeology) approved by the City and with interested culturally affiliated Native American tribes that respond to the City’s invitation. As part of the site investigation and resource assessment, the City and the archaeologist shall consult with interested culturally affiliated Native American tribes to assess the significance of the find, make recommendations for further evaluation and treatment as necessary and provide proper management recommendations should potential impacts to the resources be determined by the City to be significant. A written report detailing the site assessment, coordination activities, and management recommendations shall be provided to the City representative by the qualified archaeologist. These recommendations will be documented in the project record. For any recommendations made by interested culturally affiliated Native American tribes that are not implemented, a justification for why the recommendation was not followed will be provided in the project record.</p> <p>Native American representatives from interested culturally affiliated Native American Tribes and the City representative will also consult to develop measures for long-term management of</p>				

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	<p>any discovered tribal cultural resources. Consultation will be limited to actions consistent with the jurisdiction of the City and taking into account ownership of the subject property. To the extent that the City has jurisdiction, routine operation and maintenance within tribal cultural resources retaining tribal cultural integrity shall be consistent with the avoidance and minimization standards identified in this mitigation measure.</p> <p>If the City determines that the project may cause a significant impact to a tribal cultural resource, and measures are not otherwise identified in the consultation process, the following are examples of mitigation capable of avoiding or substantially lessening potential significant impacts to a tribal cultural resource or alternatives that would avoid significant impacts to the resource. These measures may be considered to avoid or minimize significant adverse impacts and constitute the standard by which an impact conclusion of less-than significant may be reached:</p> <ul style="list-style-type: none"> Avoid and preserve resources in place, including, but not limited to, planning construction to avoid the resources and protect the cultural and natural context, or planning greenspace, parks, or other open space, to incorporate the resources with 				

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	<p>culturally appropriate protection and management criteria.</p> <ul style="list-style-type: none"> • Treat the resource with culturally appropriate dignity taking into account the Tribal cultural values and meaning of the resource, including, but not limited to, the following: <ul style="list-style-type: none"> ○ Protect the cultural character and integrity of the resource. ○ Protect the traditional use of the resource. ○ Protect the confidentiality of the resource. • Establish permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or using the resources or places. • Protect the resource. <p>Mitigation Measure TCR-3: Implement Procedures in the Event of the Inadvertent Discovery of Human Remains If an inadvertent discovery of human remains is made at any time during Project-related construction activities or Project planning, the following performance standards shall be met prior to implementing or continuing actions such as construction, which may result in damage to or destruction of human remains. In accordance</p>	<p>City Department of Utilities and Project contractor</p>	<p>During ground disturbing activities in event of inadvertent discovery of human remains</p>	<p>City Department of Utilities</p>	

Impact Statement	Mitigation Measures	Implementing Party	Timing	Monitoring Party	Verification: Date Completed Initials
	<p>with the California Health and Safety Code (HSC), if human remains are encountered during ground-disturbing activities, the City shall immediately halt potentially damaging excavation in the area of the remains and notify the Sacramento County Coroner and a professional archaeologist 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 (HSC Section 7050.5[b]).</p> <p>If the human remains are of historic age and are determined to be not of Native American origin, the City will follow the provisions of the HSC Section 7000 (et seq.) regarding the disinterment and removal of non-Native American human remains.</p> <p>If the Coroner determines that the remains are those of a Native American, he or she must contact the Native American Heritage Commission (NAHC) by phone within 24 hours of making that determination (HSC Section 7050[c]). After the Coroner’s findings have been made, the archaeologist and the NAHC-designated Most Likely Descendant (MLD), in consultation with the landowner, shall determine the ultimate treatment and disposition of the remains. The</p>				

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	responsibilities of the City for acting upon notification of a discovery of Native American human remains are identified in California PRC Section 5097.9 et seq.				



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